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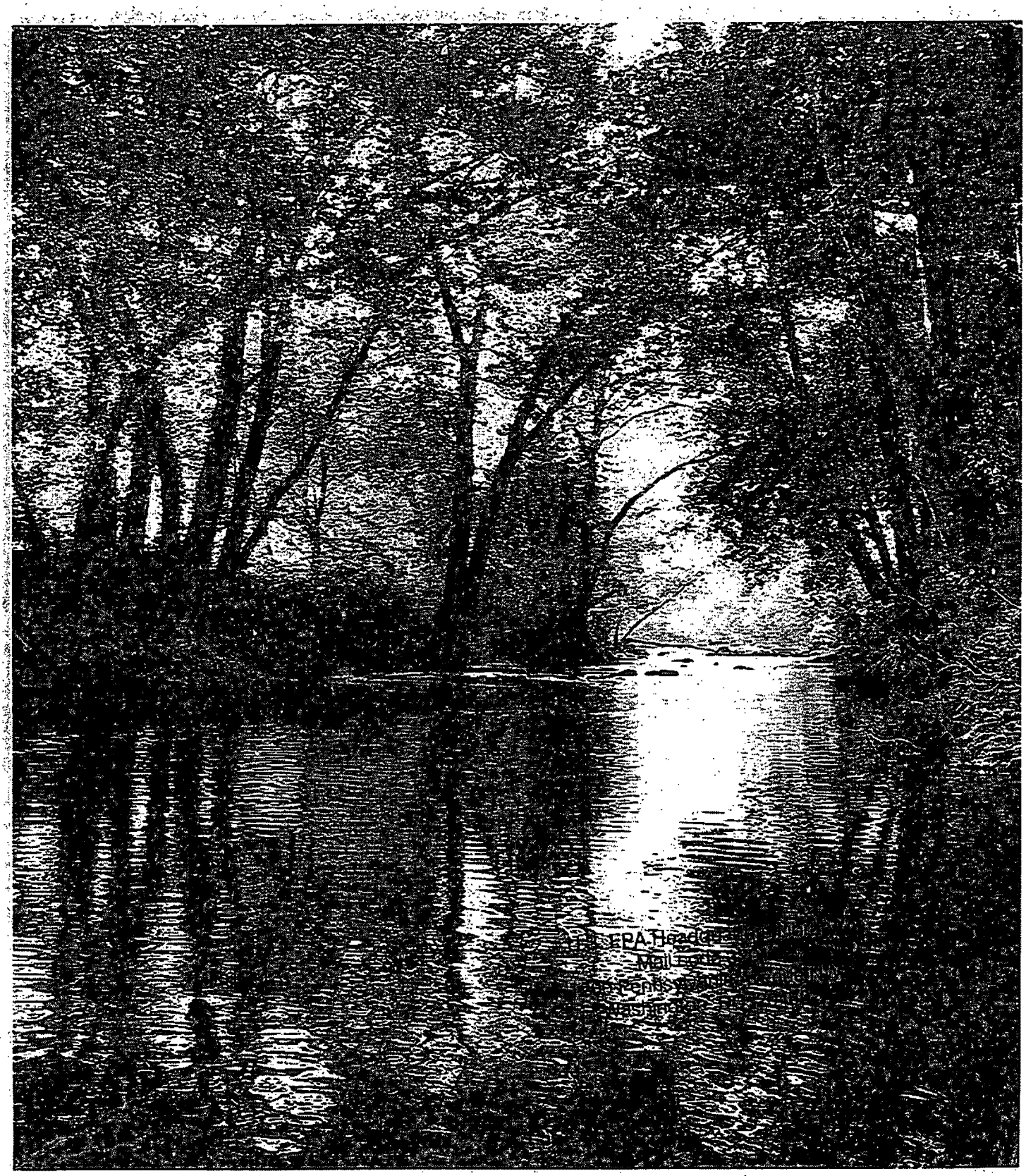
FY 1999 Annual Plan Summary



Note: As described more fully in the following pages, EPA is engaged in an effort to fully integrate planning, budgeting and accountability consistent with the requirements of the Government Performance and Results Act (GPRA). As part of this effort, EPA's FY 1999 budget request to Congress has been fully integrated with our FY 1999 Annual Plan under the GPRA. The Justification of Appropriation Estimates For the Committees on Appropriations, submitted to Congress on February 2, 1998, contains both: 1) the Annual Performance Goals, specific performance measures, and other Annual Plan requirements of GPRA, and 2) other budget-related information needed to support and explain the Agency's request for appropriations.

