Environmental Protection Agency

2001 Annual Performance Plan and Congressional Justification

Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response

Strategic Goal: America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and to the natural environment. EPA will work to clean up previously polluted sites, restoring them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

Resource Summary

(Dollars in thousands)

		FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req. v. FY 2000 Ena.
Goal 05	**Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response**	**$1,673,339.5**	**$1,622,372.6**	**$1,679,847.6**	**$57,475.0**
Obj. 01	Reduce or Control Risks to Human Health	$1,511,811.5	$1,451,859.3	$1,500,675.5	$48,816.2
Obj. 02	Prevent , Reduce and Respond to Releases, Spills, Accidents or	$161,528.0	$170,513.3	$179,172.1	$8,658.8
	Total Workyears	4,514.0	4,455.4	4,402.3	(53.1)

Background and Context

Improper management of wastes can lead to serious health threats as a result of fires, explosions, and contamination of air, soil, and water. Likewise, improper waste management and disposal pose threats to those living in nearby communities and can result in costly cleanups. A frequent result of improper hazardous and solid waste disposal is the contamination of groundwater--the source of drinking water for nearly half of all Americans. Therefore, one of the Agency's strategic goals is to ensure proper waste management and disposal occurs so that human health, endangered wildlife, and vegetation and natural resources are not threatened. EPA's mission also includes protecting human health and the environment from unacceptable risks posed by solid and hazardous wastes as well as from the release of oil and chemicals, including radioactive waste, into the environment. In 2001, EPA will promote safe waste storage, treatment, and disposal, cleanup active and inactive waste disposal sites, and prevent the creation of new environmental risks.

Means and Strategy

EPA and its partners will continue their efforts to achieve this goal by promoting better waste management, cleaning up contaminated waste sites, and preventing waste-related or industrial accidents. To date, EPA and its partners have made significant progress toward achieving its two primary objectives that address human health and the environment at thousands of Superfund, Brownfield, Resource Conservation and Recovery Act (RCRA), underground storage tank (UST), and oil sites. Brought together by our common interest to protect our health, environment, and livelihoods, EPA and its partners have established an effective structure to manage the nation's hazardous and solid wastes.

One of the objectives of this goal is to reduce or control the risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. In partnership with states, tribal governments, the public, and other stakeholders, EPA will reduce or control the risks to human health and the environment at thousands of Superfund, Brownfield, RCRA, and UST sites. EPA's strategy is to apply the fastest, most effective waste management and cleanup methods available, while involving affected communities in the decision making process. The Agency will employ enforcement efforts to further assist in reducing risk to humans from hazardous waste exposure.

To accomplish its Superfund objectives, EPA works with states, tribes, and other Federal agencies to protect human health and the environment and to restore sites to uses appropriate for the nearby communities. Site assessment is the first step in determining whether a site meets the criteria for placement on the National Priorities List (NPL) or for removal action to prevent, minimize or mitigate significant threats. The Agency also provides outreach and education to the surrounding communities to improve their direct involvement in every phase of the cleanup process and understanding of potential site risk, such as risks posed by radioactive materials.

One of Superfund's major program goals is to have responsible parties pay for and conduct cleanups at abandoned or uncontrolled hazardous waste sites. The Superfund enforcement program maximizes Potentially Responsible Party (PRP) participation and is committed to reforms, which increase fairness, reduce transaction costs and promote economic redevelopment. The Agency also seeks to recover costs associated with a site cleanup from responsible parties when trust fund monies have been expended.

Brownfields are abandoned, idled, or under-used industrial and commercial properties and are not traditional Superfund sites as they are not generally highly contaminated and present lesser health risks. Economic changes over several decades have left thousands of communities with these contaminated properties and abandoned sites. In several important ways, the Agency's Brownfields Initiative encourages the redevelopment of these sites by addressing concerns such as environmental liability and cleanup, infrastructure declines, and changing development priorities.

A significant number of industrial sites are addressed by the RCRA corrective action program, administered by EPA and the authorized states. These include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial

facilities must undergo a cleanup under the RCRA program. Out of these facilities, the Agency has identified 1,712 facilities as high priority – where people or the environment are likely to be at significant current or potential risk. The Agency is pursuing a strategy for addressing the worst facilities first, as reflected in the strategic goal.

The leaking underground storage tank (LUST) program promotes rapid and effective responses to releases from USTs containing petroleum by enhancing state, local and tribal enforcement and response capability. Corrective actions at sites where UST releases have contaminated soil and/or groundwater is a key element of the UST/LUST program. Nearly all corrective actions are undertaken by UST owners and operators under the supervision of state or local agencies. EPA oversees these activities on Indian lands.

The other objective of this goal is to prevent, reduce, and respond to releases, spills, accidents or emergencies. Through the UST and RCRA permitting and inspection programs, the Agency and its partners manage the practices of thousands of facilities. When releases do occur, EPA employees and those of its partners, who are properly trained and properly equipped, will ensure that the Agency's objective is met by having the capability to successfully respond.

The goal of the UST program is to prevent, detect, and correct leaks from USTs containing petroleum and hazardous substances. The strategy for achieving this goal is to promote and enforce compliance with the regulatory requirements aimed at preventing and detecting UST releases. States have the primary responsibility for ensuring that UST facilities (except those on Indian lands) are brought into compliance. The Agency's primary role is to provide technical and financial support to states' UST programs. EPA has the primary responsibility for implementation of the UST program on Indian lands.

For facilities that currently manage hazardous wastes, EPA ensures human health and environmental protection through the issuance of RCRA hazardous waste permits. The RCRA program reduces the risk of exposures to dangerous hazardous wastes by establishing a "cradle-to-grave" waste management framework. This framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste, ensuring that communities are not exposed to hazards through improper management. Significant progress has been made by hazardous waste management facilities having appropriate controls in place to minimize the threat of exposure to hazardous substances. To date, 47 of 50 states, Guam and the District of Columbia are authorized to issue permits. The authorization of states for all portions of the RCRA program, including regulations that address waste management issues included in permits, is an important Agency goal. In addition, the Agency has developed a strategy to address solid waste and hazardous waste on Indian lands. A highlight of this strategy is the interagency project to address issues surrounding open dumps and their cleanup, the primary waste management concern for tribes.

The Agency's chemical emergency preparedness and prevention program addresses the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases. The program also implements right-to-know initiatives to inform the public about chemical hazards and encourages actions at the local level to reduce risk. Section 112(r) of the Clean Air Act requires an estimated 36,000 facilities to develop comprehensive risk

management plans (RMPs) and submit them to EPA, state agencies, and Local Emergency Planning Committees. The Agency believes that states are best suited to implement the RMP program because they benefit directly from its success and they often have established relationships with the communities that may be at risk.

The oil spill program prevents, prepares for, and responds to oil spills mandated and authorized in the Clean Water Act and Oil Pollution Act of 1990. EPA utilizes its appropriated monies to protect inland waterways through oil spill prevention, preparedness, and enforce compliance at 450,000 non-transportation-related oil storage facilities that EPA regulates. When necessary, the Agency undertakes oil spill response, which is funded through a reimbursable agreement with the U.S. Coast Guard.

Research

The 2001 research program supports the Agency's objective of reducing or controlling risks to human health and the environment at contaminated waste sites by accelerating scientifically defensible and cost-effective decisions for cleanup at complex sites, mining sites, marine spills, and Brownfields. The research program will: 1) provide improved methods and dose-response models for estimating risks from complex mixtures contaminating soils and groundwater; 2) provide improved methods for measuring, monitoring, and characterizing complex waste sites in soils and groundwater; and 3) develop more reliable technologies for cleanup of contaminated soils and groundwater. In 2001, EPA will also deliver the annual Superfund Innovative Technology and Evaluation (SITE) report to Congress, which provides program/project status and cost savings information.

Waste identification, combustion, and waste management constitute the three major areas of research in 2001 as the Agency works towards preventing releases by proper facility management. Waste identification research will conduct multimedia, multi-pathway exposure modeling and environmental fate and transport-physical estimation in support of the hazardous waste identification rule (HWIR). Waste management research will work on developing more cost-effective ways to manage/recycle non-hazardous wastes and will examine other remediation technologies while combustion research continues to focus on characterizing and controlling releases of nickel from waste combustion.

Strategic Objectives and FY 2001 Annual Performance Goals

Objective 01: Reduce or Control Risks to Human Health

- 172 (for a cumulative total of 821 or 48%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 784 or 46%) of high priority RCRA facilities will have groundwater releases controlled.

- Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 271,000 cleanups since 1987.

- EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 2,100 sites assessed, the generation of 5,400 jobs, and the leveraging of $1.8 billion in cleanup and redevelopment funds.

- EPA and its partners will complete 75 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.

- Provide technical information to support scientifically defensible and cost-effective decisions for cleanup of complex sites, hard-to -treat wastes, mining, oil spills near shorelines, and Brownfields to reduce risk to human health and the environment.

- Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

- Maximize all aspects of PRP participation which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process.

- Continue to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing liability concerns through the issuance of comfort letters and Prospective Purchaser Agreements (PPAs).

- Sign interagency agreements (IAGs) in 18 months or less from final listing on the NPL (but no later than 180 days after completion of the first remedial investigation/feasibility study).

Objective 02: Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies

- 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 70% of 2,900 facilities.

- 70% of USTs will be in compliance with EPA/State leak detection requirements; and 93% of USTs will be in compliance with EPA/State December 22, 1998 requirements to upgrade, close or replace substandard tanks .

Highlights

In 2001, EPA and state cleanup actions will protect human health by reducing the effects of uncontrolled releases on local populations and sensitive environments. The Agency will continue to build on past successes in cleaning up sites. The following accomplishments provide examples of what has been done by the Agency to achieve its goal:

- cleaned up more than 670 Superfund National Priority Sites;
- secured PRP commitments, over the life of the Superfund program, with an estimated value of $16.2 billion ($13.5 billion in response settlements and $2.7 billion in cost recovery settlements);
- resolved potential liability of 21,000 small volume waste contributing parties through 1999.
- completed about 6,000 Superfund removal response actions from 1982 through 1999;
- saved more than $277 million in potential costs by working closely with Department of Defense to clean up or close contaminated bases;
- signed 307 agreements for brownfields assessment pilots through 1999;
- targeted 1,712 high priority RCRA sites for aggressive risk reduction;
- brought more than 80% (approximately 600,000) of the regulated USTs into compliance with new regulatory standards;
- responded to an average of 70 oil spills and monitored 130 oil spill cleanups in a typical year; and
- worked closely with states to prevent or reduce risks from chemical accidents.

In 2001, EPA will complete construction at 75 Superfund sites and will take action to address contamination at 275 sites using removal authorities. The Superfund enforcement program will also obtain PRP commitments to initiate work at 70% of construction starts at non-Federal facility sites on the NPL and to conduct or fund removals.

In 2001, the Superfund redevelopment initiative will facilitate the return of additional Superfund sites to productive reuse. More than 170 sites have already been brought back into productive use and are generating approximately 11,000 jobs and $255 million in annual income. The initiative builds on administrative reforms to explore future use opportunities with local stakeholders before selecting a cleanup remedy.

Enhancing the Agency's current ability to respond to a terrorist event is an important element of the Agency's 2001 Superfund request. Terrorist threats could include biological, chemical and radiological attacks on populations in the United States. The Agency is strengthening its anti-terrorism capabilities. The focus is on improving the Agency's response capability, improving workforce safety, and working effectively with our Federal and local partners.

The Brownfields Initiative coordinates a federal approach to assist our partners in better addressing environmental site assessment and cleanup. In 2001, the Agency will provide additional funding and technical support to 50 existing assessment demonstration pilots. These pilots provide states (including U.S. territories), political subdivisions (including cities, towns, and counties), and federally recognized tribes with useful information and new strategies for promoting a unified approach to environmental site assessment and characterization, and redevelopment. In addition, the Agency and its Federal partners will select 10 new showcase community pilots to serve as models to demonstrate the benefits of interagency cooperative efforts in addressing environmental and economic issues related to brownfields. Similar to the 16 showcase communities designated in 1998, the 10 new showcase communities will capitalize on a multi-agency partnership designed to provide a wide range of support depending on the particular needs of each community.

The Agency will also provide funding to states for activities that are part of brownfields site assessment pilots. These activities include facilitating communication among brownfields pilots and with state environmental authorities. In addition, the Agency will provide funding for the development and enhancement (or augmentation) of state voluntary cleanup programs. To further enhance a community's capacity to respond to Brownfields redevelopment, the Agency will also make 70 awards to capitalize brownfields cleanup revolving loan funds (BCRLF). Communities completing their brownfields site assessment demonstration pilot activities and communities completing targeted brownfields assessments are eligible to apply for BCRLF pilots. To augment the communities' capacities to clean up brownfields sites, EPA will fund 10 job training pilots for community residents and will provide $3,000,000 to the National Institute of Environmental Health Sciences to supplement its minority worker training programs that focus on brownfields workforce development activities. In addition, EPA will continue to explore connections between RCRA low-priority corrective action efforts and cleanup of brownfields properties.

In 2001, 172 additional high priority RCRA facilities will have human exposures controlled and 172 additional high priority RCRA facilities will have toxic releases to groundwater controlled. To accomplish the Agency's RCRA objectives, in 2001, the Agency will implement RCRA cleanup reforms through the regions and authorized states. This initiative will reform the current RCRA corrective action program to be faster, safer and promote smarter cleanups. The initiative will also ensure RCRA's strategic goals are met and that millions of people who live or work in the vicinity of RCRA facilities will be protected. The RCRA cleanup reforms intend to: reduce impediments to achieving the Agency's objective; enhance state and stakeholder involvement; and, promote innovative approaches to cleanup actions. Implementation of this initiative will be the key to a successful corrective action program for 2001 and beyond.

In 2001, the RCRA hazardous waste permits program will have permits or other approved controls in place for 106 additional RCRA hazardous waste management facilities for a cumulative total of 70 percent of the universe (2,900 facilities). These efforts minimize the threat of exposure to hazardous substances because the RCRA program's comprehensive framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste.

The Agency has several efforts underway to reform the RCRA program so that it better reflects actual levels of risk. The hazardous waste identification rule seeks to exclude lower risk wastes from hazardous waste regulation. In 2001, the Agency will continue work to develop concentration-based exemption levels for constituents occurring in hazardous wastes. The Agency is working to improve test methods under its toxic constituent leaching procedure to better evaluate waste leaching potential for assessing whether a waste should be classified as hazardous, how effective a treatment is, and whether land disposal is an appropriate method for managing particular wastes. Another risk evaluation effort, the surface impoundment study, will be completed in March 2001.

Phase I of the maximum achievable control technology (MACT) standards under the Clean Air Act (CAA) was finalized in 1999. Phase I revised standards for incinerators and cement and lightweight aggregate kilns that burn hazardous waste. As the MACT standards are implemented, by 2002, the Agency will reduce the emissions of dioxins, furans, heavy metals, acid gases and particulate matter from these sources. These efforts will further reduce the indirect exposure (primarily through the food chain) to hazardous constituents in emissions, especially to children. Phase I implementation efforts accelerate in 2001 and focus on the transition from RCRA to CAA air emissions permitting and tracking of facility progress. In 2000, EPA will initiate work on Phase II MACT standards for hazardous waste burning boilers. In 2001, the Agency will continue efforts to pursue development of the Phase II rule. Like Phase I, the Phase II rule will address emissions of dioxins, furans, heavy metals, and particulate matter.

In 2001, the Agency will work with states and industry to complete the development of voluntary guidelines for industrial non-hazardous waste management. These voluntary guidelines address a range of issues including groundwater contamination, air emissions, and alternatives to waste disposal. Although the states implement the municipal solid waste (MSW) landfill regulatory programs, the Agency establishes minimum national standards for state compliance. The Agency also reviews and approves state MSW landfill permit programs. The Agency will continue to work with states to ensure that facilities have approved controls in place to prevent dangerous releases to air, soil, groundwater and surface water. These activities will provide a uniform application of minimal safe management standards to help ensure that sufficient controls are in place.

In 2001, the Agency's priorities in the UST program are to: 1) prevent leaks from USTs; 2) ensure that USTs are managed properly and meet appropriate technical requirements; and 3) clean up releases from LUSTs. The Agency will work to ensure that 70% of USTs are in compliance with EPA and state leak detection requirements and that 93% of USTs are in compliance with the December 22, 1998, requirements to upgrade, close, or replace substandard tanks. The Agency also plans to complete 21,000 LUST cleanups under the supervision of EPA and its state, local, and tribal partners.

Reducing chemical accidents is vital to ensure that communities are not exposed to hazardous materials. The Agency continues its efforts to help states and local emergency planning committees implement the risk management plan (RMP) program. EPA has made steady progress in this area and in 2001 it will delegate the program to seven additional states for a cumulative total

of 20. To reach this goal, EPA will provide technical assistance grants, technical support, outreach, and training to state and local emergency planning committees. Through these activities, states, local communities and individuals will be better prepared to prevent and prepare for chemical accidents.

Oil spills pose risks to human health and the environment. The Federal oil spill program prevents, responds to and monitors oil spills that occur in the waters of the United States and adjoining shorelines. Over 24,000 spills are reported annually, about half of these in the inland zone which is EPA's jurisdiction. EPA responds to approximately 70 significant spills a year and monitors the work of others at approximately 130 additional spills a year. To reduce the risk of hazardous exposure to people and the environment, the Agency aims to prevent oil spills from occurring, prepare for oil spills that do occur, and respond to spills when necessary.

Research

In 2001, exposure research will be conducted to reduce uncertainties associated with soil/groundwater sampling and analysis and to reduce the time and cost associated with site characterization and site remediation activities. Assessment research will evaluate the magnitude of the risks posed by contaminants to human health and the ecosystem, the contributions of multiple exposure pathways, the bioavailability of adsorbed contaminants and treatment residuals and the toxicological properties of contaminant mixtures. Risk management research will be conducted to develop and demonstrate more effective and less costly remediation technologies involving complex sites and hard-to-treat wastes.

Research in support of the hazardous waste identification rule (HWIR) will focus on reducing the uncertainty associated with exposure assessment model predictions by providing improved process level data and models for quantifying pollutant interactions in a variety of natural systems. The research also provides consultation on sampling and sample design related to compliance with proposed exit levels in support of the proposed HWIR. In 2001, EPA will update the HWIR99 modeling methodology for delisting hazardous wastes. Additionally, waste management research will be conducted to improve the management of both solid and hazardous wastes. This includes development and/or evaluation of more cost-effective waste treatment, containment, and recycling processes, along with technical guidance on their design and implementation.

External Factors

There are a number of external factors that could substantially impact the Agency's ability to achieve the outlined objectives under this goal. The external factors include, for example, heavy reliance on state partnerships, development of new environmental technology, commitment by other federal agencies, or statutory barriers.

The Agency's ability to achieve its goals for Superfund construction completion is partially dependent upon the performance of other Federal agencies, such as the Department of Defense and the Department of Energy, as is the establishment of the Restoration Advisory Boards (RABs)/Site Specific Advisory Boards (SSABs) and other cleanup activities. In addition, the Agency's goals of construction completions, cost recovery, and maximizing PRP participation are heavily dependent on the progress of PRP negotiations, agreements with states and tribes, and the nature of contamination at NPL sites.

For the RCRA program, the Agency's ability to achieve its goals in release prevention and cleanup is heavily dependent on state participation. In most cases, states have received authorization (hazardous waste management program) or approval (municipal solid waste landfill permit program) and are primary implementors of these programs. As such, EPA relies heavily on states to perform many of the activities needed to achieve these targets. In addition, increased flexibility has been provided to states to redirect resources under the National Environmental Performance Partnership System (NEPPS) to identify priorities. If states redirect resources away from this area, it will impact both annual performance and progress toward implementing the Agency's strategic plan.

The Agency's ability to achieve its goals of: 1) improving leak detection compliance, 2) ensuring compliance with the 1998 deadline requirements to upgrade, replace or close substandard USTs, and 3) ensuring LUST cleanups are completed is greatly dependent on state programs for they are primarily responsible for implementing the UST/LUST program. EPA does not fully fund state UST programs, so achievement of the annual and strategic goals is dependant on the strength of state programs and state funding levels. States have the primary responsibility for ensuring that owners/operators comply with UST requirements and for overseeing the completion of LUST cleanups. However, EPA has the primary responsibility for implementing the UST/LUST program in Indian country.

For the risk management and counter-terrorism programs, the Agency recognizes that accident prevention and response, as well as preparedness for terrorist incidents, are inherently local activities. To succeed, the program relies on the commitment and accomplishments of the various stakeholders. Key examples of stakeholders include the following: industry, state and local government, and other Federal partners. Therefore, EPA's success will depend upon the willingness and ability of stakeholders to deliver on the commitments and obligations in their plans.

The Agency's goal of delegating the risk management plan (RMP) program to more states will depend upon those states enacting laws, allocating funds and developing specific capabilities that will enable them to review and audit risk management plans. Our goal, to increase the number of facilities that are in compliance with the reporting requirement, relies on industry's willingness to provide the necessary leadership to make RMP compliance a priority and commit the resources to get the job done.