This document is an extract of the information specifically applicable to Annual Planning requirements under GPRA. It has been prepared to facilitate review and understanding of the specific performance commitments being made by the Agency pursuant to GPRA.

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EPA's Mission and Purpose

The mission of the Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment--air, water, and land--upon which life depends. EPA's purpose is to ensure that:

- All Americans are protected from significant risks to human health and the environment where they live, learn, and work.
- National efforts to reduce environmental risk are based on the best available scientific information.
- Federal laws protecting human health and the environment are enforced fairly and effectively.
- Environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy.
- All parts of society--communities, individuals, business, state and local governments, and tribal governments--have access to accurate information sufficient to effectively participate in managing human health and environmental risks.
- Environmental protection contributes to making our communities and ecosystems diverse, sustainable, and economically productive.
- The United States plays a leadership role in working with other nations to protect the global environment.

EPA's Goals

EPA has developed a series of ten strategic, long-term Goals in its Strategic Plan. These goals, together with the underlying principles that will be used to achieve them, define the Agency's planning, budgeting, analysis, and accountability process.

- **Clean Air:** The air in every American community will be safe and healthy to breathe. In particular, children, the elderly, and people with respiratory ailments will be protected from health risks of breathing polluted air. Reducing air pollution will also protect the environment, resulting in many benefits, such as restoring life in damaged ecosystems and reducing health risks to those whose subsistence depends directly on those ecosystems.

- **Clean and Safe Water:** All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve public health, enhance water quality, reduce flooding, and provide habitat for wildlife.

- **Safe Food:** The foods Americans eat will be free from unsafe pesticide residues. Children especially will be protected from the health threats posed by pesticide residues, because they are among the most vulnerable groups in our society.

- **Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems:** Pollution prevention and risk management strategies aimed at cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work, and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

- **Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response:** 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.

- **Reduction of Global and Cross-Border Environmental Risks:** The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

- **Expansion of Americans' Right to Know About Their Environment:** Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to

protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it.

- **Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems:** EPA will develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

- **A Credible Deterrent to Pollution and Greater Compliance with the Law:** EPA will ensure full compliance with laws intended to protect human health and the environment.

- **Effective Management:** EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Guiding Principles

- **Reduce Health and Environmental Risks:** We will protect human health and the environment by employing cost-effective risk reduction strategies, based on sound, peer-reviewed science, in our implementation of programs. In making decisions about Agency priorities, we will balance our efforts to reduce ecological risks with our efforts to reduce risks to human health.

- **Emphasize Pollution Prevention:** We will structure our approaches to create incentives for preventing pollution and the transfer of pollution among air, water, and land. To accomplish this, the Agency will use a mix of tools--including performance standards and economic incentives in setting national pollution controls, as well as voluntary pollution reductions and other innovative alternatives--in furtherance of EPA's goals and objectives.

- **Emphasize Children's Health:** We will ensure that all standards EPA sets address children's unique vulnerability to health and environmental threats, and we will place emphasis on identifying and assessing environmental health risks that may affect children disproportionately.

- **Strengthen Partnerships:** We will enhance EPA's partnerships with federal, tribal, state, and local agencies, Congress, private industry, public interest groups, and citizens in order to identify environmental goals and work together to achieve them. Our internal partnership with EPA employee labor organizations will also be critical to our success.

- **Maximize Public Participation and Community Right to Know:** We will increase the flow of information to the public, enhancing every American's right to know about local environmental hazards and general conditions, and thereby enable people to make informed environmental decisions and participate in setting local and national priorities.

- **Emphasize Comprehensive Regional and Community-Based Solutions:** We will structure our approaches to address all forms of pollution simultaneously--in the air, land and water--and do so in a way that confronts environmental problems on a community-wide or regional basis.

- **Place Emphasis on Indian Country:** We will work with Indian tribes on a government-to-government basis to ensure the protection of the environment and human health in Indian Country, consistent with our trust relationship with tribes and our interest in conservation of cultural uses of natural resources.

- **Choose Common Sense, Cost-Effective Solutions:** Because a safer, healthier environment goes hand-in-hand with a robust economy, we will fulfill EPA's goals using common sense approaches that consider benefits and costs and seek the most cost-effective ways to integrate our efforts with those aimed at economic growth. We will work to increase environmental stewardship and accountability and get better environmental protection at reasonable cost by incorporating successful innovations into the daily operation of environmental programs.

New Approaches to Planning and Budgeting

In 1995, EPA embarked on a far-reaching effort to fundamentally change past approaches to planning, budgeting, performance measurement, and accountability. This entails core changes to budget structures and the implementation of processes to link budgeting and accountability. In March of 1996, Administrator Carol Browner announced the creation of a new Planning, Budgeting, Analysis and Accountability (PBAA) process that is intended to meet the requirements of the Government Performance and Results Act (GPRA) and dramatically improve EPA's ability to achieve results -- improvements in human health and the environment.

The new PBAA process has four specific purposes: (1) to develop goals and objectives for accomplishing the Agency's mission; (2) to make better use of scientific information related to human health and environmental risks in setting priorities; (3) to improve the link between long-term planning and annual resource allocation; and (4) to develop a new management system to assess our accomplishments and provide feedback for making future decisions. While this effort will take several years to fully implement, the Agency is making real progress in the short term while we build for the future. The new PBAA process comprises several steps, including:

- A Strategic Plan, which describes EPA's strategic mission, long-term goals, and specific shorter-term (i.e., 5 years or more) objectives that the Agency will meet in achieving the goals.

- Annual Performance Plans and Budget Requests, which will be derived from the Strategic Plan and a multi-year planning process, will serve as the basis for budget decisions. They will describe annual performance goals, measures of outputs and outcomes, and activities aimed at achieving the annual performance goals and making progress toward longer-term goals and objectives.

- Program Performance Reports, required by GPRA six months after the end of the fiscal year, which will assess the progress EPA has made toward achieving its goals and report on the Agency's success in accomplishing its annual performance goals.

Organization of the Annual Plan

The organization of EPA's 1999 Annual Plan reflects the Agency's new approach, which links planning and budgeting. The Annual Plan presents the Agency's Goals and Objectives, and identifies the 1999 actions and resources needed to achieve them, consistent with the Strategic Plan. This new approach promotes fiscal accountability through a direct connection with the strategic plan, and between resources and outcomes. This Annual Plan also constitutes the Agency's request to Congress for the 1999 budget. The Annual Plan is the linchpin to each of the Agency's objectives contained in the strategic plan, because the Annual Plan sets forth in measurable and quantifiable form the intermediate levels of performance for each objective in the budget year.

Resource Tables

The resource tables provide a broad overview of the resources that the Agency is requesting for 1999. Those resources are identified by Goal, Objective, and Appropriation. The dollar amounts in these and other tables may not add due to independent rounding.

Goal and Objective Sections

The Goal and Objective sections contain detailed narrative and resource information on the Agency's 10 Goals and 45 Objectives. Each Objective is linked to a specific Goal, and detailed information on the Objectives directly follows the Goals they support.

- *Goal Overview*: The Goal Overviews describe each of EPA's long-term strategic Goals, which support the Agency's overall mission. The narratives in the Goal Overviews describe the Goals and their most significant programmatic components. This section also contains a set of annual performance goals that represent the key commitments that the Agency will report on to Congress for the purpose of evaluating our performance under GPRA. In selecting these goals, the Agency has attempted to address the legislative concern expressed in GPRA that "annual plans not be voluminous presentations describing performance...for every activity. The annual plan and reports are to inform, not overwhelm the reader." The Goal Overview section also includes the total dollar and FTE resources devoted that Goal.