External influences may also affect EPA's counter-terrorism goal to train vulnerable communities and prepare them for terrorist threats. The overarching limitation is the fact that the DOD, not EPA, leads the initiative. EPA plays a key role, but we neither control the resources nor

set the priorities that could ensure that all Federal, state and local participants are engaged at a level that will ensure our commitments are met.

Environmental Protection Agency

2001 Annual Performance Plan and Congressional Justification

Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response

Objective # 1: Reduce or Control Risks to Human Health

By 2005, EPA and its partners will reduce or control the risk to human health and the environment at over 375,000 contaminated Superfund, RCRA, UST and brownfield sites.

Resource Summary
(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req. v. FY 2000 Ena.
Reduce or Control Risks to Human Health	**$1,511,811.5**	**$1,451,859.3**	**$1,500,675.5**	**$48,816.2**
Environmental Program & Management	$45,697.0	$54,612.5	$59,538.5	$4,926.0
Science & Technology	$55,782.7	$49,138.3	$7,516.6	($41,621.7)
State and Tribal Assistance Grants	$24,808.8	$24,808.8	$32,808.8	$8,000.0
Leaking Underground Storage Tanks	$70,356.8	$67,393.6	$69,832.7	$2,439.1
Oil Spill Response	$962.0	$969.8	$966.8	($3.0)
Hazardous Substance Superfund	$1,314,204.2	$1,254,936.3	$1,330,012.1	$75,075.8
Total Workyears	3,656.8	3,552.5	3,529.5	(23.0)

Key Programs
(Dollars in thousands)

	FY 1999 Enacted	FY 2000 Enacted	FY 2001 Request
RCRA Corrective Action	$31,059.9	$36,610.5	$40,062.8
RCRA State Grants	$24,808.8	$24,808.8	$32,808.8
Federal Preparedness	$1,500.0	$1,500.0	$2,700.0

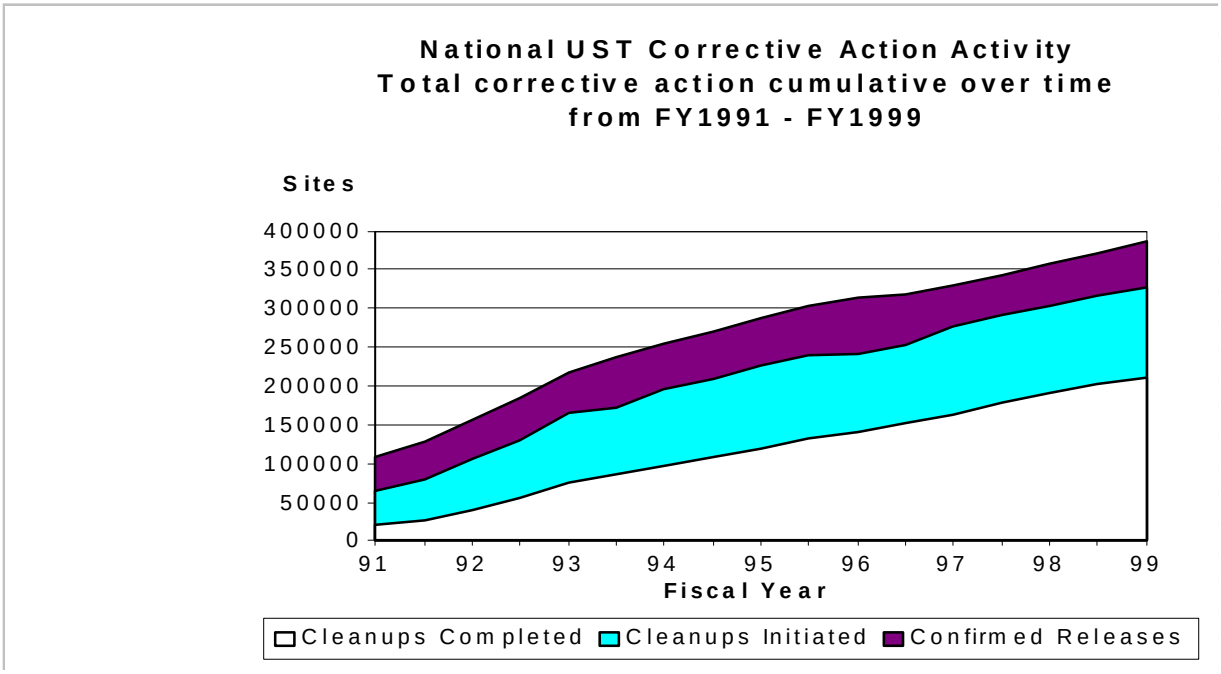
Leaking Underground Storage Tanks (LUST)Cooperative Agreements	$58,990.0	$56,466.8	$58,050.0
Superfund Remedial Actions	$585,181.4	$499,799.0	$543,682.9
Superfund Removal Actions	$199,216.8	$200,860.3	$199,218.0
Federal Facilities	$29,368.2	$27,750.6	$29,803.8
Assessments	$87,712.3	$83,857.7	$83,204.7
Brownfields	$92,603.2	$92,215.1	$91,626.7
ATSDR Superfund Support	$76,000.0	$70,000.0	$64,000.0
NIEHS Superfund Support	$60,000.0	$60,000.0	$48,526.7
Other Federal Agency Superfund Support	$10,000.0	$10,000.0	$10,585.0
Hazardous Substance Research:Hazardous Substance Research Centers	$4,529.8	$2,504.7	$2,594.5
Hazardous Substance Research:Superfund Innovative Technology Evaluation (SITE)	$7,695.9	$7,017.3	$5,932.0
EMPACT	$398.4	$35.5	$436.0
Common Sense Initiative	$135.6	$0.0	$0.0
Civil Enforcement	$72.4	$0.0	$0.0
Compliance Assistance and Centers	$558.3	$514.1	$445.6
Superfund - Maximize PRP Involvement (including reforms)	$87,857.2	$82,009.6	$86,040.1
Superfund - Cost Recovery	$30,580.6	$30,269.1	$32,886.4
Superfund - Justice Support	$29,000.0	$28,663.5	$28,663.5
Rent, Utilities and Security	$0.0	$45,248.5	$47,077.8
Administrative Services	$6,144.3	$14,950.0	$14,850.3
Regional Management	$0.0	$1,146.1	$1,205.6

FY 2001 Request

Leaking Underground Storage Tanks

The leaking underground storage tank (LUST) program promotes rapid and effective responses to releases from underground storage tanks containing petroleum by enhancing state, local and tribal enforcement and response capability. In 2001, the Agency's goal is to complete 21,000 cleanups under the supervision of EPA and its state, local and tribal partners. Corrective action at sites where underground storage tank (UST) releases have contaminated soil and/or groundwater is a key element of the UST/LUST program. Nearly all corrective actions are undertaken by UST owners and operators under the supervision of state or local agencies. EPA oversees these activities on Indian lands.

The Agency's highest priorities in the LUST program over the next several years will be to address the backlog of 168,900 cleanups (as of September 1999), and to address LUST sites that are difficult to remediate because they are contaminated by methyl tertiary butyl ether (MTBE) and other oxygenates. To help address these LUST sites and to help states make more efficient use of their resources, including state funds that reimburse some UST owners and operators for a portion of their cleanup costs, the Agency will continue to support cooperative agreements, using funds from



the LUST Trust Fund, under which states oversee cleanups by UST owners and operators. In cases where the responsible owner or operator is unknown, unwilling, or unable to clean up releases, the Fund is able to pay for this activity.

The full extent of petroleum soil and groundwater contamination at existing LUST sites will not be recognized for many more years, perhaps a decade. To be effective, remediation technologies

continue to advance, especially to address recalcitrant contaminants, such as MTBE. As substitutes are sought for MTBE, and as the composition of gasoline changes in response to changing engine performance requirements, states will face the continuing challenge of training new staff in the new remediation and site investigation technologies.

The Agency's LUST program will continue to support state efforts to make cleanups better, cheaper and faster. The Agency will continue to promote risk-based decision making (RBDM) so that LUST sites are addressed based on the risks posed, while ensuring all sites move toward cleanup. This requires re-engineering of some state programs. The Agency is helping states implement RBDM at LUST sites. It will take several years before RBDM implementation is complete nation-wide. To promote its implementation, the Agency will provide assistance to state and tribal UST programs to surmount technical impediments. EPA implementation of RBDM includes developing ways to measure the performance of RBDM in the states, helping to resolve multi-state technical implementation barriers to RBDM development, and applying RBDM to corrective action on tribal lands.

The Agency will continue to support corrective action information exchanges among the states. EPA will also support development of policy guidance documents, technical manuals, and seminars on such topics as monitored natural attenuation and free product recovery. The Agency will also help sponsor training and workshop programs for state staff to improve LUST cleanup management. For example, the Agency will continue to promote "pay-for-performance" cleanup programs which reduce contamination at LUST sites in less time, with less money.

As a result of the Agency's July 1999 blue ribbon panel's findings and recommendations on the use of oxygenates in gasoline, EPA's LUST program will help to support the improvement of remediation and treatment, as well as the monitoring and reporting of oxygenate contamination in groundwater at UST sites. As a result of the panel's recommendations, some states may decide to reopen sites that have been closed and considered to be clean in order to test for MTBE and other fuel oxygenates. This will pose an additional burden on the states already heavy workload in overseeing the backlog of 168,900 sites for which cleanups have not been completed.

In 2001, the Agency will support the "USTFields" program, which is an ongoing effort that focuses attention on abandoned or idled industrial and commercial UST facilities. Some of these facilities are gasoline service stations and automobile lots (i.e., rental car lots) where use of this land for redevelopment is complicated by real or perceived environmental contamination. USTFields are located in urban, suburban, and rural areas throughout the country. The Agency's LUST program is committed to help EPA regions, states, and local governments address cleanup of USTFields once contamination is discovered.

The Agency has primary responsibility for implementing the LUST program in Indian country. EPA educates owners and operators about the UST requirements. EPA also oversees and conducts site assessments and remediation in Indian country. Through the end of September 1999, there were 1,126 confirmed releases on Indian lands. As of September 30, 1999, a total of 850 cleanups had been initiated and of that total approximately 478 cleanups had been completed. The Agency projects that cleaning up all known and yet-to-be-discovered releases in Indian country will

take several more years. In collaboration with tribes, the Agency is implementing a risk-based corrective action (RBCA) process for LUST sites in Indian country. When owners and operators are unable or unwilling to pay for corrective action, the Agency may use funding from the LUST Trust Fund to pay for cleanup. Demonstration grants under RCRA Section 8001, and non-demonstration grants under RCRA Section 9003, will continue to help Indian tribes develop the capability to administer their own programs.

Superfund

The Superfund program addresses contamination from uncontrolled releases at Superfund hazardous waste sites that threaten human health, the environment, and the economic vitality of local communities. Superfund sites with contaminated soils and groundwater occur nationally in a large number of communities, many of them urban areas, where they are often accessible to children or present exposure to disadvantaged populations. In fact, more than 27 million Americans, including over 4 million children, live within four miles of a Superfund site. Once contaminated, groundwater and soils may be extremely difficult and costly to cleanup. Some sites will require decades to complete. In 2001, EPA will complete construction at 75 NPL sites for a cumulative total of 830.

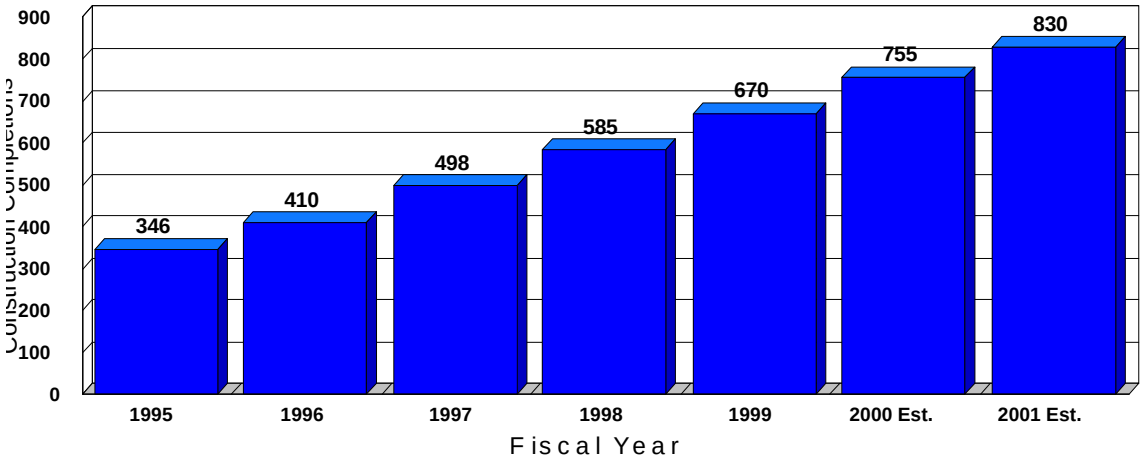
To protect human health and the environment and address potential barriers to redevelopment, EPA works with states, Indian tribes, and other Federal agencies to: 1) assess sites and determine whether they meet the criteria for Federal Superfund response actions; 2) prevent, minimize or mitigate significant threats at Superfund sites through removal actions; 3) generate accurate risk assessment and cost-performance data critical to providing the technical foundation for decisions made in environmental cleanup programs; 4) complete remedial cleanup construction at sites listed on the NPL; 5) develop technologies for cost-effective characterization and remediation; 6) enhance the role of states and Indian tribes in the implementation of the Superfund program; 7) work with the surrounding communities to improve their direct involvement in every phase of the cleanup process and their understanding of potential site risk; and 8) promote reuse and redevelopment of remedial and removal Superfund sites.

More Superfund NPL sites have reached construction completion in the past four years than in all of the prior years of the Superfund program combined. As of September 1999, EPA had completed all final cleanup plans at over 1,000 Superfund NPL sites and undertaken almost 6,000 removals at hazardous waste sites to immediately reduce the threat to human health and the environment. The Agency also has cleanup construction underway or completed at 91% of the sites on the final NPL (1,412 sites), including:

- 48% of sites have all cleanup construction completed (670 sites)
- 31% of sites have remedial cleanup construction underway (438 sites)
- 12% of sites have had or are undergoing a removal cleanup action (172 sites).

Additionally, environmental data gathered by EPA through August 1999 shows that Superfund continues to fulfill its environmental mission and is reducing the risks to human and

Cumulative Construction Completions



ecological health posed by dangerous chemicals in the air, soil, and water. Since the inception of the Superfund program, EPA has: 1) provided alternative water supplies to over 430,000 people at NPL and non-NPL sites to protect them from contaminated ground and surface water; 2) relocated over 22,000 people at NPL and non-NPL sites in instances where contamination posed the most severe immediate threats; 3) cleaned 216 million cubic yards of hazardous solid waste; and, 4) cleaned 325 billion gallons of hazardous liquid waste.

EPA's efforts to address uncontrolled releases at Superfund sites begin when states, Indian tribes, citizens, other Federal agencies, or other sources notify EPA of a potential or confirmed hazardous waste site or incident. EPA confirms this information and places sites requiring Federal attention in the Agency's comprehensive environmental response, compensation and liability information system database. In the case of Federal facilities, sites are placed on the Federal facility hazardous waste docket. These sites are then assessed to determine whether Federal action is needed. In most cases, EPA makes a determination that no further Federal action is appropriate. These sites are removed from the inventory and EPA may refer the site to state or tribal environmental authorities for further attention - if warranted. For those sites where additional action is needed to protect public health and the environment, EPA seeks the course of action best suited to the individual sites. Sites posing immediate risks may be addressed under removal authority. Federal action may be delayed or avoided at sites with ongoing state action. In some instances, potentially responsible parties enter into agreements with EPA to evaluate or cleanup sites prior to listing on the NPL. In some cases, where cleanup at these sites is progressing in a timely and protective manner or is completed prior to final listing, listing on the NPL may be unnecessary. Some sites may be addressed under both removal and remedial authorities when, for example, early removal action is taken to address risks at sites on the NPL. As a matter of policy, EPA seeks the governor's concurrence before listing sites on the NPL.

Removal authority under CERCLA is used by EPA to prevent, reduce or mitigate threats posed by releases or potential releases of hazardous pollutants in emergency and non-emergency situations at NPL and non-NPL sites. EPA undertakes removal response actions at: 1) emergency incidents where response is necessary within a matter of hours (e.g., threats of fire or explosion); 2) time-critical situations at NPL sites to make these sites safe from immediate threats while they await remedial action; 3) time-critical incidents at non-NPL sites posing major public health and environmental threats; and 4) non-time critical situations at both NPL and non-NPL sites to promote quicker and less costly cleanup. Sites known to pose the greatest potential risk to public health and the environment receive priority.

For sites listed on the NPL, restoration work begins with site characterization and feasibility study to review site conditions and proposals for future land use. This forms the foundation for the Record of Decision and remedy selection. Public involvement is a key component in selecting the proper remedy at a site. A remedial action is performed upon approval of the remedial design and represents the actual construction or other work necessary to implement the remedy selected. The United States Army Corps of Engineers and the Bureau of Reclamation also assists EPA in implementing most high-cost, Trust Fund-financed remedial actions.

Although completion of construction is a major milestone in the Superfund program, many activities occur at a site after this milestone is achieved. These "post-construction" activities include the following: 1) groundwater restoration system operation until cleanup goals are achieved; 2) five-year reviews to assure that remedies remain protective; 3) implementation of institutional controls; 4) oversight of operation and maintenance activities performed by the states and PRPs to ensure cleanup methods work properly and the site remedy continues to be effective; and 5) site deletion from the NPL. As more sites move into post-construction, the Agency is devoting more resources to assure adequate long-term stewardship.

EPA is committed to involving citizens in the site cleanup process. Superfund community relations are based on two-way communication designed not only to keep citizens informed about site progress, but also to give them the opportunity to provide input on site decisions. EPA conducts outreach efforts, such as holding public meetings, establishing community advisory groups, providing communities with financial assistance to hire technical consultants to assist them in understanding the problems and potential solutions to the contamination problems, and distributing site-specific fact sheets. EPA strives to create a decision-making process to clean up sites that the communities feel is open and legitimate, and improves the community's understanding of potential risk at hazardous waste sites. Similarly, at Federal facility Superfund sites, the Agency encourages citizen involvement by working with, for example, Department of Defense (DOD) to establish restoration advisory boards and Department of Energy (DOE) to establish site specific advisory boards (SSABs).

States and Indian tribes are key partners in the cleanup of Superfund hazardous waste sites. EPA can authorize the states or tribes to carry out a fund-financed response. However, states and tribes more often operate as a support agency. In this role, they are actively involved in site response activities, but they do not take on a lead role. To support their involvement as a lead or

support agency, EPA provides financial support through cooperative agreements to conduct removal, site assessment, remedial, and enforcement projects and for core infrastructure activities.

Under core program cooperative agreements, EPA provides non-site-specific funds to develop, maintain and enhance states' and tribes' capacity to manage and implement CERCLA responses. EPA currently has core program cooperative agreements with 48 states and 15 tribes. Activities funded under the core program cooperative agreements include the following: 1) establish and update procedures for emergency responses and longer-term remediation procedures which include developing and updating of generic health and safety plans, quality assurance project plans, and community relations plans; 2) develop/update provisions for satisfying all requirements and assurances which include fiscal and contract management activities for CERCLA; 3) provide legal assistance relating to CERCLA, such as document review for legal sufficiency, development and refinement of the enforcement program, development of legal authorities, and legal assistance for coordinating applicable or relevant and appropriate requirements (ARAR) identification; and 4) hire and train staff to manage publicly-funded cleanups.

In May 1998, EPA released the "Plan to Enhance the Role of States and Tribes in the Superfund Program." The plan was developed so that EPA can share Superfund program responsibilities more fully with interested and capable states and tribes, enabling the cleanup of more sites. In 1999, EPA continued to implement and evaluate the plan. Currently, 19 pilots have been approved with 9 states and 10 tribes.

Across the country, thousands of Federal facilities are contaminated with hazardous waste, unexploded ordnance (UXO), radioactive waste, fuels, and a variety of other toxic contaminants. These facilities include many different types of sites, such as formerly used defense sites, abandoned mines, nuclear weapons' production plants, military ranges, fuel distribution areas, and landfills. The Agency works with the facilities to promote faster, more effective, and less costly cleanups and, where appropriate, to encourage reuse. EPA provides technical and regulatory oversight at Federal facilities on the NPL to ensure protection of human health, effective program implementation, and meaningful public involvement. The Agency works with the DOD, DOE, and other Federal entities to find protective, creative, and cost-effective solutions.

The Superfund Federal facilities response program oversees cleanup at Federal facilities. To date, nine sites have been deleted from the NPL and in 1999 six sites were added to the NPL. The program works with a large number of ongoing projects: 477 remedial investigations/feasibility studies, 76 remedial designs, and 204 remedial actions. In many cases, Federal facilities face unique challenges due to the types of contamination (e.g., radiation, UXO), the size of the facility (e.g., Hanford is over 500 square miles), or the complexities of reuse related to environmental issues (e.g., base closure).

In response to recommendations from the EPA Office of Inspector General, EPA is establishing a quality management system for environmental information. This will entail the implementation of a quality management plan based on an adaptation of the American National Standard "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," ANSI/ASQC E-4-1994, that will establish requirements

for headquarters and the regions. EPA has taken the lead in establishing comparability and consistency in quality assurance across the Federal community through the intergovernmental data quality task force, which is responsible for the adaptation of ANSI/ASQC for use across the federal community. Implementation of the quality management system will involve significant collaboration with other federal agencies, including the Department of Defense and the Department of Energy. As part of implementation, training and orientation will be required for the regions as well as federal facilities. Establishing the quality management plan will not complete this activity; rather it will initiate a continuing process that is vital to assure critical restoration and reuse decisions are based on environmental data that are reliable and technically sound.

EPA has significantly improved the Superfund program through administrative reforms. These efforts will continue in 2001. There have been many noteworthy achievements over the last year. Key accomplishments through the end of 1999 include the following: 1) establishing community advisory groups at 51 sites; 2) reviewing 43 site decisions for an estimated savings of over $60 million; 3) saving more than $1.3 billion in future costs from updating over 290 remedies; 4) evaluating over 75 projects on the risk-based priority panel for NPL sites; and 5) archiving over 31,800 CERCLIS sites to help promote the economic redevelopment of these properties. The successes realized throughout Superfund set the Agency in a uniquely positive position to achieve and expand Superfund accomplishments in the coming years.

The Superfund redevelopment initiative is a new coordinated national effort to facilitate the return of Superfund sites to productive use. Through the Superfund administrative reforms effort and cumulative experience, EPA has become increasingly aware of the importance of fully exploring future use opportunities at Superfund sites with its partners before selecting and implementing a cleanup remedy. This has resulted in Superfund sites, which were once thought to be unusable that are now being "recycled" back into productive use. EPA has compiled a list of over 170 Superfund sites that have been recycled. At these sites, more than 13,000 acres are now in ecological or recreational use. Approximately 11,000 jobs, representing more than $255 million in annual income, are located at sites that have been recycled for commercial use. EPA believes it can help to significantly increase the number of sites in productive reuse by focusing its efforts more on recycling Superfund sites, and by involving its partners in determining the reasonably anticipated future uses of sites so that it can select, design and implement cleanups that are consistent with those uses, while protecting human health and the environment.

EPA's focus on recycling Superfund sites builds on the success the Agency has achieved through its administrative reforms. In carrying out this initiative, EPA's priority remains the protection of human health and the environment. While operating within the current regulatory and statutory framework, EPA will take full advantage of its administrative flexibility in recycling Superfund sites. The Agency remains committed to accelerating the pace of Superfund cleanups without compromising its "enforcement first" approach, which includes the recovery of costs from those who are responsible for the pollution. The Superfund redevelopment initiative will focus on activities to support remedy selection and design. Ten pilot sites were selected and awarded during 1999. By the end of 2000, EPA expects to select up to an additional 40 pilots sites through a competitive process. These activities are expected to be valued up to $100,000 in direct financial assistance and/or services to local communities.

In 2001, the Agency will increase its emphasis on anti-terrorism to meet its leadership responsibilities under the National Contingency Plan, CERCLA, Oil Pollution Act, and Presidential Policy Directives 39 and 62. Key Federal and state agencies depend on EPA to carry out its responsibilities as a leader of the National Response System (NRS). Under this initiative, the Agency will: 1) improve preparedness and response capability to respond to intentional releases and acts of terrorism; 2) enhance emergency response team capabilities to deliver equipment, experts, and specialized training necessary to support regional counter terrorism teams; and 3) enhance biological, radiological, laboratory, and training capabilities.

These improvements will help EPA meet its responsibilities to Federal, state and local partners and to enhance its role as an NRS leader. It will also position EPA to save lives and prevent environmental harm in the event of intentional releases or acts of terrorism. Also, it will protect the health and safety of EPA On-Scene Coordinators (OSCs) when they respond to a terrorist event through enhanced equipment and training.

Radioactive Technical Assistance

In 2001, EPA will provide national level guidance on the risks posed by radioactive materials in the environment including technical guidance for conducting risk assessments in order to limit public and environmental exposure to radiation. EPA will accomplish this by working with the public, industry, states, tribes and other government agencies to use information systems and to inform and educate people about radiation risks and promote actions that reduce human exposure. EPA alone, or in partnership with other Federal agencies, will continue to promote the management of radiation risks in a consistent safe manner at Superfund site, DOE, DOD, state, local and other Federal sites by:

- Developing risk assessment models, remediation technologies, and measurement and information systems.
- Providing training and direct site assistance including laboratory, field and risk assessment support.
- Conducting radiological assessments of sites with actual or suspected radioactive contamination.

The radiation program also maintains an on-going capability to provide radioanalytical and mixed waste analytical data on environmental samples to support site assessment and cleanup activities. EPA also coordinates with other nations on select radiological issues, including risk assessment methodologies and risk management approaches.

Superfund Enforcement

The Superfund enforcement program is critical to the Agency's ability to cleanup the vast majority of the nation's worst hazardous waste sites. In 2001, EPA will continue its successful

emphasis on completing construction at Superfund sites by obtaining commitments for PRPs to conduct work at new remedial construction starts at non-Federal facilities and ensuring compliance with Federal facility statutes and CERCLA agreements.

The Superfund enforcement program has successfully encouraged or compelled PRPs to undertake or fund approximately 70% of new remedial construction work at Superfund sites in recent years. The program focuses on the following efforts: 1) maximizing PRP participation in conducting or funding response actions while promoting fairness in the enforcement process; 2) recovering costs from PRPs when EPA expends funds from the Superfund Trust Fund; and 3) negotiating agreements with Federal facilities for NPL site cleanup. The Superfund program emphasizes "enforcement first" to ensure that sites for which there are responsible parties are cleaned up by those parties. In tandem with this approach, various Superfund reforms are being implemented to increase fairness, reduce transaction costs and promote economic redevelopment. The Agency provides funds to the Department of Justice (DOJ) for an interagency agreement (IAG) to assist EPA Superfund in enforcement efforts. This objective also supports the RCRA corrective action and the regional LUST legal enforcement program.

The Superfund program continues to gainfully benefit from Superfund enforcement reforms. These reforms include undertaking PRP searches and investigations to develop sufficient information to make orphan share determinations; making orphan share offers at all eligible sites; expediting negotiations to facilitate early de minimis settlements; settling with parties with limited ability to pay; making more effective and widespread use of Alternative Dispute Resolution (ADR); issuing administrative orders to the maximum practicable number of PRPs at a given site; creating site-specific accounts; removing liability barriers to economic redevelopment through prospective purchaser agreements; and assessing PRP compliance with cleanup obligations at sites with potential environmental justice issues then seeking penalties for significant non-compliance with cleanup requirements, as appropriate.

In 2001, the Agency will negotiate remedial design/ remedial action cleanup agreements at sites on the NPL and will also achieve removal agreements at hazardous waste sites. Where negotiations fail, the Agency will take either unilateral enforcement actions to require PRP cleanup or use Trust Fund dollars to remediate sites. When Trust Fund dollars are used to cleanup sites, the program will take cost recovery actions against PRPs to recover expenditures.

Institutional controls are a critical component of many response actions selected by EPA to ensure that property is used and maintained in an appropriate manner after construction of the selected cleanup is complete. The Superfund program will implement and ensure the enforcement of institutional controls following the completion of construction. Furthermore, response work will be undertaken, in accordance with existing agreements or through additional negotiations, when found to be necessary through five year reviews.

EPA will continue its efforts in Federal facilities administrative activities related to CERCLA § 120 agreements. CERCLA § 120 requires that for all Federal facility sites on the NPL, an IAG be signed by all appropriate parties which provide enforceable schedules for the progression of the entire cleanup. For Federal facility NPL sites, the signing of an IAG and oversight of its

implementation ensures a protective cleanup at a timely pace. EPA will monitor milestones in existing IAGs, resolve disputes, and oversee all remedial work being conducted by Federal facilities. EPA will work with affected agencies to resolve outstanding policy issues relating to the cleanup of Federal facilities. For 2001, EPA will enter into an IAG with the responsible Federal agency at all Federal facilities as soon as possible after listing on the NPL but no later than 180 days after completion of the first remedial investigation/feasibility study.

In 2001, the Superfund cost recovery program will recover monies expended from the Trust Fund from viable responsible parties. Where settlement negotiations and previous enforcement actions have failed to achieve PRP response, and Trust Fund dollars are used to cleanup sites, the program will take cost recovery actions against PRPs to recover expenditures. By pursuing cost recovery settlements, the program promotes the principle that polluters should pay cleanup costs at sites where they caused or contributed to the contamination and maximizes the leverage of the Trust Fund to address future threats posed by contaminated sites. Trust Fund expenditures will be recouped through administrative actions, CERCLA § 107 case referrals and ADR.

The enforcement program's involvement in case referrals and support include case development and preparation, referral and post-filing actions. The program will also provide case and cost documentation support for the docket of cases currently being worked on by DOJ. The enforcement program will meet cost recovery statute of limitation deadlines, resolve cases, and issue bills for oversight and make collections in a timely manner.

Other Federal Agencies

Other Federal agencies contribute to this objective by providing essential services in areas where EPA does not possess the needed Superfund specialized expertise. Contributors include the Agency for Toxic Substances and Disease Registry (ATSDR), the National Institute of Environmental Health Sciences (NIEHS), the Occupational Safety and Health Administration (OSHA), the National Oceanic and Atmospheric Administration (NOAA), the Department of Interior (DOI), the United States Coast Guard (USCG), and the Federal Emergency Management Agency (FEMA). Some of the essential services performed by these Federal agencies include the following: 1) ATSDR conducts public health assessments at NPL and non-NPL sites; maintains toxicology databases for chemicals found at sites; and provides health education to health care providers, local and national health organizations, and state and local health departments; and 2) NIEHS manages a worker training grant program which trains workers who are, or may be, working with hazardous waste and funds a basic research program which focuses on assessing the impacts of complex chemical mixtures on humans.

Overview of Other Federal Agency Funding

Agency	FY 2000 Enacted	FY 2001 Pres. Bud
ATSDR	$70,000,000	$64,000,000
NIEHS	$60,000,000	$48,526,700
DOJ	$28,663,500	$28,663,500
USCG	$4,800,000	$5,135,000
FEMA	$1,100,000	$1,100,000
NOAA	$2,450,000	$2,450,000
DOI	$1,000,000	$1,200,000
OSHA	$650,000	$700,000
TOTAL	**$168,663,500**	**$151,775,200**

Brownfields

Brownfields are abandoned, idled, or under-used industrial and commercial properties where expansion or redevelopment is complicated by real or perceived contamination. Brownfields properties are not traditional Superfund sites as they are not generally highly contaminated and present lesser health risks. However, economic changes over several decades have left numerous communities with these contaminated properties and abandoned sites. In fact, the General Accounting Office has estimated that over 450,000 brownfield properties exist. Concerns about environmental liability and cleanup, infrastructure declines, and changing development priorities have worsened the situation.

In response to needs for the assessment and cleanup of brownfield properties, the Agency implements strategies to bring these properties back into use for the benefit of their communities. The brownfield economic redevelopment initiative is a comprehensive approach to empower states, communities, and other stakeholders interested in environmental cleanup and economic redevelopment to work together to prevent, assess, safely clean up, and sustainably reuse these properties.

The Agency provides funding for brownfield site assessment demonstration pilots for up to $200,000 each. These pilots provide EPA, states, local governments, and federally recognized Indian tribes with useful information and new strategies for promoting a unified approach to environmental site assessment and characterization, and redevelopment. In 2001, the Agency will continue to fund brownfield pilots with Superfund program assistance. This assistance is designed to facilitate communication between brownfield pilots and state environmental authorities, and expedite the redevelopment and reuse of the brownfield properties. Through 2001, the site

assessment pilots will have resulted in a cumulative total of 2,100 sites assessed, the generation of 5,400 jobs, and the leveraging of $1.8 billion in cleanup and redevelopment funds.

Where appropriate, the Agency provides funding for targeted brownfield assessments in communities that are not successful in competing for an assessment pilot. This activity enjoys wide support from cities and other local communities. This funding provides preliminary assessments and site investigations (PA/SI) using standard methodology established by the American Society for Testing Materials. Site assessments at non-pilot brownfield sites are performed either under existing PA/SI cooperative agreements with states or through EPA contractors.

To continue EPA's efforts to provide a pattern of interagency collaboration in addressing environmental and economic issues in brownfields communities, the Agency and its Federal partners will designate 10 new showcase communities in 2001 for a total of 26 showcase communities. These designated brownfields showcase communities will be distributed across the country and vary by size, resources, and community type. The goals of the project are to: promote environmental protection and restoration, economic development, job creation, community revitalization, and public health protection through assessment, cleanup and sustainable reuse of brownfields; link federal, state, local and non-governmental action supporting community efforts to restore and reuse brownfields; and develop national models demonstrating the positive results of public and private collaboration in addressing brownfields challenges.

The Agency will also award cooperative agreements to capitalize brownfield cleanup revolving loan fund pilots (BCRLF) of up to $500,000 each. Communities completing their brownfield assessment demonstration pilot activities and communities completing their targeted brownfield assessments are eligible to apply for a BCRLF pilot. This funding enables eligible entities to develop cleanup strategies, make loans to prospective purchasers to cleanup properties, and encourages communities to leverage other funds into their revolving loan fund pools. In addition, the Agency awards brownfield job training and development demonstration pilots at up to $200,000 over two years to help residents of brownfield communities take advantage of new jobs created by the assessment and cleanup of brownfield.

Funding to support the expansion, enhancement and development of state voluntary cleanup programs (VCPs) continues to be an important activity in the Agency's attempt to reuse and redevelop Brownfield properties. EPA provides both monetary and technical/legal assistance to states and tribes developing and enhancing VCPs. VCPs address contaminated sites which do not require Federal action, but which need cleanup before the sites are considered for reuse. EPA believes that building strong and effective state and tribal programs, such as VCPs, will also complement efforts to address the cleanup of brownfield properties.

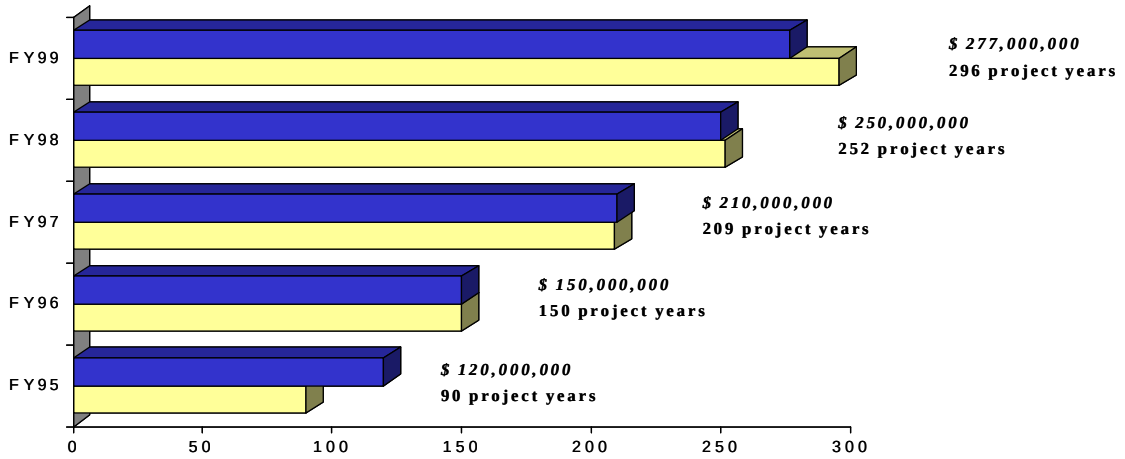
The Agency will facilitate the reuse of Brownfield properties through the application of transportation/land use/air quality models in cities around the country that show the air quality benefits of Brownfield redevelopment and infill. EPA will work with city mayors and states to make Brownfield redevelopment and infill a National Ambient Air Quality Standards attainment strategy under the State Air Quality Implementation Plans.

Base Realignment and Base Closure

Since 1993, EPA's Superfund Base Realignment and Base Closure (BRAC) program has worked with the Department of Defense (DOD) and the states' environmental programs to achieve the Administration's goal of "making property environmentally acceptable for transfer, while protecting human health and the environment" at closing or realigning military installations. Between 1988 and 1995, during the four rounds of base realignments and closures, over 120 major military installations representing the Army, Navy, Air Force, and Defense Logistics Agency were mandated to close. With the Federal government reducing its military bases and nuclear production facilities, the government is also disposing of excess property to reduce operation and maintenance expenses while promoting the economic development opportunities of the local communities.

There are approximately 108 fast track cleanup military bases where EPA supports DOD's cleanup and transfer process. The Fast Track program strives to make parcels available for reuse as quickly as possible, by either transfer of uncontaminated or remediated parcels, or lease of contaminated parcels where cleanup is underway or "early transfer" of contaminated property undergoing cleanup. A major success of the fast track program has been the formation of the base cleanup teams (BCTs) at the fast track designated installations. The teams, which include EPA, DOD, and state environmental experts, engineer commonsense approaches to cleanups by developing common goals and priorities up front. The Agency empowers its team members to make decisions to expedite the process of accelerating cleanup while integrating base reuse priorities. To further assist with fast track cleanup, EPA engages in public participation by working with DOD to establish restoration advisory boards (RABs) at military installations. RABs foster teamwork by bringing members of the community together with military officials and government regulators to discuss cleanup issues.

Time and Cost Avoidance Attributed to EPA Participation in the Fast Track Cleanup Program



By EPA partnering with DOD and the states in cleaning up contaminated closed and realigned bases, it is estimated that more than 296 project years have been cut off project baselines; more than $277 million in potential costs have been avoided; and more than 444,000 acres of BRAC property are available for reuse (more than 132,000 of these acres have been transferred or leased for reuse).

Resource Conservation and Recovery

For decades, many industrial facilities in this country have mismanaged their hazardous wastes. Some of the facilities – particularly those that have been abandoned or closed – are being addressed under the Superfund program. A significantly larger number, however, fall under the Resource Conservation and Recovery Act (RCRA) corrective action program that is administered by EPA and the authorized states. These include some of the most intractable and controversial cleanup projects in the country. Approximately 3,500 industrial facilities must undergo a cleanup under the RCRA program. Out of these facilities, the Agency has targeted approximately 1,700 facilities as high priority – where people or the environment is likely to be at significant current or potential risk. The Agency is pursuing a strategy for addressing the worst facilities first, as reflected in the Agency's annual performance goal.

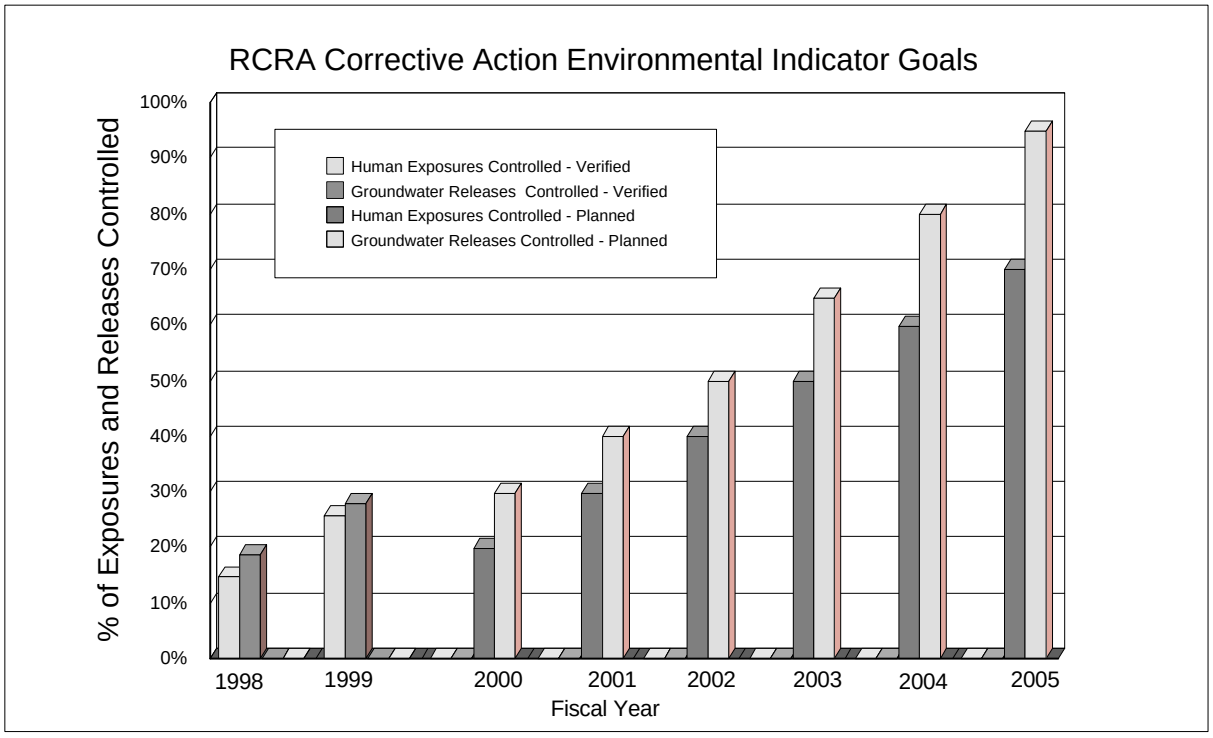
Over the past several years, the Agency has emphasized streamlining the corrective action program and improving overall implementation. In 2001, those efforts will be further advanced by the RCRA cleanup reforms initiative. Designed to encourage cleanups, reduce impediments to cleanup actions, enhance state and stakeholder involvement, and promote the reuse of RCRA facilities, the initiative will accelerate the pace of the program. However, reinvention will not be effective without strong and aggressive implementation efforts by the Regions and states. Currently, thirty-two states and one territory are authorized to implement the corrective action program. During 2001, actions will focus on authorization of states for implementation of the hazardous waste identification rule (HWIR) - media regulation and the post closure rule. HWIR-media rule created a new RCRA permit called a remedial action plan (RAP) for managing wastes from cleanups. The RAP will be faster and easier to obtain than other permits and will not require facility-wide corrective action which previously impeded cleanup progress at some facilities.