- *Annual Performance Goals*: Annual Performance Goals are central to measuring progress toward achieving Objectives. They are quantifiable standards, values, or rates against which actual achievement can be compared. They establish the connection between longer-term objectives and the day-to-day activities in the Agency's programs and will be used by managers to determine how well a program or activity is doing in accomplishing its intended results. This Annual Plan lists Annual Performance Goals for both 1998 and 1999, as well as a description of how achieving the Annual Performance Goals advance accomplishment of the Objectives.

- *Key Performance Measures*: Key Performance Measures provide the means for determining the extent to which annual goals and multi-year objectives are being achieved. As such, they are essential to program evaluations that help to guide the Agency's strategic planning. This Annual Plan indicates Key Performance Measures for 1998 and 1999.

- *Key Performance Measure Verification*: The Key Performance Measures Verification section describes how the values used in Performance Measures are verified and validated. This section fulfills a GPRA requirement that Performance Measure Verification be included in the Annual Plan. This section includes a description of the source of the performance measure data and a general description of current procedures for quality assurance. This section may also include information such as plans to subject the methodology of the data collection or analysis to independent review.

- *Statutory Authority*: This section cites the public law that gives the Agency legal authority to carry out the Objective.

- *External Costs and Benefits*: This section identifies regulatory actions that are likely to result in a rule that may have an annual effect on the economy of $100 million or more. This analysis is required by executive order and is reported in the Agency's annual "Regulatory Plan."

- *Customer Service Standards*: This section describes the Agency's plan to improve its mission of protecting public health and the environment by more efficiently and effectively serving the public, industry, state and local agencies, and other customers.

Use of Non-Federal Parties in Preparing this Annual Plan

The Annual Plan was prepared in conformance with section 220.7 of OMB Circular A-11, concerning the role of non-Federal parties in preparing the Annual Plan.

Relationship between the Annual Plan and the Strategic Plan

As described above, the Annual Plan is closely aligned with the Agency's Strategic Plan which was submitted to Congress in September 1997. Minor changes include:

- One objective included in the Annual Plan was not included in the Strategic Plan. This objective, within the Goal, "Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems," addresses new Reinvention activities. The Objective statement is as follows: "Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection."

- Also within the "Sound Science" Goal, the following Objective in the Annual Plan was not specifically addressed in the Strategic Plan: "Enable Research on Innovative Approaches to Current and Future Environmental Problems." This Objective was not addressed because no programmatic goals are associate with this objective. Its purpose is to describe resources related to operating expenses in the Agency's research programs. The Agency intends to remove the Objective from the Annual Plan once necessary cost-accounting mechanisms have been

  established to properly attribute those costs across our research-related objectives.

- Within the "Effective Management" Goal, one objective in the Strategic Plan is addressed as two Objectives in the Annual Plan. In the Strategic Plan the Objective was as follows: "EPA will provide the management services, administrative support and facility operations necessary to achieve its environmental mission and to meet its fiduciary and workforce responsibilities." In the Annual Plan two Objectives delineate headquarters and regional resources. The two Objectives are as follows: "The Regions will continue to provide the management services, infrastructure support and facility operations necessary for the Agency to achieve its environmental mission, and meet its fiduciary and workforce responsibilities;" and "The Agency will provide the management services, administrative support and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities."

Relationship between Budgeted Resources and Annual Performance Goals and Measures

Annual Performance Goals are related to the resource levels contained in each objective. Annual Performance Goals in this Annual Performance Plan are based upon the resource levels requested in FY 1999. However, resources may contribute not only to the budget year's Annual Performance Goals but also to the accomplishment of goals in future years. For example, a performance goal to complete a number of Superfund site cleanups, or develop research methods and models, generally requires a period longer than one year. Thus, resources requested in FY 1999 will contribute to completion of work in FY 1999 and beyond. Likewise, some FY 1999 Annual Performance Goals are achievable only with appropriations provided in prior years.

Given this multi-year characteristic of some of the resources requested, it is not possible to establish direct linkages between the budget requested for a particular year and the achievement of all performance goals for that year.