The 2001 request includes additional resources to execute these needed reforms and to stay on track for meeting the goals. Most of the increase will go to state implementors to help offset reduced "buying" power resulting from level grant funding over the past several years. The additional EPA resources will be used to implement the cleanup reforms, allowing the Agency to accelerate the pace of accomplishments as we face increasingly complex facility cleanups.

In 2001, the Agency will be implementing a broad spectrum of approaches to expedite corrective action and achieve the goals. These approaches include new uses of enforcement tools to create incentives for cleanup at facilities with cooperative parties as well as to compel cleanups at facilities where collaborative approaches have not yielded results. In addition, the Agency will explore policy changes to address liability concerns in order to facilitate the cleanup and reuse/redevelopment of RCRA facilities.

The Agency has developed and is implementing new guidance to use in determining when a facility has met the RCRA performance goals (environmental indicators), or human exposure controlled and groundwater releases controlled. Although the long-term goal for the RCRA corrective action program continues to be achieving final cleanup at all RCRA facilities, the focus of the Agency's implementation efforts is on near- term actions which will mitigate actual or imminent human exposure problems, as well as actions designed to stop further spread of contaminants in the environment, addressing worst sites first.

Training will remain a high priority for the corrective action program. Training, especially with regard to the two environmental indicators, will be essential to ensure sound science and national consistency, and ultimately to achieve the 2005 commitments. In 2001, the Agency will offer several workshops to targeted audiences for results-based project management in the RCRA corrective action program. Similar workshops will occur in the Regions for 2000. Workshops and internet-based training are both essential to maintain interaction between the states, regions and headquarters programs and to share successful approaches, identify and address problems, and



ultimately achieve the program's goals.

Research

This research supports the Agency's objective of reducing or controlling risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. Research related to hazardous substances (Superfund), leaking underground storage tanks (LUST), and oil spills fall within this objective.

Groundwater, soils and sediments research focuses on understanding the processes that govern contaminant transport and fate and also to improve remediation and monitoring technologies, especially their cost-effectiveness. For groundwater, immediate threats to human ingestion may be minimized by the provision of costly alternate water supplies. However, these do not always eliminate other routes for human exposure (e.g., inhalation via showering) nor is the value of the groundwater resource replaced, since groundwater discharge can also result in sediment contamination, presenting a direct ecological threat to the fauna and the rest of the food chain. Contaminated soils pose chronic and acute health risks to surrounding communities and ecosystems through a number of exposure routes and pathways, and can provide a continuing source of groundwater contamination. Contaminated sediments can pose significant risks to aquatic and other ecosystems, and to humans who use surface waters for food or recreation.

The human and ecological risks posed by contaminated groundwater, soils and sediments are potentially high for the following reasons: 1) the large number of sites with known contamination; 2) the presence of highly toxic (and often extremely persistent) contaminants, such as heavy metals and volatile organic chemicals; 3) the potential for multiple routes of exposure; 4) many contaminated sites (e.g., sediments, mining) cover large areas, providing high exposure (particularly to ecosystems); 5) ground water is the source of drinking water for over 50% of the population; and 6) sediments are an integral part of the riparian zone, affecting surface water quality. In addition, the extent and geological complexity of many of these sites (often contaminated with complex mixtures of contaminants) present many uncertainties when determining risk, as well as in finding accurate, low cost techniques for site characterization and remediation. Long term performance of remediation processes will also be studied.

Exposure research will be conducted to reduce uncertainties associated with soil/groundwater sampling and analysis and to reduce the time and cost associated with site characterization and site remediation activities. Methods and instruments will be developed and tested to provide accurate characterization of sites. Assessment research will evaluate the magnitude of the risks posed by contaminants to human health and the ecosystem, the contributions of multiple exposure pathways, and the toxicological properties of contaminants. As a result, quantitative estimates of the toxicity of contamination will be achieved. Risk management research will be conducted to develop and demonstrate more effective and less costly remediation technologies.

For Superfund exposure research in 2001, the two areas of focus are: 1) surface/subsurface characterization and sampling, and 2) analytical methods for groundwater and soils. Non-invasive geophysical techniques can provide methods for subsurface site characterization. During 2001, significant effort will be directed toward experiments at a unique field test facility for evaluating these geophysical technologies under controlled dense non-aqueous phase liquid (DNAPL) spill

conditions. The facility will also be used to evaluate other subsurface (e.g. groundwater) sampling methods and designs.

Research is being conducted to examine the influence of sample size on “representativeness" of soil volatile organic compound (VOC) results, VOC releases due to sample disturbance, and the ability of NAPLs to penetrate caliche. Work will continue in 2001 on a prototype device for sampling VOCs from contaminated soils around Superfund sites. This device will greatly increase the accuracy of VOC measurements in soils by minimizing losses during sample collection and shipment. In 2001 and beyond, the focus will shift to semi-volatile compounds and conducting experiments under controlled spill conditions and improving environmental statistics and survey designs.

Phyto process research will develop and incorporate plant/enzyme mediated transformation algorithms into multimedia models. The overall goal is to quantitatively describe these processes through air, water, and soil systems, using molecular descriptors of the organic compounds and physical/chemical descriptors of the system to model the fate processes. In 2001, efforts will also produce a critical review of documented aquatic and terrestrial plant phyto processes and data complete with formulation of kinetic algorithms for organic and inorganic pollutants of concern.

Research in the application of advanced instrumentation to soils and groundwater characterization focuses on methods that will provide high-quality data rapidly with simple and rugged protocols. Emphasis is on technologies that can eventually be used to perform analysis in the field, specifically those that can determine pollutants that are intractable by conventional EPA methods, as well as those that improve risk assessments by providing specific information on the most hazardous forms of pollutants. Currently, pollutants of primary interest are polyaromatic hydrocarbons (PAHs), chlorinated organics, petroleum related compounds, and toxic metals. Emphasis in 2001 and beyond will be on innovative methods and technologies to evaluate / characterize the natural attenuation of contaminants in ground water and soils. A major product for 2001 will be a journal article to describe a field method/biosensor for detection of phenols in soil leachate from contaminated Superfund sites.

Superfund health risk assessment research develops methodologies, models, and factors that will enable risk assessors to develop more accurate quantitative estimates of the amount of a contaminant found in the soil matrix that is toxicologically available to cause harm. Major areas of emphasis for 2001 include: developing statistical distributions for exposure factors to facilitate probabilistic analysis, further refining and validating the biokinetic models for lead and other toxic metals, developing better models and methods for dermal exposure, and evaluating the bioavailability of soil-borne contaminants.

Research is also being conducted to develop models and factors that quantitatively predict the relative toxicity of complex mixtures of groundwater contaminants compared to their individual toxicities. This research attempts to answer the question of whether mixtures of groundwater contaminants produce a more toxic (synergistic) response, a less toxic (antagonistic) response or no net change in human response (additive). The major area of emphasis for 2001 will be completing

a database describing known chemical interactions and developing models to predict the interaction of other chemicals.

Ecological risk assessment research develops methodologies and factors that will enable ecological risk assessors to estimate the amount of soil-borne contamination that will be toxicologically available to harm ecological receptors. The major area of emphasis for 2001 will be to develop ecological soil screening values for common soil contaminants. These screening values will enable the Agency to make prompt decisions about what levels of contamination are not harmful.

An additional important project is to continue the Ecological Risk Technical Support Center, which is being established in 2000 on a one-year pilot basis. The Center will assist regional risk assessors by providing them with state-of-the-art research findings from across ORD.

Risk management research will address priority remediation problems for groundwater and major subsurface sources of groundwater contamination (e.g. NAPLs). The research scope includes treatment and containment, related source characterization, and groundwater fate (including natural attenuation) and transport modeling.

In 2001, the Agency plans to continue small-scale field tests on the use of surfactants and cosolvents for DNAPL cleanup. DNAPLs are a major source of organic groundwater contamination for which there are few effective commercialized remediation options. Research on the use of thermal treatment processes (e.g., steam) will be expanded and studies on the application of soil vapor extraction to remediation of VOCs in the vadose zone will be completed.

Research will continue on the cost-effectiveness of several bioremediation options for the treatment of PAHs, and on the effectiveness of monitored natural attenuation (MNA) towards this contaminant class. Research on the immobilization of metals in soils to reduce their mobility and bioavailability will shift from lead to other priority metal contaminants. Studies of phyto-remediation options will continue, with field studies of selected options and other studies to understand the chemical, physical and biological processes involved.

Containment research will include caps, covers and vertical barriers for the vadose zone, as well as fixed barriers and pumping methods for contaminated plumes. Research for barriers will address long term maintenance and effectiveness. Some innovative systems for containment improvement will also be investigated. Work on revising the hydrologic evaluation of landfill performance (HELP) model for predicting design parameters for conventional covers will continue.

Research on improved indicators for MNA of organics, initiated in 2000, will continue. Expanded research will be conducted on the remediation of dissolved inorganic plumes and related source areas, including their natural attenuation (NA). Other groundwater research will include developing methods to evaluate the long-term performance of permeable reactive barriers (PRBs) and groundwater containment systems.

Soil and sediments remediation research evaluates and develops more cost-effective techniques for clean up of priority contamination problems in soils, the vadose zone (i.e., unsaturated zone) and sediments. In 2001, the program will expand research on sediments contaminated with persistent organics and/or metals. Emerging *in-situ* sediments remediation techniques and MNA effectiveness will be evaluated, along with improved methods for assessing their performance.

The Superfund Innovative Technology Evaluation (SITE) program fosters the development and use of lower cost characterization technologies and risk management remediation technologies for sediments, soils, and groundwater. In the characterization area, the focus will be to initiate studies on ecological samplers and biosensors, while completing efforts on geophysical technologies and demonstration reports on total petroleum hydrocarbons (TPH) in soil. Under the remediation area, the program will be continuing evaluations of technologies dealing with priority remediation problems where innovative technologies are being commercialized. Remediation problems include: complex mixtures of contaminants, difficult-to-treat contaminants in groundwater and soils, DNAPLs, and sediments. In addition, the annual SITE Report to Congress, which provides program/project status and cost savings information, will be produced.

In 2001, oil spills research will involve the development of an oil spill model applicable to near-coastal water and options to clean up fuel and chemical spills to navigable waterways. Efforts will result in an interim report on development of the Fate and Transport Water Quality Model, addressing modeling management alternatives and pollutant exposure to coastal ecosystems.

Research on bioremediation as a clean up option for petroleum oil spills will be continued at a decreased level, with emphasis on its application to fresh water spills. Work will continue on an effectiveness protocol for surface washing agents, while development of a protocol on emulsification processes for petroleum and non-petroleum oils will be brought to a close. Studies will continue on the mechanisms of biodegredation of animal fats and vegetable oils and the toxicity of their biodegredation bi-products.

LUST research includes better understanding of naturally occurring subsurface processes for fuels components (including fuel oxygenates like MTBE), reliable indicators to measure NA rate and extent, and models and resource documents to predict likelihood of site-specific NA effectiveness. In 2001, research will continue to focus on the remediation of MTBE and other oxygenates. Field studies of the viability of natural attenuation to degrade MTBE in groundwater under differing hydro geochemical conditions will continue, along with laboratory and pilot studies of NA and enhanced biodegredation processes for MTBE in groundwater, soils, and the vadose zone.

FY 2001 Change from FY 2000 Enacted

LUST:

- (+$1,583,200) Increase for LUST cooperative agreements to provide assistance to states.

- (+$1,373,500 and +4.9 FTE) Increase for LUST corrective action to address the large number of cleanups that have yet to be completed and new challenges the Agency faces in helping states address complex cleanups such as those contaminated with fuel oxygenates, e.g., MTBE.

- (-$756,000) Decrease to State Fund Solvency and Remediation Technologies to support an increased need in LUST corrective action.

- (+$148,600) Increase for LUST tribal support to enhance EPA implementation of the LUST program in Indian Country.

Superfund:

- (+$27,027,600) Increase for Superfund remedial activities which will result in additional remedial action project starts in 2001.

- (+$16,888,300) Increase to Superfund remedial action program. Funds were redirected from other Federal agencies.

- (-$11,473,300) Decrease to National Institute of Environmental Health Sciences for basic research. Funds were redirected to support Superfund remedial action program.

- (-$10,000,000, - 10.0 FTE) Redirected from Superfund remedial activities to fund the RCRA Corrective Action Reforms Initiative.

- (-$6,000,000) Decrease to Agency for Toxic Substance and Disease Registry. Funds were redirected to support Superfund remedial action program.

- (+$5,022,200) The Agency is providing additional payroll dollars to cover increased costs associated with the current workforce.
- (+$2,340,000) Increase to support oversight of the increasing number of NPL Federal facility cleanup projects, and EPA's initiative to play a greater role at the more than 9,000 Formerly Used Defense Sites (FUDS).

- (+$1,374,200) The increase will help the program to maximize PRP participation in conducting or funding response actions while promoting fairness in the enforcement process; recover costs from PRPs when EPA expends funds from the Trust Fund; and negotiate agreements with Federal facilities for NPL site cleanup.

- (+$1,200,000, +12.0 FTE) Redirected from the Superfund removal program to perform anti-terrorism activities.

- (+$585,000) Increase to U.S. Coast Guard, Department of Interior and Occupation Safety and Health Administration.

Brownfields :

- (-$7,195,600) Reduction to Brownfields Site Assessment. Funds were redirected to support increases to Revolving Loan Fund and Brownfields Technical Support.

- (+$4,013,800) Increase to Revolving Loan Funds to support a shift in program emphasis as more brownfields communities move into the cleanup phase.

- (+$3,383,300) Increase to Brownfields Technical Support to support development and implementation cost of information systems to collect, track and report key Brownfields program data. It also reflects an increase in cost oversight and technical support for a growing number of Brownfields pilots.

EPM:

- (+$2,000,000, +10 FTE) Increase to RCRA Corrective Action Reforms Initiative to fund salary and program activities. Funds were redirected from the Superfund program.

- (+$1,364,900) Additional funds provided to support increase costs associated with the workforce based on the Agency's repricing of payroll.

STAG:

-

- (+$8,000,000) Increase to Corrective Action Reforms Initiative for assistance to authorized states to increase cleanup activities. Funds were redirected from the Superfund program.

Research

Superfund

- (+$1,084,100) This increase represents additional resources being provided to the Superfund Research Centers' programs (including Minority Centers). The research Centers provide a national program of basic and applied research, technology transfer, and training, for several priority research areas. These priority areas include contaminated sites (groundwater and soils), contaminated sediments, and mining wastes.

- (+$477,700) The R&D program, including infrastructure support costs, is spread across eight of the ten goals in the Agency's GPRA/budget structure. Based on a review of actual infrastructure utilization under each goal (i.e., utilization of workyears and associated PC&B, travel, operating expenses, and working capital fund), adjustments are being made across goals to more accurately reflect expectations for use in 2001.

- (-$2,437,500) Funding to support the Gulf Coast HSRC 2000 Congressional earmark will not be continued in 2001.

- (-$1,141,200, -1.0 FTE) In 2001, funding for the SITE Program will be reduced. The number of risk management demonstrations will decrease by one to two, depending on the nature of the technologies under evaluation, in order to accommodate additional funding required for the Superfund Research Centers.

- (-$515,350) This decrease represents a transfer of resources from the Superfund Appropriation to the S&T appropriation in support of the Agency's 2001 RCRA Corrective Action (CA) initiative. The reduction will result in a reduced level of technical support and technical transfer related activities. See Goal 5 Objective 2 for description of 2001 RCRA initiative activities.

S&T

- (-$6,298,300) The 2001 request is $6,298,300 below the 2000 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the 2001 President's Request.

- (+$1,531,400) The R&D program, including infrastructure support costs, is spread across eight of the ten goals in the Agency's GPRA/budget structure. Based on a review of actual infrastructure utilization under each goal (i.e., utilization of workyears and associated PC&B, travel, operating expenses, and working capital fund), adjustments are being made across goals to more accurately reflect expectations for use in 2001.

Annual Planning Goals

Leaking Underground Storage Tank Cleanups

In 2001 Complete 65 Leaking Underground Storage Tank (LUST) Cleanups in Indian Country for a cumulative total of 603 cleanups since 1987.

In 2001 Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 271,000 cleanups since 1987.

In 2000 Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 250,000 cleanups since 1987.

In 1999 EPA completed 25,678 LUST cleanups.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
LUST cleanups completed.	25,678	21,000	21,000	Cleanups
LUST cleanups in Indian Country.			65	Cleanups

Baseline: EPA completed a total of 228,925 LUST cleanups from 1987 through 1999, which includes a total of 478 LUST cleanups in Indian Country.

Superfund Site Assessments

In 2001 EPA will continue to emphasize increasing the number of Indian tribes participating in the Superfund program, as expressed through the number of tribes supported by Superfund cooperative agreements with tribes and intertribal consortia. This will be evidenced by an increase in the number of site assessed.

In 2001 EPA and its partners will make final Superfund site assessment decisions on 475 additional sites for a cumulative total of 36,633.

In 2000 EPA and its partners will make final Superfund site assessment decisions on 475 additional sites for a cumulative total of 36,158.

In 1999 EPA exceeded the target by completing 744 final site assessment decision.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Site assessment decisions.	744	475	475	Assessments
Site assessments (PA/SI) conducted in Indian country.			no target	Assessments
The number of tribes supported by cooperative agreements with tribes/intertribal consortia.			no target	Agreements
Amount of site-specific dollars provided for building tribal capacity.			no target	Funding

Percentage of Superfund sites impacting Indian country where a tribe is involved as either the lead or support agency.			no target	Involvement

Baseline: EPA completed a total of 35,683 final site assessments from 1982 through 1999.

Superfund Removal Response Actions

In 2001 Conduct 275 Superfund removal response actions for a cumulative total of 6,479 removal response actions since 1982.

In 2000 Conduct 275 Superfund removal response actions for a cumulative total of 6,204 removal response actions since 1982.

In 1999 EPA exceeded the target by conducting 356 removal response actions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Removal response actions.	356	275	275	Removals

Baseline: EPA completed a total of 5,929 removal response actions from 1982 through 1999.

Superfund Cleanups

In 2001 EPA and its partners will complete 75 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.

In 2000 EPA and its partners will complete 85 Superfund cleanups (construction completions) to achieve the overall goal of 900 construction completions by the end of 2002.

In 1999 EPA met the target of 85 construction completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Construction completions.	85	85	75	Completions

Baseline: EPA completed a total of 670 construction completions from 1982 through 1999.

Superfund Cost Recovery

In 2001 Ensure trust fund stewardship by getting PRPs to initiate or fund the work and recover costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations (SOL) on total past costs equal to or greater than $200,000.

In 2000 Ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.

In 1999 We met our goal to ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. EPA addressed cost recovery at 99% of all National Priority List (NPL) and non-NPL sites with a statute of limitations on total past costs equal to or greater than $200,000.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Address Cost Recovery at all NPL & Non-NPL sites w/tot. past costs = or > $200K	99	100		Percent
Addressed 100% of SOLs at Cost Recovery Cases at all NPL and non-NPL sites with total past costs equal to or greater than $200,000 and report costs recovered			100	Percent

Baseline: In FY 98 the Agency will have addressed 100% of Cost Recovery at all NPL & non-NPL sites with total past costs equal or greater than $200,000.

Superfund Potentially Responsible Party Participation

In 2001 Maximize all aspects of PRP participation which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund, and emphasize fairness in the settlement process.

In 2000 Maximize all aspects of PRP participation, which includes maintaining PRP work at 70% of the new remedial construction starts at non-Federal Facility Superfund sites, and emphasizing fairness in the settlement process.

In 1999 Achieved >70% responsible party participation in new remedial actions at NPL sites. Goal met with the exception of completing 5 Sect 106 Civil Actions & 2 Remedial Admin Orders primarily due to a decline in the no. of sites available for Remedial Design/Remedial Action negotiation completions.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Section 106 Civil Actions	33			Agreements
Orphan Share Offers at all eligible work settlement negotiations.	100%			Sites
De Minimis Settlements	38	20		Settlements
Remedial Administrative Orders	17			Orders
Administrative and judicial actions		100		Actions
Ensure fairness by making Orphan Share Offers at 100% of all eligible sites			100	Percent
Provide finality for small contributors by entering into De Minimis settlements			18	Settlements
PRPs conduct 70% of the work at new construction starts			70	Percent

Baseline: In FY 98 approximately 70% of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties.

Superfund Prospective Purchaser Agreement

In 2001 Continue to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing liability concerns through the issuance of comfort letters and Prospective Purchaser Agreements (PPAs).

In 2000 Continue to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing liability concerns through the issuance of comfort letters and prospective purchaser agreements.

In 1999 We met our goal of continuing to make formerly contaminated parcels of land available for residential, commercial, and industrial reuse by addressing 100% of liability concerns through the issuance of comfort letters and prospective purchaser agreements.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Evaluate liability concerns - Prospective Purchaser Agreement requests assessed	100	100		Percent
Evaluate liability concerns- 100% of Prospective Purchaser Agreement requests addressed and report the number of completed Prospective Purchaser Agreements at the end of the year			100	Percent

Baseline: In FY 98 EPA signed 24 PPAs. A total of 70 PPA agreements have been achieved since the guidance was issued five years ago.

Superfund Federal Facilities Compliance

In 2001 Sign Interagency agreements (IAGs) in 18 months or less from final listing on the NPL (but no later than 180 days after completion of the first RI/FS).

In 2000 Ensure compliance with Federal facility statutes and CERCLA Agreements and ensure completion of current NPL CERCLA IAGs.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Federal Facilities CERCLA Negotiations		4		Negotiations
Federal Facilities Current NPL IAGs		6		NPL IAGs
Percentage of IAGs in place 18 months after final listing on the NPL.			100	Percent

Baseline: Section 120 of CERCLA establishes the following for all Federal facilities: 1) no later than 6 months after listing the site on the final NPL, a RI/FS shall be started; 2) the RI/FS should be completed expeditiously; and, 3) an IAG shall be signed by all appropriate parties 180 days after the completion of the RI/FS. EPA prefers to sign IAGs as soon as possible after listing since IAGs provide enforceable schedules for the progression of the entire cleanup. As of January 18,

2000, EPA has signed 142 IAGs where the average time from NPL listing to having an IAG in place was 22 months. The baseline for tracking the 18 month or less goal will be all federal facilities listed on the final NPL after October 1, 1998.

RCRA Corrective Action

In 2001 172 (for a cumulative total of 821 or 48%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 784 or 46%) of high priority RCRA facilities will have groundwater releases controlled.

In 2000 172 (for a cumulative total of 649 or 38%) of high priority RCRA facilities will have human exposures controlled and 172 (for a cumulative total of 612 or 36%) of high priority RCRA facilities will have groundwater releases controlled.

In 1999 162 (for a cumulative total of 477 or 28%) of high priority RCRA facilities have human exposures controlled and 188 (for a cumulative total of 440 or 26%) have groundwater releases controlled.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request	
High priority RCRA facilities with human exposures to toxins controlled.	162	172	172	Facilities
High priority RCRA facilities with toxic releases to groundwater controlled.	188	172	172	Facilities

Baseline: EPA established a baseline of 1,712 high priority corrective action facilities in January 1999.

Research

Scientifically Defensible Decisions for Site Cleanup

In 2001 Provide technical information to support scientifically defensible and cost-effective decisions for cleanup of complex sites, hard-to -treat wastes, mining, oil spills near shorelines, and Brownfields to reduce risk to human health and the environment.

In 2000 Enhance scientifically-defensible decisions for site cleanup by providing targeted research & technical support.

In1999 Produced the annual Superfund Innovative Technology and Evaluation (SITE) Program report, and completed six (6) innovative technology reports.

In1999 Produced: 1) manual of practice for the Horizontal Lasagna Process; 2) research data from bench-scale studies of leachate application to liner materials; and 3) final cover guidance revision on an EPA report entitled, Alternative Cover Assessment Project Phase I Report.

In 1999 Completed: 1) Statistical Distribution for Selected Exposure Factors; 2) report and software on modeling of bioavailability of cadmium at hazardous waste sites; 3) issue paper on pesticide degradation in hazardous waste sites; 4) report on software and database for pilot project to enhance MIXTOX database.

Performance Measures:	FY 1999 Actuals	FY 2000 Estimate	FY 2001 Request

Environmental Research Brief on permeable reactive barrier of ground water contaminated with chromium and chlorinated solvents			
Using data from the Exposure Factors Handbook, develop peer-reviewed statistical distributions for selected exposure factors.			
Technical Resource Document for Monitored Natural Attenuation in Sediments		1	Document
Summary Report of Case Studies of Natural Attenuation of MTBE, a fuel additive, at Geographically Diverse Locations	1		Report
Progress report on Field Demonstration of Chemically-Enhanced Subsurface Dense, Non-Aqueous Phase Liquid Extraction Technologies		1	Report
Superfund Innovative Technology Evaluation (SITE) Program Report to Congress.	1		Report
A report summarizing the key research findings methods, models, and factors relating to evaluating the risks from the dermal route of exposure.	1		Report
Review the 20 most common Superfund soil contaminants and develop eco-toxicity soil screening levels for wildlife and soil biota for chemicals where there is sufficient data.	09/30/2000		Values
Publish a technical Resource Document on the bioremediation of oil spills on marine shorelines. Provide oil spill response teams with a tool to assess appropriate applications of bioremediation.		1	Document
Deliver the Annual SITE Program Report to Congress.		1	Report

Baseline: EPA has made progress toward completing the remediation of many contaminated sites, but cost effective characterization, risk assessment, and timely cleanup of complex sites remains a problem. The science and technology are not yet available to enable confident application of demonstrated cleanup approaches and site managers and responsible parties often disagree on the projected efficacies of various cleanup alternatives, especially for bioremediation. Re-use of formerly contaminated sites is increasing with limited guidance on options for managing risk. The issues for research are: how can complex sites be characterized to reduce the cost of clean-up while ensuring adequate risk reduction; how can risk assessment procedures be improved with more extensive coverage of bio-availability; and how can confident use of low-cost, low-energy approaches such as natural attenuation and containment (e.g., the use of covers) be improved while continuing to provide demonstrated technologies for the wide array of contaminant-site combinations.

Brownfield Site Assessment Grants

In 2001 EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 2,100 sites assessed, the generation of 5,400 jobs, and the leveraging of $1.8 billion in cleanup and redevelopment funds.

In 2000 EPA will provide additional site assessment funding to 50 communities, resulting in a cumulative total of 1,900 sites assessed, the generation of 4,900 jobs, and the leveraging of $1.7 billion in cleanup and redevelopment funds.

In 1999 EPA exceeded its goal and reached 307 communities by the end of 1999.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Cumulative leveraging of cleanup and redevelopment funds.		$1.7B	$1.8B	Funds leveraged
Cumulative jobs generated.		4,900	5,400	Jobs generated
Cumulative site assessments.		1,900	2,100	Assessments
Cooperative agreements to support Brownfields assessment pilots.	80			Agreements

Baseline: By the end of 1999, EPA assessed 1,687 sites, generated 4,416 jobs, and leveraged $1.6 billion in cleanup and redevelopment funds.

Brownfield Revolving Loan Funds

In 2001 EPA will provide funding for 70 communities to capitalize revolving loan funds, provide funding for 10 job training pilots, support 10 existing showcase communities and provide funding for 10 additional showcase communities, and enhance the Brownfields Federal Partnership.

In 2000 Sign agreements with 60 communities to capitalize revolving loan funds, and support 16 existing Brownfields showcase communities and 10 job training pilots.

In 1999 EPA met its target by supporting 16 existing showcase communities, and provided funding for 68 communities to capitalize brownfields cleanup revolving loan funds resulting in the award of 45 cooperative agreements.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Showcase communities.	16	16	26	Communities
Cooperative agreements to capitalize revolving loan funds	45	60	70	Agreements
Job training pilots.		10	10	Pilots

Baseline: By the end of 1999, EPA will have signed a total of 68 agreements for capitalization of revolving loan funds and announced a total of 21 job training pilots. Sixteen showcase communities were announced in 1998.

Verification and Validation of Performance Measures

Performance Measure: LUST cleanups completed

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database.

Data Source: Designated State agencies submit semi-annual progress reports to the EPA regional offices.

QA/QC Procedures: EPA regional offices verify and then forward the data to the OUST Headquarters. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify their data.

Data Quality Review: None.

Data Limitations: Relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Performance Measure: [Superfund] Construction completions

Performance Database: CERCLIS is the official database used by the Agency to track, store, and report Superfund site information.

Data Source: Data is entered on a rolling basis by EPA.

QA/QC Procedures: The headquarters sponsor of the data is responsible for identifying and defining data elements. Regional staff are responsible for reviewing, verifying, and validating site data in CERCLIS. To assure data accuracy, the following administrative controls are in place: (1) Superfund/Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; (2) Report Specifications; (3) Coding Guide; (4) Quality Assurance ; (5)QA Third Party Testing;(6)Regional CERCLIS Data Entry Internal Control Plan; and (7) a historical lockout feature.

Data Quality Review: Two audits, one by the Office Inspector General (OIG) and the other by Government Accounting Office (GAO), were done to assess the validity of the data in CERCLIS. The OIG audit report "Superfund Construction Completion reporting", No. E1SGF7-05-0102-8100030, was performed to verify the accuracy of the information that the Agency was providing to Congress and the public.

Data Limitations: The OIG report concluded that the Agency "has good management controls to ensure accuracy of the information that is reported," and "Congress and the public can rely upon the information EPA provides regarding construction completions." The GAO's report, "Superfund

Information on the Status of Sites (GAO/RECD-98-241)," estimates that the cleanup status of National Priority List sites reported by CERCLIS is accurate for 95% of the sites.

New/Improved Data or Systems: In 2001, the Agency will continue its efforts begun in 1999 to improve the Superfund program's technical information by incorporating more site remedy selection, risk, removal response, and community involvement information in CERCLIS. Also, it will continue its efforts to share information among the Federal, state and tribal programs. The additional information will further enhance the Agency's efforts to efficiently identify, evaluate and remediate Superfund hazardous waste sites.

Performance Measure: High priority RCRA facilities with human exposures to toxins controlled; High priority RCRA facilities with toxic releases to groundwater controlled

Performance Database: The Resource Conservation Recovery Information System (RCRIS) is the national database which supports EPA's RCRA program. RCRIS contains information on entities (generically referred to as "handlers") engaged in hazardous waste (HW) generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRIS has several different modules, including a Corrective Action Module which tracks the status of facilities that require, or may require, corrective actions. Progress for these measures are recorded in Corrective Action Module.

Data Source: EPA regions and authorized states enter data on a rolling basis.

QA/QC Procedures: For validation and verification within RCRIS, controls include maintaining a high degree of consistency in data elements over time as well as data screen edits to help ensure that key data is entered for all facilities. States and Regions, who create databases, manage data quality control. RCRIS has a suite of user and System documentation which describe overall administration of data collection and management activities. Training on use of systems is provided on a regular basis, usually annually, depending on the nature of systems changes and user needs.

Data Quality Review: GAO-1995 Report of EPA's Hazardous Waste Information System reviewed whether RCRIS is meeting the primary objective of helping EPA and states manage the HW program. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure data collected provides critical information and minimize burden on states.

Data Limitations: None identified.

New/Improved Data or Systems: The Agency has spent considerable time in establishing the baseline for measuring progress on this measure. During 1999 the Agency finalized its baseline and national guidance for evaluating and documenting environmental indicators.

Performance Measure: [Brownfields] Cumulative site assessments; [Brownfields] Cumulative jobs generated; [Brownfields] Cumulative leveraging of cleanup and redevelopment funds

Performance Database: In order to validate the Brownfields performance measure data, the Outreach and Special Projects Staff utilize data input and verification of the Brownfields Management System (BMS) and the CERCLIS system. The Brownfields Management System is used to evaluate management, environmental, and economically-related results such as jobs generated and acres assessed and cleaned up. BMS uses data gathered from Brownfield pilots' quarterly reports and from the Regions. The CERCLIS system records Regional accomplishments on Brownfields assessments.

Data Source: Data is entered by EPA headquarters and regional staff on a rolling basis. Data is derived from grant recipient reports on Pilot and targeted brownfields assessment projects.

QA/QC Procedures: Verification relies on reviews by Regional staff responsible for pilot cooperative agreements or Brownfields cooperative agreements and contracts.

Data Quality Review: "Superfund: Brownfields - Potential for Urban Revitalization" (EPA IG, March 24,1998). The IG recommended issuance of QA guidance to regional offices and grant recipients. This has been done. Additionally, the program now requires that regional offices and grant recipients address components of the guidance in quarterly reports.

Data Limitations: The Paperwork Reduction Act limits data collection and quality control. Grants are designed to address recipient-specific objectives, and are thus non-uniform with respect to reporting data.

New/Improved Data or Systems: EPA is developing standard measures and seeking legal/grants clearance to require future reporting through cooperative agreement terms and conditions.

Performance Measure: Ensure fairness by making Orphan Share Offers at 100 percent of all eligible sites.

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: Data is entered by Regional personnel and a sample is checked by HQ.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Provide finality for small contributors by entering into De Minimis settlements.

Performance Database: HQ maintains a data base specifically to track the number of parties at de minimis settlements

Data Source: Manual and Automated EPA system. HQ and Regions enter numbers.

QA/QC Procedures: Data is entered by Regional personnel and a sample is checked by HQ.

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: PRPs conduct 70 percent of the work at new construction starts

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: To assure data accuracy and control, the following administrative controls are in place: 1) Superfund/Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; 2) Report Specifications – Report specifications are published for each report detailing how reported data are calculated; 3) Coding Guide – It contains technical instructions to data user such as regional Information Management Coordinators (IMCs), program personnel, report owners and data input personnel; 4) Quality Assurance (AQ) Unit Testing – Unit testing is an extensive QA check made current specification; 5) QA Third Party Testing – Third party testing is an extensive test made by an independent QA tester to assure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan -- The data entry internal control plan includes: a) regional policies and procedures for entering data into CERCLIS; b) a review process to ensure that all Superfund accomplishments are supported by source documentation; c) delegation of authorities for approval of data input into CERCLIS; and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature has been added to CERCLIS so that changes in past fiscal year data can only be changed by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Addressed 100% of SOLs at Cost Recovery cases at all NPL and non-NPL sites with total past costs equal to or greater than $200,000 and report costs recovered

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: To assure data accuracy and control, the following administrative controls are in place: 1) Superfund/Oil Implementation Manual (SPIM) – This is the program management manual which details what data must be reported; 2) Report Specifications – Report specifications are published for each report detailing how reported data are calculated; 3) Coding Guide – It contains technical instructions to data user such as regional Information Management Coordinators (IMCs), program personnel, report owners and data input personnel; 4) Quality Assurance (QA) Unit Testing – Unit testing is an extensive QA check made current specification; 5) QA Third Party Testing – Third party testing is an extensive test made by an independent QA tester to assure that the report produces data in conformance with the report specifications; 6) Regional CERCLIS Data Entry Internal Control Plan -- The data entry internal control plan includes: a) regional policies and procedures for entering data into CERCLIS; b) a review process to ensure that all Superfund accomplishments are supported by source documentation; c) delegation of authorities for approval of data input into CERCLIS; and, d) procedures to ensure that reported accomplishments meet accomplishment definitions; and 7) a historical lockout feature has been added to CERCLIS so that changes in past fiscal year data can only be changed by approved and designated personnel and are logged to a change-log report.

Data Quality Review: The IG reviews the end-of-year CERCLA reports to verify numbers for all measures. The process is informal and there are no results to publish.

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Evaluate liability concerns – 100 percent of Prospective Purchaser Agreement requests addressed and report the number of completed Prospective Purchaser Agreements at the end of the year

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)

Data Source: Automated EPA system HQ and Regional Offices enter data into CERCLIS

QA/QC Procedures: EPA will use the end-of-year CERCLIS information to obtain the data to support these measures, and will conduct a quality assurance audit on a representative sample of the data against actual settlement documents to ensure the accuracy and validation of the data.

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Federal facility NPL Interagency Agreements (IAGs) – 80 percent of Federal facility sites will have IAGs in place within 18 months of NPL listing

Performance Database: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Regions enter the dates IAG negotiations are started, completed, and signed and dates regarding amendments to the IAGs.

Data Source: Automated EPA system – Regions enter the information into CERCLIS.

QA/QC Procedures: HQ and Regions hold two biannual meetings to review the signed and unsigned IAGs to confirm accuracy of information entered into CERCLIS

Data Quality Review: None

Data Limitations: None

New/Improved Data or Systems: None

Performance Measure: Deliver the annual SITE Program Report to Congress.

Performance Database: Output measure -- No database required.

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Research

Goal 5 Objective 1

Performance Measure: Deliver the annual SITE Program Report to Congress.

Performance Database: Output measure -- No database required.

Data Source: N/A

QA/QC Procedures: N/A

Data Quality Review: N/A

Data Limitations: N/A

New/Improved Data or Systems: N/A

Coordination with Other Agencies

LUST

EPA, with very few exceptions, does not perform the cleanups of the leaking underground storage tanks (LUST). States and territories use the LUST Trust Fund to administer their corrective action programs, oversee cleanups by responsible parties, undertake necessary enforcement actions, and pay for cleanups in cases where a responsible party cannot be found or is unwilling or unable to pay for a cleanup. Most states have cleanup funds that cover the majority of owners and operators' cleanup costs. These state funds are separate from the LUST Trust Fund.

State LUST programs are key to achieving the objectives and long-term strategic goals. EPA relies on state agencies to implement the LUST program, including overseeing cleanups by responsible parties and responding to emergency LUST releases. LUST cooperative agreements are made directly to the states to assist them in implementing their oversight and programmatic role.

Superfund

The Superfund program coordinates with many other Federal and state agencies in accomplishing its mission. Many of these agencies perform essential services in areas where the Agency does not possess the specialized expertise. Currently, the Agency has active interagency agreements with the Agency for Toxic Substances and Disease Registry (ATSDR), the National Institute for Environmental Health Sciences (NIEHS), the Department of Interior (DOI), the Department of Justice (DOJ), the National Oceanic and Atmospheric Administration (NOAA), the Federal Emergency Management Agency (FEMA), the Occupational Safety and Health Administration (OSHA), and the United States Coast Guard (USCG).

The services these agencies provide include conducting public health assessments at Superfund sites, maintaining toxicology databases for chemicals found at Superfund sites, providing health education to health care providers, local and national health organizations and state and local health departments; funding to colleges and universities for basic research which focuses on assessing the impacts of chemical mixtures on humans; supporting response preparedness and management activities to the national response team, regional response teams, on-scene coordinators and remedial project managers, outreach to states, Indian tribes and Federal natural resource trustee officials on natural resource damage assessments; providing scientific support for response operations through coastal resource coordinators in EPA's coastal regional offices and coordination between federal and state natural resource trustee agencies; supporting the Superfund program in the management and coordination of training programs for local officials through the Emergency Management Institute and the National Fire Academy, and supporting the national response system by providing expertise in emergency preparedness and administrative support to the regional response teams and national response team; conducting compliance assistance visits to review site safety and health plans and programs and developing guidelines and procedures in the composition of manuals for assessing safety and health at hazardous waste sites; responding to actual or potential releases of hazardous substances involving the coastal zone, including the Great Lakes and designated inland river ports; and litigating and settling cleanup agreements and cost recovery cases and seeking civil penalties.

The United States Army Corp of Engineers (USACE) and the Bureau of Reclamation provide management and support for design and construction management at Superfund sites which contribute to the direct cleanup at many sites. These Federal partners implement most high-cost Fund-financed remedial actions, provide on-site technical expertise, and ensure that project management is consistent between Fund and PRP financed projects.

The Superfund and Federal facilities enforcement programs work closely with other Federal agencies (e.g., DOD, DOE, DOI, etc.) to clean up their federal facility Superfund sites. EPA works with states and Indian tribes as key partners in the cleanup decision-making process at Superfund Federal and non-Federal sites. At non-Federal sites, states and tribes also conduct site assessments and response actions.

The Agency also works in partnership with states and tribal governments to strengthen state and tribal hazardous waste programs and improve the efficiency and effectiveness of the nation's

overall hazardous waste response capability. EPA assists the states in developing their CERCLA implementation programs through infrastructure support, financial and technical assistance, and training. Partnerships with states increase the number of site cleanups, improve the timeliness of responses, and make land available for economic redevelopment sooner, while allowing for more direct local involvement in the cleanup process. EPA is working to enhance the role of states and tribes in the implementation of the Superfund program by encouraging their participation in all aspects of the Federal Superfund program, from site assessment through remedial design and construction. Nineteen pilot projects (9 with states and 10 with tribes) are underway to enhance the role of states and tribes in Superfund.

Executive Order 12580 delegates certain authorities for implementing Superfund to other Federal agencies. These responsibilities are carried out in close consultation and coordination with EPA. EPA works with these agencies to ensure compliance with environmental laws and regulations, and in partnership with the states and tribes, EPA provides effective and efficient oversight of Federal cleanup programs. EPA also provides technical and program assistance, training and outreach for other Federal agency personnel and their contractor; works with other state and tribal regulators and Federal agencies to develop cleanup priorities and milestones; facilitates appropriate transfer and leasing of excess Federal properties; and works with tribal nations to enhance their technical capabilities. In addition, EPA coordinates with the USACE, states, and tribes in the identification and cleanup of more than 9,000 formerly used defense sites nationwide. Expectations are that EPA will plan an even greater role at these sites in the future.