Annual Plan Overview

For 25 years, the Environmental Protection Agency and its partners have made significant strides in controlling pollution and other environmental risks to human health and the environment. The air, land, and water are now safer for all Americans due to our Nation's investment in environmental protection.

The EPA's plan for 1999 builds on that success and invests in programs that deliver consistently better environmental protection at less cost. The EPA's 1999 Annual Plan provides $7.8 billion and 18,375 FTE for the Agency's programs.

This Annual Plan represents the EPA's new approach to planning and budgeting, which links goals and objectives to the human, capital, and technological resources required to achieve them. The EPA's 1999 Annual Plan represents the Agency's full participation in the Government Performance and Results Act (GPRA), which is designed to increase the effectiveness and accountability of Federal Agencies.

Key Initiatives in the Annual Plan

The EPA is committed to providing the greatest degree of environmental protection at the lowest possible cost and regulatory burden to citizens and businesses. The Agency has several key initiatives which are designed to address environmental risks effectively while maintaining the Administration's commitment to a strong economy and a streamlined Federal government.

Many of these initiatives are supported across the Agency and involve a number of strategic goals and objectives. They all work to support the Agency's mission to reduce risk to human health and safeguard the environment for future generations.

- ***Ensuring Clean and Safe Water:*** The President has made the protection of America's water supply and waterways a national priority. To meet this commitment, the 1999 budget includes a *Clean Water Initiative* as well as strong support for the Nation's water infrastructure through State Revolving Funds:

  - ***Restoring and Protecting America's Waterways through the President's "Clean Water and Watershed Restoration Initiative":*** This year the President is launching a *Clean Water and Watershed Restoration Initiative* to implement the Administration's *Clean Water Action Plan*, a far reaching new effort to clean America's rivers, lakes and coastal waters. The EPA will play a key role in this initiative, focusing on three challenges to restore and protect the Nation's waterways: preventing polluted runoff; protecting public health; and ensuring community-based watershed management. This initiative is funded in the Agency's Annual Plan at $645 million, as part of the President's *Environmental Resources Fund for America*. It builds on the Agency's on-going efforts in water quality, with increases to selected water programs of $145 million over 1998. This initiative increases grants to States to implement water quality improvement projects as well as other Agency activities such as the restoration

and protection of our Nation's wetlands.

- ***Upgrading the Nation's Water Quality Infrastructure:*** The budget proposes $775 million in capitalization grants for Drinking Water State Revolving Funds (SRFs), which make low-interest loans to help municipalities meet the requirements of the Safe Drinking Water Act Amendments. The funds will help ensure that Americans have a safe, clean drinking water supply -- our first line of defense in protecting public health. The budget also proposes $1.075 billion in capitalization grants to Clean Water SRFs to help municipalities comply with the Clean Water Act, thus helping to reduce beach closures and keep our waterways safe and clean. The combined SRF proposal, with continued outyear capitalization, will meet the Administration's long-term goal to provide about $2.5 billion a year in loans to needy communities. Both the Clean Water SRF and the Drinking Water SRF are part of the President's *Environmental Resources Fund for America*.

- ***Meeting the Global Warming Challenge:*** In his 1998 State of the Union Address, the President stated that "our overriding environmental challenge ... is a worldwide problem requiring worldwide action: the gathering crisis of global warming." At the recent conference on Global Climate Change in Kyoto, Japan, the United States led the world to reach an historic agreement committing nations to reduce greenhouse gas emissions through market forces, new technology and energy efficiency. The *Climate Change Technology Initiative (CCTI)*, funded in the EPA's budget at $205 million in 1999, will help America continue to meet its global responsibility to lead the world in emissions reductions. CCTI, which is part of the President's *Research Fund for America*, is an inter-agency initiative led by EPA and DOE to support research and technology advancements in energy efficiency, renewable energy, and carbon-reduction technologies. The President has stated that "Americans have always found a way to grow the economy and clean the environment at the same time. And when it comes to global warming, we'll do it again." CCTI will help America meet that challenge.