EPA serves an active role in programs related to radiation protection for human health and the environment. EPA plays the lead role developing Federal Guidance for radiation protection as directed by the President. This Federal Guidance provides a common framework to ensure that the regulation of exposure to ionizing radiation by all federal agencies is carried out in a consistent and adequately protective manner. Furthermore, EPA works through the Interagency Steering Committee on Radiation Standards, which includes the Department of Energy, Department of Defense, Department of Health and Human Services, Occupational Safety and Health Administration, and the Nuclear Regulatory Commission, coordinating the development of radiation protection standards and guidance.

Brownfields

The Brownfields National Partnership represents a significant investment in brownfields communities including more than 100 commitments from more than 20 Federal agencies. Federal resources include additional brownfields pilots from EPA; redevelopment funds from the Department of Housing and Urban Development and the Economic Development Agency; and job training efforts from the Department of Labor, the Department of Health and Human Services, the Department of Education, and the Department of Veterans Affairs. These funds will help clean up and redevelop nearly 5,000 properties.

The centerpiece of the Brownfields National Partnership is the funding of 16 brownfields showcase communities beginning in FY 1998. The Showcase communities were selected to receive Brownfields assistance from various agencies including EPA, Department of the Interior,

Department of Justice, many of the previously mentioned, as well as General Services Administration, Small Business Administration, to mention a few. EPA and these other Federal agencies will continue to provide active support to brownfields activities across the country in 2001. The Agency's commitment to the project is awarding additional assessment and demonstration pilots and funding Intergovernmental Personnel Act staff in each of the 16 communities. In addition, 24 community finalists received funding and technical support from the Agency. To augment the success of the Brownfields National Partnership and its continued efforts to clean up and redevelop brownfields properties, the Agency and its Federal partners will designate 10 additional showcase communities in 2001.

The Brownfields program also relies on partnership building with local government, state, and non-government groups to leverage federal funding with private sector funding. As part of the brownfields initiative, EPA will continue to provide outreach, curriculum development, job training, and technical assistance to community residents through cooperative agreements to community-based organizations, community colleges, universities, and private sector non-profit groups. The Agency also works with cities, states, federally recognized Indian tribes, community representatives, and other stakeholders to implement the many commitments. Successful brownfields redevelopment is proof that economic development and environmental protection go hand in hand.

The brownfields program has demonstrated that cleaning up abandoned or under-used contaminated land can have significant payoffs. Building on the pilot program, EPA will continue to partner with other Federal, state, local, and private sector efforts to restore contaminated property to economic reuse. In 2001, EPA will provide funding to support 50 existing brownfields assessment pilot cooperative agreements, provide technical assistance to 16 existing brownfields showcase communities, sign agreements with 70 new communities to capitalize revolving loan funds, provide brownfields communities with targeted brownfields assessments (TBAs), and award 10 additional job training pilots. The Agency will also provide information and tools and develop model practices and policies to be used by local governments, developers, and transportation officials in their pursuit to redevelop brownfields properties.

RCRA

The Agency maintains a close relationship with state agencies that are authorized to implement the Resource Conservation and Recovery Act (RCRA) corrective action program. States are expected to achieve the same level of federal standards as the Agency, including annual performance goals of human exposures and groundwater releases controlled. As part of the state grant process, regional offices negotiate with the states the progress in the corrective action program toward the objective of meeting the GPRA goals.

Research

The Agency spends substantial effort in coordinating with other agencies to conduct risk management and exposure research. These activities include work with the Department of Defense (DOD) in their Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) programs. Other groups include the Department of Energy (DOE) and the Office of Science and Technology and the Integrated Treatment Remediation Demonstration (ITRD) Program. Collaborative field demonstrations (e.g., through the SITE program) and laboratory research with DOD, DOE, and the Department of Interior (DOI) (particularly the U.S. Geological Survey) to improve characterization and risk management options for dealing with subsurface contamination are also conducted. Collaboration with external organizations allows the Agency the needed flexibility in dealing with complex waste/site characterization and remediation problems and, consequently, improve the Agency's ability to meet its objective of quicker and more cost-effective site cleanups.

Characterization and monitoring research at EPA are also being coordinated with other Agencies. The unique controlled spill field research facility was designed in cooperation with the U.S. Bureau of Reclamation and is being constructed and operated in conjunction with the Department of Energy near the town of Mercury at the Nevada Test Site. Geophysical research experiments and development of software for subsurface characterization and detection of contaminants are being conducted with the USGS and DOE's LBNL (Lawrence Berkeley National Laboratory).

The Agency works with The National Institute of Environmental Health Sciences (NIEHS) to advance fundamental Superfund research. NIEHS manages a large basic research program directed at Superfund issues. The program is mandated in CERCLA, which establishes a "basic university research and education program" in NIEHS, and further reinforced in Superfund Amendments and Reauthorization Act (SARA), where the intent of Congress is clarified, indicating that the program "may include" the following: epidemiologic and ecologic studies, advanced techniques for detection, assessment and evaluation of effects on human health of hazardous substances; methods to assess the risk to human health presented by hazardous substances; and methods and technologies to detect hazardous substances in the environment and basic biological, chemical, and physical methods to reduce the amount and toxicity of hazardous substances**.**

Statutory Authorities

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657

- Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976
- Defense Base Closure and Realignment Act of 1990, Section 2905(a)(1)(E) (10 U.S.C. 2687 Note).

- Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)
- Oil Pollution Act 33 U.S.C.A.
- Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (Public Law 102-579 as amended by Public Law 104-201) 40 CFR 194: Criteria for the Certification and Recertification of the WIPP's Compliance with the Disposal Regulations (1996): Certification Decision (1998).
- Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970
- Uranium Mill Tailings Radiation Land Withdrawal Act of 1978

Research

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Oil Pollution Act (OPA)

Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response

Objective # 2: Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies

By 2005, over 282,000 facilities will be managed according to the practices that prevent releases to the environment, and EPA and its partners will have the capabilities to successfully respond to all known emergencies to reduce the risk to human health and the environment.

Resource Summary
(Dollars in thousands)

	1999 Enacted	FY 2000 Enacted	FY 2001 Request	FY 2001 Req. v. FY 2000 Ena.
Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies	**$161,528.0**	**$170,513.3**	**$179,172.1**	**$8,658.8**
Environmental Program & Management	$91,639.9	$98,517.3	$104,860.3	$6,343.0
Science & Technology	$8,345.8	$8,584.7	$9,306.5	$721.8
State and Tribal Assistance Grants	$38,038.4	$39,438.4	$39,438.4	$0.0
Leaking Underground Storage Tanks	$34.9	$0.0	$0.0	$0.0
Oil Spill Response	$13,372.8	$13,477.0	$14,201.1	$724.1
Hazardous Substance Superfund	$10,096.2	$10,495.9	$11,365.8	$869.9
Total Workyears	857.2	902.9	872.8	(30.1)

Key Programs
(Dollars in thousands)

	1999 Enacted	FY 2000 Enacted	FY 2001 Request
RCRA Permitting	$13,325.0	$15,724.4	$16,311.6
RCRA State Grants	$27,493.7	$27,493.7	$27,493.7

Waste Combustion	$6,890.3	$4,438.3	$4,677.5
Risk Management Plans	$7,254.9	$7,242.8	$7,913.5
Federal Preparedness	$9,807.5	$9,528.2	$10,154.8
Community Right to Know (Title III)	$4,544.7	$4,797.5	$5,137.5
Underground Storage Tanks (UST)	$6,378.3	$6,203.9	$6,906.4
UST State Grants	$10,544.7	$11,944.7	$11,944.7
Oil Spills Preparedness, Prevention and Response	$11,851.9	$11,820.4	$12,560.3
Hazardous Waste Research	$6,167.9	$5,379.8	$6,880.8
Project XL	$112.6	$117.4	$126.7
Common Sense Initiative	$130.0	$0.0	$0.0
Civil Enforcement	$1,225.3	$1,298.5	$1,360.1
Compliance Assistance and Centers	$274.9	$353.4	$280.7
Rent, Utilities and Security	$0.0	$7,362.0	$7,983.3
Administrative Services	$212.7	$1,263.0	$1,365.6
Regional Management	$0.0	$252.5	$122.5

FY 2001 Request

Underground Storage Tank Program

The goal of this program is to prevent, detect, and correct leaks from underground storage tanks (USTs) containing petroleum and hazardous substances. This is done by promoting and enforcing compliance with the regulatory requirements aimed at preventing and detecting UST releases.

In 2001, the Agency estimates that 70% of tanks will be in compliance with EPA/state leak detection requirements and 93% of USTs will be in compliance with EPA/state December 22, 1998 requirements to upgrade, close or replace substandard tanks. Improving compliance with leak detection requirements will be a major focus for the UST program in 2001 and beyond. Achieving necessary and significant improvements in leak detection rates will require a sustained emphasis by both EPA and states. For example, a number of issues have been raised by the Administrator's Blue Ribbon Panel on the use of oxygenates in gasoline and industry associations concerning leak

detection and improvements needed for leak detection systems. EPA and the states will need to address these significant concerns over the next several years to ensure leak detection systems are operating properly.

The Agency believes that compliance with requirements to upgrade, replace or close substandard tanks will reach 93% by the end of 2001, largely because many states have laws and enforcement tools that go well beyond those available to EPA. This includes laws in 20 states which allow them to prevent delivery of fuel to noncompliant facilities. In addition, distributors in many other states have decided not to deliver fuel to noncomplying facilities for liability reasons. The states are the primary enforcers of the UST program requirements. EPA will continue to assist and augment state inspection efforts which assess compliance with requirements for leak detection, corrosion protections, spill containment, and overfill prevention. These efforts will ensure increased compliance.

A priority in the UST program over the next several years is to ensure that USTs are managed properly and meet appropriate technical requirements. To help ensure compliance with UST requirements, the Agency will continue to assist states and tribes. EPA will place a special emphasis on boosting owners' and operators' low compliance rate with leak detection requirements.

The Agency will also continue to promote compliance with the 1998 deadline requirements for upgrading, replacing or closing substandard tanks, as well as study the causes of releases from new and upgraded UST systems and establish partnerships with states and industry to improve tank owners and operators' operation and maintenance procedures. In addition, the Agency will continue its evaluation of EPA's technical requirements for UST systems to understand how well they are working and how they might be improved. This evaluation will have a definite impact on the prevention of releases. States have identified this evaluation as one of the most important activities that the UST program and the states need to undertake in the near future.

In 2001, the Agency will continue to coordinate its UST/ methyl tertiary butyl ether (MTBE) release prevention workshops with states, industry and the private sector. The UST program's efforts to prevent and detect leaks from underground storage tanks are consistent with and advance the recommendations of the Agency's Blue Ribbon Panel on the Use of Oxygenates in Gasoline (July 1999). Financial support will continue to be provided through UST state grants to help states address low leak detection compliance and ensure that USTs are in compliance with the 1998 deadline.

EPA has the primary responsibility for implementation of the UST program in Indian Country. This responsibility requires EPA Regional offices to educate owners and operators about the UST requirements, conduct inspection and enforcement activities, and maintain a database of information on USTs located in Indian Country. Demonstration grants under Resource Conservation and Recovery Act (RCRA) Section 8001, and non-demonstration grants under RCRA Section 2007 (PL 105-276) will continue to help Tribes develop the capability to administer UST programs.

In 2001, the Agency will continue to support the USTFields initiative, which is an effort that focuses attention on abandoned or idled industrial and commercial UST facilities. Some of these facilities are gasoline service stations and automobile lots (i.e., rental car lots) where expansion or redevelopment is complicated by real or perceived environmental contamination. USTFields are located in urban, suburban, and rural areas throughout the country. The Agency is committed to help EPA Regions and state and local governments collect and distribute information on current or completed efforts to revitalize abandoned tank properties. The Agency's UST activities will include helping states document and disseminate challenges facing state and local regulatory program efforts to redevelop abandoned or idle USTs, and a comprehensive inventory of where USTFields are located. The Agency will also help to build partnerships between parties interested in redeveloping UST sites, and facilitate outreach through the Agency's web site to share lessons learned among Federal agencies, states, municipalities, and communities.

Chemical Emergency Preparedness and Prevention

The Agency's Chemical Emergency Preparedness and Prevention (CEPP) program addressees the risks associated with the manufacture, transportation, storage and use of hazardous chemicals to prevent and mitigate chemical releases. The program also implements right-to-know initiatives to inform the public about chemical hazards and encourages actions at the local level to reduce risk. All Americans benefit from an effective chemical safety program because hazardous chemical substances are virtually everywhere and chemical accidents are an ever-present danger. A calendar year 1996 analysis estimated that more than 400 releases of extremely toxic and flammable chemicals resulted in two dozen fatalities, 1,000 injuries, thousands of evacuations, and more than $1 billion in damages.

This will be the second year that Federal, state, and local agencies and the general public will have access to large amounts of information on the presence of chemicals in every community and the potential hazards those chemicals present. Section 112(r) of the Clean Air Act requires an estimated 36,000 facilities to develop comprehensive Risk Management Plans (RMPs) and submit them to EPA, state agencies, and Local Emergency Planning Committees (LEPCs). This is fewer than the 66,000 facilities originally required to report under this program. The reduction is the result of the Chemical Safety Information, Site Security and Fuels Regulatory Relief Act which removes certain flammable fuels from coverage by the RMP program. The law was signed by the President on August 5, 1999.

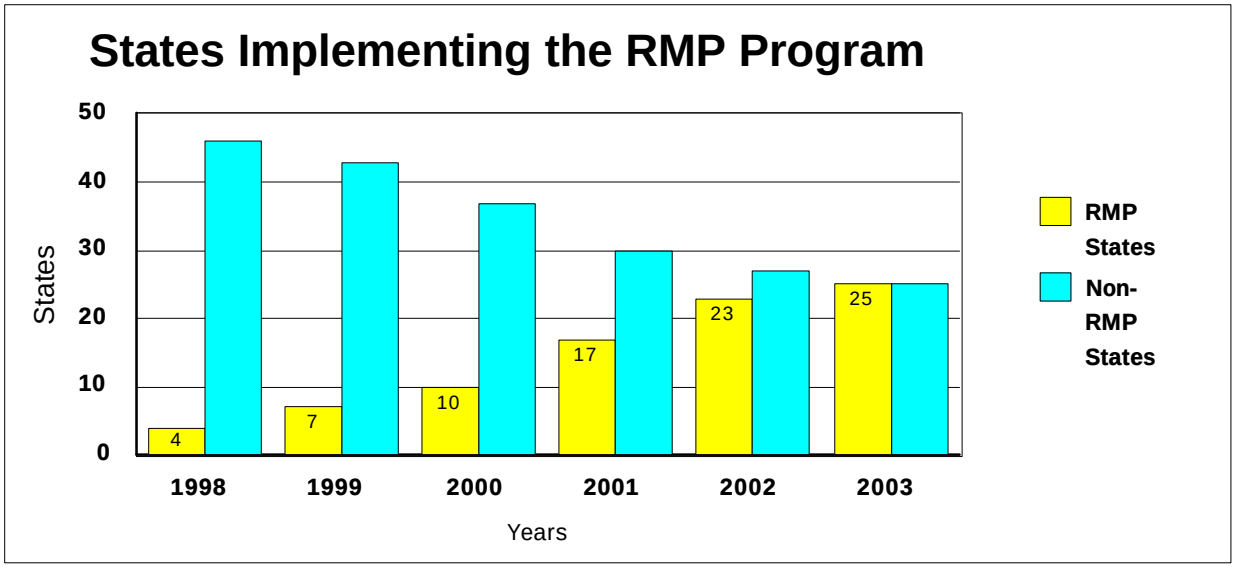
The same Chemical Safety law directed that worst-case scenario information included in the off-site consequences portion of the RMPs be withheld for one year, pending an assessment of the risk and benefits of making such information public and federal regulations for appropriate public disclosure. The President has delegated these tasks to EPA and the Department of Justice (DOJ). EPA and DOJ will develop and issue these rules in 2000 (per statute). The Agency expects to implement the rules in 2001.

Each RMP identifies and assesses the hazards posed by on-site chemicals. It also provides a five-year facility accident history and outlines an accident prevention program and an emergency response plan. The statutory deadline for filing RMPs was June 1999. While the numbers are still

being tallied, EPA estimates that about half of those required to submit RMPs have done so. A program priority in 2001 will be to continue efforts to increase compliance with the RMP reporting requirement, particularly among the small business community. This will be done by providing a combination of technical assistance, outreach and training.

EPA will continue to promote implementation of the RMP program during 2001. The Agency believes individual states are best suited to implement the program because they benefit directly from its success and they often have established relationships with the communities that may be at risk. EPA also believes that as most facilities achieve compliance, this may serve as an incentive for states to seek delegation. The Agency will continue to emphasize flexibility in how states will be authorized to receive delegation. One new approach EPA will undertake is to increase participation by encouraging states to partially implement the RMP program. EPA will work to secure agreement and help them to develop and manage individual program components. Some examples include outreach and compliance programs, facility training, and audits/inspections.

In addition to this effort, EPA will continue to provide states a combination of grant assistance, technical support, training, and other outreach services to help them fully develop and receive delegation of the program. The Agency's goal is to delegate RMP program authority to an additional seven states during 2001, bringing the total number of authorized states to 17.



Because the Clean Air Act mandates a RMP program for every state, EPA Regional offices will continue to manage RMP programs in those states that have not accepted delegation. In 2001, the Agency will begin to implement an active audit program which will include a combination of audit reviews and on-site inspections. The audit program is required by the law to ensure that facility operations are conducted in a safe and responsible manner. Audit selection will be based upon several criteria, including accident history, patterns of noncompliance, types and quantities of

chemicals or geographic location. In the enforcement area, program efforts will begin to focus on the quality of the RMP, as well as on facilities that fail to submit reports.

EPA will continue to analyze the extensive data in the RMPs. The Agency will examine trends and patterns in such areas as industry sector, facility size, geographic region, and chemicals. In particular, EPA will employ epidemiological methods to analyze the RMP's five-year accident history data to explore accident risk factors and precursors and will complete regulatory action on changes resulting from a review of the RMP chemicals list.

One of EPA's vital roles is to help communities implement accident prevention programs. LEPCs (established under the Emergency Planning and Community Right to Know Act, EPCRA) serve as the focal point for discussions on reducing chemical risks at the local level. Under the RMP program, LEPCs take information on how facilities are reducing the risk of accidents and integrate it into their emergency plans and community right-to-know programs. In 2001, EPA will support LEPC efforts by providing tools, technical assistance and guidance to better enable them to use the risk information. In the regulatory area, the program expects to undertake the second phase of streamlining of EPCRA's reporting requirements. EPA will also continue an initiative to improve and enhance emergency preparedness and prevention in Tribal communities.

Funding of the independent Chemical Safety Board (CSB) has placed new responsibilities on the Agency with regard to chemical safety and accident prevention. The same Clean Air Act provisions that established the CSB requires EPA to respond to the Board's recommendations and provide support for its activities. EPA completed a memorandum of understanding with the Board in 1999 that delineated roles and working relationship. As a result, the Agency expects to conduct activities in the following areas:

- Responding to Board recommendations that result from investigations. EPA anticipates each CSB investigation may lead to several recommendations which may require program adjustments and modifications;

- Gathering field information to understand how to prevent accidents and to support decision-making on CSB recommendations; and

- Taking prevention actions and providing outreach to industry, government and the public to enhance application of chemical safety measures. The program will focus on lessons learned from accidents and issue case studies and chemical safety alerts to reduce the risk of future accidents.

EPA also supports a highly effective national emergency preparedness and response capability. Under the National Response Team (NRT)/Regional Response Team (RRT) and the Federal Response Plan (FRP), the Federal government helps states and cities address major incidents that are beyond their capabilities. EPA chairs the NRT and co-chairs the 13 RRTs throughout the U.S. which integrates actions of all Federal partners to prevent, prepare for and respond to hazardous substance and petroleum emergencies.

In 2001, the NRT will implement and test an incident command/unified command system to coordinate response management for all levels of government and the private sector during major incidents. In addition, the NRT will broadcast lessons learned about major incidents and exercises, and emergency response procedures on the NRT/RRT Internet site. The NRT will also continue to promote interagency training programs in crisis management response, communicate information on new safety and cleanup technologies, implement mechanisms to coordinate radiological and hazmat response, and provide technical assistance for incidents occurring outside the United States.

The Federal Response Plan (FRP) provides for the delivery of Federal assistance to states to help them deal with the consequences of significant disasters. EPA has the lead responsibility for the plan's Emergency Support Function covering hazardous materials. An important priority under the FRP is to protect public health and the environment from terrorist threats. Under the program, EPA participates with other Federal agencies to implement national security and anti-terrorism requirements. They include the following:

- *Continuity of Operations (COOP) Program.* PDD #67, requires all Federal Executive Branch departments and agencies to have in place a viable capability to ensure the performance of their essential functions during any emergency or situation that may disrupt normal operations. During 2001, EPA will place emphasis on individual and team training, testing of alert and notification procedures, and an internal headquarters exercise at the designated alternate facility to enhance the operational capabilities of the Agency's COOP response team. The Agency will also continue to review and refine its COOP plans.

- *Critical Infrastructure Protection.* Presidential Decision Directive (PDD) #63, requires EPA (and other Federal agencies) to strengthen Agency and stakeholder defenses against assaults on critical infrastructures, including cyber systems. EPA also has the lead responsibility for coordinating plans and activities with the water supply sector. In 2001, EPA and other Agency partners will concentrate on implementing industry and EPA plans to address the problems, gaps and vulnerabilities that were cited in initial program assessments.

- *Anti-terrorism Emergency Preparedness*. As directed under PDDs #39 and #62, EPA participates in the crisis and consequence management phases of terrorist incident response exercises. We also prevent and prepare for deliberate releases and coordinate with other Federal agencies to ensure that anti-terrorism activities are integrated with state and local emergency preparedness and response programs and organizations (including State Emergency Response Commissions, LEPCs and the National Response System).

In 2001, EPA's anti-terrorism program will continue to focus on helping stakeholders to prepare for and respond to nuclear, biological and chemical acts of terrorism. EPA will continue efforts toward ensuring that response personnel are trained and equipped to respond to weapons of mass destruction incidents. EPA will also work with its Federal partners to develop federal, state and local planning capabilities, as well as help them to understand the interfaces between the PDD mandates, National Response System and the national domestic preparedness program for terrorist

events. These activities will be conducted as part of the Federal government's initiative to ensure that state and local emergency officials are adequately trained.

Oil Spills

The goal of the oil spill program, which is authorized by the Clean Water Act (CWA) and been in effect for over twenty-five years, is to protect public health and the environment from hazards associated with a discharge or substantial threat of a discharge of oil or hazardous substances into navigable waters, adjoining shorelines, and exclusive economic zones of the United States. The program was strengthened by the Oil Pollution Act of 1990 (OPA), a statute passed in response to increasing frequency and severity of accidental oil discharges into the environment, such as the Ashland tank collapse and the Exxon-Valdez spill.

Each year more than 24,000 oil spills occur in the United States, approximately over half of them within the inland zone over which EPA has jurisdiction. On average, one spill of greater than 100,000 gallons occurs every month from approximately 450,000 EPA-regulated oil storage facilities and the entire oil transportation network. Oil spills contaminate drinking water supplies; cause fires and explosions; kill fish, birds, and other wildlife; destroy habitats and ecosystems; and impact the food chain. There are also serious economic consequences of oil spills because of their impact on commercial and recreational uses of water resources.

The oil spill program prevents, prepares for, and responds to oil spills, as mandated and authorized in the CWA and OPA. EPA protects inland waterways through oil spill prevention, preparedness, and enforcement activities associated with the 450,000 non-transportation-related oil storage facilities EPA regulates. In addition to its regulatory responsibilities, EPA serves as the lead responder for the inland zone for all spills, including spills from outside of its regulated universe, such as spills from pipelines, trucks, and other transportation systems (regulated by the Department of Transportation). EPA accesses the Oil Spill Liability Trust Fund (OSLTF), administered by the United States Coast Guard, to fund its site-specific spill response activities.

The oil spill program establishes requirements to prevent and prepare for spills at oil storage facilities subject to its regulations. In the event of a spill, the Oil and Hazardous Substances National Contingency Plan (NCP) is the Nation's blueprint for the federal response to discharges of oil and hazardous substances. EPA's regulatory framework is chiefly composed of the Spill Prevention, Control, and Countermeasures (SPCC) regulation and the Facility Response Plan (FRP) regulation.

All regulated oil storage facilities must prepare SPCC plans. These facilities, which range from hospitals and apartment complexes storing heating oil to large tank farms, include any oil storage facility with aggregate aboveground storage capacity[1] greater than 1,320 gallons, or underground storage greater than 42,000 gallons (not otherwise subject to the UST program requirements). Four hundred additional facilities will be in compliance with SPCC provisions in

[1]Above ground storage in containers less than 55 gallons are exempt.

2001 as a result of EPA's activities. In addition, certain high-risk oil storage facilities must prepare FRPs to identify and ensure the availability of resources to respond to a worst case discharge, establish communications, identify an individual with authority to implement removal actions, and describe training and testing drills at the facility. In 2000 and 2001, EPA will review a small number of FRPs, with EPA's review triggered by a large spill, or a spill at a particularly high risk facility.

The OPA also requires EPA to develop Area Contingency Plans (ACPs), in conjunction with area committees (state, local and Federal officials in a given geographic location). The ACPs detail the responsibilities of various parties in the event of a response, describe unique geographical features of the area covered, and identify available response equipment and its location.

In 2001, EPA will implement the revised SPCC regulation for a full year. The new SPCC regulation is a performance-based rule, heavily reliant upon industry standards, and as such, represents a comprehensive overhaul of the basic regulatory structure of the current oil spill prevention program. The Agency anticipates undertaking a new and extensive outreach effort to the regulated community about industry compliance with the new rule. The Agency must also train its own workforce of inspectors and other staff to assist in compliance assistance and enforcement of the new regulation. In addition to these prevention efforts, EPA will continue its preparedness efforts by focusing on development of ACPs. Response efforts include evaluating, monitoring and/or responding to all spills within the inland waterways. Over the past four years (1996-1999), EPA has received and evaluated approximately 35,000 oil spill notifications, served as lead responders at approximately 358 oil spills, and shared response responsibility with another party at approximately 675 responses.

Resource Conservation and Recovery

The Agency's Resource Conservation and Recovery Act (RCRA) program accounts for about 13,900 of the facilities addressed by this objective. The RCRA program reduces the risk of human exposures to hazardous, industrial nonhazardous, and municipal solid wastes. Every year, municipalities and industries generate approximately 217 million tons of municipal solid waste, 270 million tons of industrial hazardous waste (including waste waters), and more than 7.6 billion tons of industrial nonhazardous waste. A combination of regulations, permits and voluntary standards and programs ensure to the greatest extent possible safe management of the various wastes. Without the RCRA program, new contaminated waste sites, possibly Superfund sites, would result from mismanagement of these wastes, threatening nearby communities. In 2001, the focus of the RCRA program will be on reducing risk, tailoring management practices to the potential risks of specific wastes, and on creating efficiencies through streamlining procedures and waste management procedures and systems.

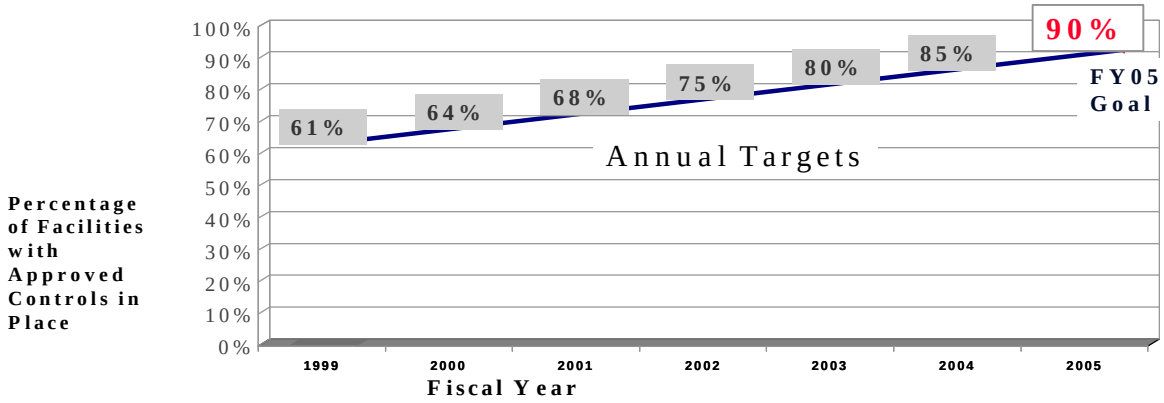
The main vehicle for hazardous waste program implementation is the issuance of RCRA hazardous waste permits. The RCRA program reduces the risk of exposures to dangerous hazardous wastes by establishing a "cradle-to-grave" waste management framework. This framework regulates the handling, transport, treatment, storage, and disposal of hazardous waste, ensuring that communities are not exposed to hazards through improper management. Significant progress has

been made by hazardous waste management facilities having appropriate controls in place to minimize the threat of exposure to hazardous substances. To date, 47 of 50 states, Guam and the District of Columbia are authorized to issue permits. The authorization of states for all portions of the RCRA program, including regulations that address waste management issues included in permits, is an important goal. The Agency and the states have now permitted almost all operating landfills and land disposal sites, as well as most commercial incinerators. Permits for storage and treatment facilities as well as post-closure facilities comprise the largest remaining workload. In a rule making designed to simplify the permitting process for lower-risk treatment and storage facilities, the Agency will propose, in 2000, the standardized permit. The final rule will be promulgated in 2001. During 2001, the Agency will provide technical assistance to states that are authorized to implement the RCRA program, including site specific assistance, regulatory interpretation and program guidance. The Agency will also continue implementation efforts in those states not authorized to conduct permitting activities.

In line with efforts to better calibrate risk and regulatory standards, the Agency is developing concentration-based exemptions within the Hazardous Waste Identification Rule (HWIR-Waste). This proposal will provide a framework to identify lower-risk waste currently regulated under Federal hazardous waste requirements (Subtitle C) that could safely be managed as nonhazardous waste. Under this proposal, generators of listed hazardous wastes that meet the standards would no longer be subject to the hazardous waste management system. Generators would therefore have a reduced management burden for lower risk wastes. In 2001, the Agency will be working toward developing a rule proposal by FY 2002.

Progress Towards the RCRA Goal

for Safe Waste Management at Hazardous Waste Facilities



EPA is conducting a review of a basic underlying tool of the hazardous waste program, the toxicity characteristic leach procedure (the TCLP). This test is used in decisions as to which wastes are hazardous and to evaluate the effectiveness of waste treatment. While the test works quite well for its original intent, some regulated entities believe the current test overestimates the hazard posed if their wastes are disposed of in industrial landfills. In other cases, EPA has recognized that some industrial waste landfills create conditions in which the TCLP will underestimate the hazards posed by certain wastes and could result in treatment that actually increases the leaching of hazardous constituents in such industrial or hazardous waste landfills. In FY2000, EPA will evaluate a number of different leaching tests and begin the process of developing alternative approaches based on a review in 1999 of scientific research to date. In 2001, EPA intends to continue methods development work and may be able to begin field work and laboratory validation testing to allow the Agency to determine how to better tailor the regulatory uses of leach tests.

In addition, EPA needs to look beyond risks to groundwater or from combustion, to better consider the role of the RCRA program in controlling air releases of toxic chemicals from non-combustion units, such as air emissions from industrial wastewater treatment units. In 1998, an EPA study concluded that there might be significant risks if certain chemicals are present in typical waste management units. In conjunction with other work in EPA on air toxics, the RCRA program will closely review whether or not RCRA hazardous waste regulations should play a role in controlling key air toxics concerns. In 2000, EPA will identify and start to analyze available data on the occurrence of toxic chemicals of potential concern in waste management units. In 2001, the Agency will complete further analysis and policy evaluation of whether RCRA regulation would be an effective complement to Clean Air Act actions to control the most problematic air toxic emissions.

The Land Disposal Program Flexibility Act of 1996 requires the Agency to conduct a study of “decharacterized” hazardous wastes (hazardous wastes which have been treated or mixed with

other waste waters to the point where they no longer meet the hazardous waste characteristics) managed in surface impoundments regulated under the Clean Water Act. The Agency is also required, under a consent decree, to conduct a study of "non-decharacterized" waste managed in surface impoundments. In March 2001, the Agency will complete the study which will quantify probability of human health and ecological effects attributable to exposure from hazardous constituents managed in industrial surface impoundments, identify the most significant factors influencing the probability of those effects, and compare the risk results of the decharacterized waste impoundments with the risk result of non-decharacterized wastes.

In 2000, the Agency's RCRA waste identification program will produce a final listings determination rule associated with chlorinated aliphatics, and will propose a listings determination rule for industrial wastestreams generated during the production of inorganic chemicals. In 2001, the Agency will finalize the listings determination rule for inorganic chemicals and propose a listings determination rule for industrial wastestreams generated during the production of paints.

The Hazardous Waste Minimization and Combustion Strategy outlines the Agency's plans to ensure that hazardous waste combustion in incinerators and Boilers and Industrial Furnaces (BIFs) is safe and reliable. Rulemakings designed to reduce the emission of hazardous air pollutants, including dioxins, furans and toxic metals, will improve the quality of life (especially for the more vulnerable, including children), as well as limit the number of people and areas exposed to releases from hazardous waste combustion facilities. To reduce the burden on the Agency and the regulated community, the Agency has combined its efforts and is developing these rules primarily under the Clean Air Act.

Finalized in 1999, the Phase I combustion rule addresses revised standards for hazardous waste incinerators and cement and lightweight aggregate kilns that burn hazardous waste. The Maximum Achievable Control Technology (MACT) rule will mean an air permit for hazardous waste combustion facilities using streamlined procedures for industry and state implementors. The Agency will begin its Phase I implementation efforts in 2000 with the development and publication of guidance and technical assistance documents. Implementation efforts, primarily in the form of technical assistance to the regions, states and industry, will continue in 2001 as several key milestones are reached. The Agency estimates that most facilities will demonstrate compliance with the standards and transition from RCRA to CAA air emissions permitting in 2001 and FY 2002 and expects, therefore, that technical assistance will be critical during this time. In 2001, the Agency will continue efforts to pursue development of the Phase II rule, which will cover emissions from hazardous waste burning boilers.

The Agency will continue its work to reduce long-term risks from particularly "hard-to-treat" wastes. These include mercury, arsenic, and other heavy metals, both in process wastes as well as in contaminated soils. During 2001, the Agency will propose improvements on mercury treatment based on the results from its Advance Notice of Proposed Rule Making (ANPRM) in mercury, published in mid-1999. Also during 2001, the Agency will analyze information from the public and technical experts and advance toward issuing a final rule and guidance on sound and cost-effective means of mercury treatment that avoid the high costs of incineration.

In 2001, the Agency will be completing steps to address potential risks associated with the use of hazardous waste in fertilizers. In 2000, EPA plans to propose revised RCRA standards for recycling of hazardous waste in fertilizers that provide a more consistent and appropriate regulatory framework, while ensuring protection of human health and the environment. Final standards will be issued in early FY 2002.

As part of the Agency's efforts to streamline RCRA procedures and systems, EPA plans to propose major changes to the hazardous waste manifest in 2000. The Agency expects to propose automation of the RCRA manifest and changes to the manifest form to reduce paperwork burden on hazardous waste generators. In addition, EPA expects to streamline the regulatory requirements for managing utility waste generated at remote sites. In 2001, EPA will begin development of the final rule, including reviewing and responding to public comments. The Agency expects to complete the final manifest rule in FY 2002.

In 2001, the Agency will examine potential RCRA improvements in site-specific projects initiated under the Project XL program. Project XL encourages experimentation with alternative regulatory requirements that may yield superior environmental results. Currently, there are 11 XL Projects with RCRA components. Several involve experimenting with more flexible, performance-based regulatory requirements for industries (such as public utilities and laboratories) that generate small quantities of hazardous wastes at numerous locations.

The Agency is also working to reduce risks -- both known and unknown -- from industrial nonhazardous waste, also known as Industrial D waste. Manufacturing facilities generate and dispose of 7.6 billion tons of industrial nonhazardous waste on a site each year. In 2000, the RCRA program will work with states in reviewing comments on draft guidance issued in 1999. This guidance addresses a range of issues related to the management of industrial nonhazardous waste, including groundwater contamination, air emissions resulting from solid waste disposal, and alternatives to waste disposal, such as recycling and waste prevention. The recommendations in these voluntary guidelines incorporate substantial flexibility for a broad range of approaches for dealing with a diverse set of waste streams which pose varying degrees of risk in various site-specific situations. In 2001, in conjunction with the states and a focus group comprised of the states, industry, and the environmental community, the Agency will finalize the guidance on planning, designing, constructing, and operating new solid waste management facilities at industrial sites that generate nonhazardous solid wastes.

In 2001, the Agency will complete the tailored regulations applicable to the management of cement kiln dust that were proposed in 1999 or announce its reliance on other approaches described in the proposal. These regulations are being developed to provide substantial flexibility in how cement wastes are managed to ensure protection of human health and the environment.

The Agency works with other Federal agencies, states, tribes and industry to promote safe handling of wastes from mining, oil and gas production, and utilities industry. In 2000, the Agency will complete the fossil fuel regulatory determination and will begin monitoring progress made by the utility industry in rectifying certain deficiencies identified in the regulatory determination, particularly with regard to management of pyrite wastes and wastes from oil-fired boilers managed

in surface impoundments to ensure sufficient progress to justify continuation of the Bevill exemption for these wastes. In 2001, the Agency will begin its follow-up activities related to the regulatory determination.

In 2001, the Agency will complete the review of its solid waste landfill criteria, required by the Small Business Regulatory Enforcement Fairness Act, and announce those areas in which it will consider revising the regulations to provide additional flexibility for small landfills and others so that compliance is less costly and easier to achieve.

Although regulatory programs addressing landfills that receive municipal solid waste (MSW) and nonhazardous waste landfills that receive conditionally exempt small quantity generator (CESQG) waste are implemented by the states, it is the Agency's responsibility to establish minimum national standards with which all facilities must comply. In addition, the Agency must review and approve state landfill permitting programs to verify that they are capable of ensuring that all facilities in the state comply with the national standards. Virtually all municipal landfill permitting programs should have approval by the end of 2000. In 2001, the Agency will place additional emphasis on reviewing state permitting programs for non-hazardous landfills that receive CESQG hazardous waste.

Waste management, particularly issues surrounding open dumps, is a significant environmental concern for tribes. In 2001, the Agency will begin the second year of the government-wide program directed toward closing open dumps and/or ensuring compliance with regulations for those municipal solid waste landfills in tribal country that wish to remain operating working toward the most efficient and effective solutions that result in the greatest positive environmental impact. Agencies participating in this program include the Bureau of Indian Affairs, Indian Health Service, the Rural Utility Service and the Department of Defense, the Federal Aviation Administration, the National Oceanic and Atmospheric Administration and the United States Geological Service. In 2001, EPA will provide funding and technical assistance to at least 10 tribes to assist them in developing and implementing comprehensive solid waste management programs that will result in the closure of their open dump sites in compliance with the municipal solid waste landfill requirements (following on 1999 efforts with 11 tribes and 10 planned for 2000). EPA will also serve as the facilitator for the overall implementation of this program. In the hazardous waste arena, the Agency provides support to tribal governments to assist them in building capacity for hazardous waste program management. That support will continue along with the Agency's work with the Tribal Association for Solid Waste and Emergency Response. Technical assistance for tribal environmental programs in both solid and hazardous waste will be provided by tribal circuit riders.

In 2001, the Agency will move forward in its redesign of information management within the waste program under the Waste Information Need (WIN/INFORMED) Initiative. Working with state partners, the Agency has been engaged in a multi-year review of the RCRA waste management needs in an effort to find ways to reduce the reporting burden of data providers by streamlining current national reporting requirements, coordinating RCRA information system standards with other EPA data systems, improving the utility of information that is collected, and continuing to promote electronic reporting wherever feasible. During 2001, the Agency will begin implementing

recommendations that will result from Waste Activity Monitoring and the Universe Identification analyses scheduled for completion in 2000.

In a related waste management program, EPA will support safe and environmentally sound radioactive waste management by: maintaining certification and oversight responsibilities for Department of Energy (DOE) waste disposal activities at the Waste Isolation Pilot Plant; providing technical support to the Nuclear Regulatory Commission (NRC) in application of pending standards at Yucca Mountain; coordinating with other Federal agencies including NRC and DOE, and states to develop mechanisms for control of other industrial materials with a radioactive component; and developing waste management regulations to facilitate the disposal of low-activity mixed waste by combining existing RCRA requirements with traditional radiological waste management components. EPA will also implement its strategy to address Technologically Enhanced Naturally-Occurring Radioactive Material issues in conjunction with other Federal agencies, states, Tribes, industry, and environmental groups.

Under the National Contingency Plan and the Federal Radiological Emergency Response Plan, EPA assists the regions, states and other Federal agencies in responding to radiological emergencies. EPA provides technical assistance and guidance on all Superfund Emergency Response matters and also offer field monitoring expertise, mobile radiochemical analysis, and dose assessment support and develops Protective Action Guidance for use by state/local authorities to protect their populations. EPA performs radiological lab analyses that provide data on dose levels and potential risks. EPA also operates the Environmental Radiation Ambient Monitoring System which collects data from 260 monitoring stations across all 50 states and the American Territories for drinking and ground water samples, and air and milk analysis

Research

Research to support the Agency's objective of managing facilities to prevent the releases of contaminants into the environment is conducted in three major areas: combustion, multimedia science, and waste management. This research will: (1) develop provisional toxicity values (reference doses, reference concentrations, cancer slope factors) for waste constituents, which do not currently have values, so their risks may be quantitatively assessed for delisting decisions and risk assessments supporting the Hazardous Waste Identification Rule (HWIR); (2) conduct multimedia, multi-pathway exposure modeling and environmental fate and transport-physical estimation; (3) identify better ways to manage wastes, focusing on treatment for hazardous waste streams which are either difficult or expensive to treat; (4) determine cost-effective ways to monitor combustion processes and to minimize releases; and (5) develop more effective systems for solid waste disposals.

Emissions from waste combustion facilities remain a public concern, and a number of uncertainties exist about the risks posed by these facilities. Emissions characterization and control of toxic contaminants such as dioxin, furans, mercury, lead, cadmium, products of incomplete combustion (PICs), and combustor risk issues, need further research to reduce uncertainties related to waste combustion and to provide protection to the public and the environment.

Hazardous waste combustion research addresses incinerators and industrial systems burning wastes. It involves the study of reduction of emissions by system design and operation changes, as well as through the use of add-on controls. Emissions characterization research is an integral part of this program. In 2001, research on selection of PIC surrogates, PIC measurement techniques, and bench-scale research on factors influencing polychlorinated biphenyl (PCB) formation will continue along with research on characterizing and controlling releases of nickel from waste combustion.

The HWIR has been proposed to provide administrative and economic relief to the regulated community by developing a risk-based approach expected to exclude many low-risk wastes and waste streams from regulatory control under Subtitle C of the Resource Conservation and Recovery Act (RCRA). It is estimated this approach will likely save hundreds of millions of dollars annually. Critical new research is needed in order to provide the scientific underpinnings to ensure the success of the HWIR. Multimedia based research is in direct support of the regulatory reform efforts under the HWIR and is related to the development of allowable national "exit levels" (levels below which a waste or waste stream is excluded from regulation under RCRA Subtitle C) based on sound scientific data and models. The research is intended to develop a systems approach to modeling and data management.

Present exposure assessment modeling techniques do not adequately account for many important contaminant speciation processes that impact the fate of pollutants in natural systems. Research focuses on reducing the uncertainty associated with exposure assessment model predictions by providing improved process level data and models for quantifying pollutant interactions in a variety of natural systems. Research also provides consultation on sampling/sample design related to compliance with proposed exit levels in support of the proposed HWIR. The major product for 2001 will be an update of the HWIR99 modeling methodology for wastes, in response to public comments on the 1999 Federal Register Notice, and incorporation of enhanced uncertainty analysis techniques into the revised methodology.

Risk assessment research under HWIR will develop provisional toxicity values (Reference Doses, References Concentrations, Cancer Slope Factors) for waste contaminants which do not currently have values so their risks may be quantitatively assessed for delisting decisions and risk assessments. The emphasis will be on assessing priority chemicals identified by the Office of Solid Waste. In the area of combustion, the Combustion Technical Assistance Center (CTAC) provides technical assistance for risk assessment at over 200 RCRA combustion facilities. Assistance is provided in response to scientific questions, such as those involving human health and environmental toxicity, that arise while site-specific risk assessments are being conducted on hazardous waste combustion sites.

Waste management research will be conducted to improve ways to manage both solid and hazardous wastes. This includes development and/or evaluation of more cost-effective waste treatment and containment processes. In 2001, research on bioreactors will continue, along with studies of the design and effectiveness of RCRA and municipal waste containment units. Technical support for the cleanup of RCRA active waste management facilities will be expanded in 2001.

FY 2001 Change from FY 2000 Enacted

EPM:

- (+$2,805,700) Additional funds provided to support increased costs associated with the workforce based on the Agency's repricing of payroll (EPM).

- (+$750,000) This increase will provide funds to finalize the Industrial D guidance.

- (+$550,100) Increase for the Risk Management Program. Additional resources will enhance Regional efforts to provide states technical support, outreach, and training to achieve our state delegation goal.

- (+$525,000) This increase to the Tribal Program will provide additional outreach and technical assistance to the tribes through the Circuit Rider program and increase the Municipal Solid Waste Capacity building grants.

- (+$400,000) This increase will provide funds to support Agency efforts to complete the tailored regulations applicable to the management of cement kiln dust.

- (+$200,000) This increase for UST Compliance/MTBE Release Prevention will help EPA address low leak detection compliance rates and coordinate other UST compliance release prevention activities, such as workshops with states and the private sector to understand the effects of MTBE in groundwater and drinking water supplies.

- (+$205,000) This increase will provide funds to accelerate the testing of different treatment standards for high concentrated mercury wastes. This work will support PBTI related activities.

- (+$158,900) Increase to UST Tribal Support. This increase reflects the Agency's need to increase support for implementation of the UST program in Indian Country.

- (-$158,900) Decrease to UST State Program Approval. Resources were redirected to the UST Tribal support. The Agency continues to approve additional states to operate their own programs in lieu of the federal program. This decrease reflects the Agency's need to increase support for implementation of the UST program in Indian Country.

- (+$150,000) Increase to improve emergency preparedness and prevention in Tribal communities.

- (-5.3 FTE) Decrease reflects the agency's across the board general reduction of FTE in the RCRA program and the transfer of the FTE for the EMPACT program.

STAG:

- (+$1,600,000) Increase to UST/MTBE Release Prevention to ensure USTs are in compliance with the regulatory requirements for upgrading, replacing, or closing substandard tanks. While the Agency will continue to approve and work with states to operate their own UST/LUST programs in lieu of the federal program, this redirection is meant to reflect increased emphasis in addressing low leak detection compliance rates and related MTBE issues.

- (-$1,600,000) Decrease to UST State Program Approval. Resources were redirected to UST/MTBE Release Prevention.

Superfund:

- (+$626,600) Increase will strengthen Federal emergency preparedness and response programs to deal with significant releases of hazardous substances and natural disasters. Resources will enable the agency to conduct essential training and exercises and test notification mechanisms under the National Response Team/Regional Response Team, Federal Response Plan and Continuity of Operations Program. Included in total increase is +$304,500 payroll to cover anticipated workforce level.

Oil:

- (+$739,900) Increase will improve Oil prevention program (SPCC inspections). Included in total increase is +$339,700 payroll to cover anticipated workforce level.

Research

S&T

- (+$380,500 +1.5 FTE) This increase represents a transfer of resources from the Superfund Appropriation to the S&T appropriation in support of RCRA corrective action (CA) initiative activities. Research efforts will focus on providing a wide range of technical support activities to the states, including technical assistance and technology transfer support in technology, risk assessment, and possibly site characterization activities.

- (+$990,600) The R&D program, including infrastructure support costs, is spread across eight of the ten goals in the Agency's GPRA/budget structure. Based on a review of actual infrastructure utilization under each goal (i.e., utilization of workyears and associated PC&B, travel, operating expenses, and working capital fund), adjustments are being made across goals to more accurately reflect expectations for use in 2001.

- (-$950,000) The 2001 request is $950,000 below the 2000 Enacted budget level due to Congressional earmarks received during the appropriations process that are not part of the 2001 President's Request.

Annual Performance Goals

UST Compliance

In 2001 70% of USTs will be in compliance with EPA/State leak detection requirements; and 93% of USTs will be in compliance with EPA/State December 22, 1998 requirements to upgrade, close or replace substandard tanks .

In 2000 90% of USTs will be in compliance with EPA/State December 22, 1998 requirements to upgrade, close or replace substandard tanks.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percentage of USTs in compliance with the 1998 deadline requirements.		90%	93%	Compliance
Percentage of USTs in compliance with the leak detection requirements.			70%	Compliance

Baseline: An estimated 65% of USTs were in compliance at the time of the December 22, 1998 deadline.

Emergency Planning

In 2001 EPA will develop a strategy to promote development of tribal chemical emergency preparedness programs.

In 2001 85 % of facilities will be submitting RMPs, 7 states (for a cumulative total of 17) will be implementing Accident Prevention Programs, and 300 audits will be completed on RMP plans to determine completeness and accuracy.

In 2000 75% of facilities will be in compliance with the RMP submission requirements, 3 States (for a cumulative total of 10) will be implementing the RMP program, and 180 audits will be completed on RMP plans to determine completeness and accuracy.

In 1999 In FY99, the electronic system for collecting and establishing baseline data on RMP facilities was completed. The total number of facilities which have submitted RMPs is 14,405. Additionally, 2 States are implementing a prevention program.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percentage of facilities which have submitted RMPs.		75%	85%	Facilities
RMP audits completed.		180	300	Audits
Number of states implementing accident prevention programs.	2	3	7	States
Number of LEPCs implementing the Clean Air Act 112 (r) chemical RMP- prevention programs	not available			LEPCs

Development of draft strategy.			1	Strategy

Baseline: This is a new activity and the baseline is being established.

SPCC Compliance

In 2001 400 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations (for a cumulative total of more than 1,900 facilities since 1997).

In 2000 400 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations (for a cumulative total of more than 1,500 facilities since 1997).

In 1999 EPA exceeded its goal by bringing 774 facilities into compliance with SPCC provisions.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Facilities in SPCC compliance.	774	400	400	Facilities

Baseline: More than 1,100 facilities were in compliance by 1999.

Response to Oil Spills

In 2001 Respond to or monitor all significant oil spills in the inland zone. EPA typically responds to 70 oil spills and monitors 130 oil spill cleanups per year.

In 2000 Respond to or monitor all significant oil spills in the inland zone. EPA typically responds to 70 oil spills and monitors 130 oil spill cleanups per year.

In 1999 EPA exceeded its goal by responding to 94 oil spills and monitoring response at 229 oil spills.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Oil spills responded to by EPA.	94	70	70	Spills
Oil spills monitored by EPA.	229	130	130	Spills

Baseline: EPA typically responds to 70 oil spills and monitors 130 oil spill cleanups per year.

OPA Enforcement

In 1999 Our goal was that facilities be managed so as to prevent releases into the environment by completing 30 OPA Case Referrals and Administrative Enforcement Orders. We missed our target by six; 8 compliance orders and 16 OPA case referrals.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
OPA Case Referrals & Administrative Enforcement Actions	24			Actions

Baseline: Historically, the Agency has taken civil and criminal enforcement actions at about 30 facilities under the Oil Pollution Act. This information will be updated and incorporated into the 2001 Enforcement and Compliance Accomplishments Report.

RCRA Permitting Standards and Compliance

In 2001 EPA will evaluate RCRA Subtitle C management needs for 36 Federally recognized tribes.

In 2001 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 70% of 2,900 facilities.

In 2000 106 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for an approximate total of 67% of 2,900 facilities.

In 1999 The number of hazardous waste management facilities with permits or other approved controls in place cannot be accurately reported at this time. We expect to have validated data available by the end of 2000.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
RCRA hazardous waste management facilities with permits or other approved controls in place.	not available			Facilities
Propose final streamlined permitting standards		1		Rulemaking
Percent RCRA hazardous waste management facilities with permits or other approved controls in place.		67%	70%	Facilities
Promulgate final streamlines permitting standards.			1	Standard
Tribes evaluated.			36	Evaluations

Baseline: EPA established a baseline of 2,900 facilities in 1999.

Hazardous Waste Combustion

In 2001 Develop the Phase II rule for reducing hazardous waste combustion facility emissions of dioxins, furans and particulate matter under the Clean Air Act.

In 2000 Initiate development of the Phase II rule for reducing hazardous waste combustion facility emissions of dioxins, furans, and particulate matter under the Clean Air Act.

In 1999 EPA promulgated Phase I of the waste combustion rule.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Complete industry scoping studies and issue report.		1		Report
Complete initial analysis of existing EPA databases solicit industry comment.		1		Analysis
Promulgate Phase 1 of Waste Combustion Rule	30-Sep-1999			Rulemaking
Develop Phase II of Waste Combustion Rule.			1	Rulemaking

Baseline: The Phase I rule for reducing hazardous emissions of dioxins, furans, and particulate matter under RCRA was promulgated in 1999.

Research

Scientifically Defensible Decisions for Active Management

In 2001 Provide technical information to support RCRA regulatory development for waste identification, containment, and combustion.

In 2000 Enhance scientifically defensible decisions for active management of wastes, including combustion, by providing targeted research and technical support

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Develop provisional toxicity values for 10 - 20 waste constituents that do not have values describing their dose-response toxicological properties.		09/30/2000		Values
Provide journal article on factors that control Hg speciation in incinerators		1		Article
Update the HWIR99 modeling methodology for delisting hazardous wastes, in response to public comments on 1999 Federal Register Notice			1	Update

Baseline: Both the Agency and the private sector have worked for at least a decade to reduce the volume of wastes to be managed and to reduce the risks of the related waste management systems. In recent years, research has focused on support to Agency initiatives on classifying wastes for

their appropriate management and disposal (e.g., HWIR, de-listing, listing), to improve the ongoing requirement for risk assessments as part of Agency and stakeholder decision-making, and to reduce the uncertainties in risk management alternatives, particularly combustion. HWIR development is being extended to a wider universe of waste issues and combustion remains a priority, particularly for controlling hazardous emissions under different boiler operating conditions.

Municipal Solid Waste

In 2001 EPA will provide support and funding to tribes participating in the multi-agency Tribal Open Dump Cleanup Project, which will ultimately result in closing or upgrading of existing high threat open dumps on Indian Lands.

In 2001 78% (160 for a cumulative total of 2,760 out of 3,536) of existing RCRA municipal solid waste facilities in states will have approved controls in place to prevent dangerous releases to air, soil, groundwater, and surface water.

In 2000 74% (141 for a cumulative total of 2,600 out of 3,536) of existing RCRA municipal solid waste facilities in states will have approved controls in place to prevent dangerous releases to air, soil, groundwater, and surface water.

In 1999 Data not available. This is not a mandatory reporting element for states, and EPA is currently negotiating with states and state associations to determine the best means to obtain the data. We anticipate data by the end of 2000.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Percent of municipal solid waste landfills (MSWLFs) with approved controls.	not available	74%	78%	MSW landfills
Open dumps assessed.			no target	Assessments
Open dumps upgraded to comply with Subtitle D landfill standards.			no target	Upgrades
Open dumps with contents transferred and protections against future dumping in place.			no target	Sites

Baseline: The universe was obtained in the 1996 MSWLF survey. EPA is currently negotiating with states to determine a means of data collection and verification.

Anti-Terrorism

In 2001 Provide anti-terrorism training to 25 communities.

In 2000 Provide anti-terrorism training to 19 communities.

In 1999 Anti-terrorism training has been completed for 31 communities.

Performance Measures:	1999 Actuals	FY 2000 Estimate	FY 2001 Request	
Number of communities receiving anti-terrorism training	31	19	25	Communities

Baseline: This is a new activity and the baseline is being established.

Verification and Validation of Performance Measures

Performance Measure: Percentage of USTs in compliance with the 1998 deadline - Percentage of USTs in compliance with the leak detection requirements

Performance Database: The Office of Underground Storage Tanks (OUST) does not maintain a national database.

Data Source: Designated State agencies submit semi-annual progress reports to the EPA regional offices.

QA/QC Procedures: EPA regional offices verify and then forward the data to the OUST Headquarters. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify their data.

Data Quality Review: None.

Data Limitations: Percentages reported are sometimes based on estimates and extrapolations from sample data. Relies on accuracy and completeness of state records.

New/Improved Data or Systems: None.

Performance Measure: Percent of RCRA hazardous waste management facilities with permits or other approved controls in place

Performance Database: The Resource Conservation Recovery Information System (RCRIS) is the national database which supports EPA's RCRA program. RCRIS contains information on entities (generically referred to as "handlers") engaged in hazardous waste generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRIS has several different modules, including status at RCRA facilities included in the RCRA permitting universe.

Data Source: EPA regions and authorized states enter data on a rolling basis.

QA/QC Procedures: Controls include maintaining a high degree of consistency in data elements over time as well as data screen edits to help ensure that key data is entered for all facilities. States and Regions, who create the databases, manage data quality control. RCRIS has a suite of user and System documentation which describe overall administration of data collection and management activities. Training on use of systems is provided on a regular basis, usually annually depending on the nature of systems changes and user needs.

Data Quality Review: GAO - 1995 Report of EPA's Hazardous Waste Information System. Recommendations coincide with ongoing internal efforts (WIN/Informed) to improve the definitions of data collected, ensure data collected provides critical information and minimize burden on states.

Data Limitations: None identified.

New/Improved Data or Systems: The Agency has spent considerable time reviewing data associated with permitting at RCRA hazardous waste facilities. During 1999 the Agency finalized its universe baseline.

Coordination with Other Agencies

State UST programs are key to achieving the objectives and long-term strategic goals. EPA relies on state agencies to implement the UST program, including developing core program capabilities and promoting and enforcing compliance with the UST requirements.

Because many agencies at all levels of government have authority to regulate and implement aspects of hazardous materials safety programs, coordination is essential for the success of EPA initiatives. On the chemical accident preparedness and prevention side, inter-agency coordination remains a critical factor in accomplishing the goals of the Risk Management and Emergency Planning and Community Right-to-Know Act (EPCRA) programs. The Agency's role in carrying out these initiatives is to provide leadership and support. EPA works in partnership with states and local governments and other organizations to promote actions to reduce risk. We also provide technical assistance and tools to states and local emergency planning commissions (LEPCs) to better utilize the information on chemical hazards and risks available to them. In addition, through the rule making process, EPA works closely with our Federal partners (OSHA, DOT) and with states to ensure compatibility with existing accident preparedness and prevention initiatives. Close coordination and a cooperative working relationship is also required to effectively meet our responsibilities in the Chemical Safety program, most importantly where they involve the Chemical Safety Board (CSB). EPA recently completed a memorandum of understanding with the CSB which further delineates this working relationship.

The focal point for our Federal preparedness efforts is EPA's role in the National Response System, which is responsible for coordinating chemical emergency preparedness and response at the federal, state and local levels. Within this structure, EPA chairs the multi-agency National and Regional Response Teams that oversee national, regional, and area spill contingency planning. In addition, the Agency plays a leadership role in crisis management and counter-terrorism requiring participation on a number of inter-agency workgroups.

The Oil Spill program is multi-dimensional, integrating prevention, preparedness, and response activities to address oil spills that create significant environmental and economic impacts. These activities include implementing the Spill Prevention, Control, and Countermeasures program; evaluating, improving, and providing periodic review of facility response plans and developing, overseeing, and strengthening area contingency plans with other Federal agencies such as the United States Fish & Wildlife Service, National Oceanographic and Atmospheric Administration, United States Coast Guard, Federal Emergency Management Agency, Department of the Interior, Department of Transportation, Department of Energy, and other Federal agencies and States, as well as with local government authorities. The Department of Justice also provides assistance to agencies

with judicial referrals when enforcement of violations becomes necessary. EPA and the United States Coast Guard work in coordination with other Federal authorities to implement the National Preparedness for Response program.

The Agency maintains a close relationship with state agencies that are authorized to implement the RCRA Permitting and Municipal Solid Waste (MSW) landfills programs. States are required to achieve the same level of Federal standards as the Agency, including the annual performance goals of controls at hazardous waste facilities and MSW landfills. Regional offices negotiate with the state agencies annualized goals that the state agencies should achieve with the grant funds. For example, Regions may negotiate with the state agencies the number of facilities that are permitted in a year resulting in approved controls in place at facilities. The Agency will continue our partnership effort with state agencies by providing technical assistance and guidance on implementing permitting and MSW Landfill programs.

The Agency works with tribes to ensure compliance under RCRA on Indian lands. Regional RCRA tribal team are partnering with the Indian Health Service (IHS) and the Bureau of Indian Affairs (BIA) to address open dump issues on tribal lands. In states where partnerships with these federal agencies have not been well established, Regional office establish interagency workgroups. Workgroup representatives from other Federal agencies will coordinate tasks based on the field of expertise of each agency which will allow for efficient completion of the open dump initiative without overlapping efforts.

Research

Multimedia, multipathway, multi-chemical, and other multi-receptor model development for the HWIR continues to be a highly effective interagency team effort between EPA and The Department of Energy (DOE). To develop waste classification criteria based on protecting human health and the environment, the EPA supported the modification of software developed by DOE's Pacific Northwest National Laboratory (PNNL) to create a comprehensive environmental exposure and risk analysis software system. The PNNL modified its Framework for Risk Analysis in Multimedia Environmental System (FRAMES), under the direction of EPA, to produce the FRAMES-HWIR Technology software system. EPA is also coordinating some of its hazardous waste combustion and non-combustion treatment research with DOE.

Statutory Authorities

- Solid Waste Disposal Act as amended by the Hazardous and Solid Waste Amendments of 1984.
- Title III (Emergency Planning and Community Right-to-Know Act) of CERCLA, as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986

- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601-9657

- Clean Air Act Section 112
- Waste Isolation Pilot Plant Land Withdrawal Act of 1992, P.L. 102-579
- Nuclear Waste Policy Act of 1982, P.L. 97-425
- Energy Policy Act of 1992, P.L. 102-486
- Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970
- Uranium Mill Tailings Radiation Land Withdrawal Act of 1978
- Public Health Service Act, as amended, 42 U.S.C. 201 *et seq.*
- Chemical Safety Information, Site Security and Fuels Regulatory Release Act, 1999.
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. 5121 et seq.
- Executive Order 12241 of September 1980, National Contingency Plan, 3 CFR, 1980
- Executive Order 12656 of November 1988, Assignment of Emergency Preparedness Responsibilities, 3 CFR, 1988
- Oil Pollution Act (OPA), 33 U.S.C. 2701 *et seq.*.
- Clean Water Act (CWA), Section 311.
- Safe Drinking Water Act, 42 U.S.C. 300F et seq. (1974)