- ***Implementing Stronger Clean Air Standards:*** This budget request supports an investment of $65 million for a national network of Particulate Matter Monitors to help the Nation meet the health based air quality standard for fine particles. This investment level honors the President's commitment to States to fund the costs of deploying a new fine particulate monitoring network and to provide them the tools necessary to carry out their monitoring efforts. The EPA will also be conducting analyses to determine the chemical constituents of PM 2.5 and better identify and understand the sources and characteristics of the pollution. This effort will lead to cleaner, safer air for all Americans.

- ***Protecting Human Health:*** One of the President's foremost policy concerns is the protection of human health through the reduction of environmental threats. As the President said in his State of the Union Address: "Our communities are only as healthy as the air our children breathe, the water

they drink, the Earth they will inherit." To reduce environmental threats and protect future generations, the Agency focuses on areas where it can provide the greatest amount of protection, such as the cleanup of toxic waste sites and the protection of children from toxins in the environment.

- ***Cleaning up Toxic Waste Sites:*** The budget strengthens the President's commitment to clean up toxic waste sites with $2.1 billion for Superfund, a 40 percent increase over the 1998 level. These funds are part of the President's *Environmental Resources Fund for America*. Combined with continuing administrative reforms, these funds will help meet the President's pledge to double the pace of Superfund cleanups. The Administration proposes to clean up another 400 sites, resulting in the cleanup of two-thirds of the Nation's worst toxic waste dumps by the end of the year 2001.

- ***Focusing on Health Risks to Children:*** The Agency has made the protection of children's health a fundamental goal of public health and environmental protection in the U.S. This annual plan builds on that commitment with a $33 million investment (an $8 million increase over 1998) for the Assessing Health Risks to Children Agenda. This is a high-priority for the Agency since children face significant and unique health threats because they are often more heavily exposed and more vulnerable than adults to toxins in the environment. When we protect the health of children, we protect the health of all Americans. Major activities include establishing, with HHS, six Children's Environmental Research Centers, ensuring that EPA's public health regulations consider children's health, and providing information to parents to better protect their children from environmental hazards.

- ***Reducing Risks Posed by Persistent, Bioaccumulative, and Toxic Pollutants:*** The Agency is strengthening its efforts to address the health threat presented by persistent, bioaccumulative, and toxic (PBT) pollutants. This initiative is funded at $13 million in the 1999 Annual Plan (a $10 million increase over 1998). The Agency will conduct and coordinate research and work to reduce the risks posed by PBTs through a combination of strategies utilizing the full range of regulatory, voluntary, programmatic, enforcement, compliance and research tools. PBT risk mitigation activities will include analysis of economic impact, pollution prevention strategies, exploration of safe substitute chemical alternatives and dissemination of public information. This multi-year initiative will reduce PBTs in the environment and reduce the risks that these toxins pose to human health.

- ***Investing in Science for Sound Decision-making:*** Environmental research is critical for developing the scientific understanding and technological tools to allow the Nation to enhance environmental quality for current and future generations. Within the President's *Research Fund for America*, the

EPA's 1999 budget includes $487 million for EPA's Office of Research and Development (ORD). This investment will provide a scientific basis for developing cost-effective environmental policies, create the knowledge base for citizens to make wise environmental decisions, and enable new and better approaches to environmental protection.

- ***Revitalizing Communities through the Brownfields Initiative:*** The budget proposes to extend the President's Brownfields initiative, which promotes local cleanup and redevelopment of industrial sites, bringing jobs to blighted areas. This budget proposes $91 million for technical assistance and grants to communities for site assessment and redevelopment planning as well as revolving loan funds to finance clean-up efforts at the local level.

- ***Strengthening Partnerships with Indian Tribes:*** This Annual Plan continues the Agency's commitment to carrying out its trust responsibilities to Federally-recognized tribes with a budget request of $159 million (a $20 million increase over 1998). The Indian Program includes cross-Agency activities designed to ensure the protection of public health and the tribal homeland environment in a manner consistent with a government-to-government relationship. The Indian Program is a priority for the Agency because the sub-standard environmental conditions of many tribal homelands pose threats to human health, Tribal economies, and ecosystems. The program will enhance environmental protection by increasing the number of partnerships with tribal governments, providing infrastructure assistance, and helping to resolve trans-boundary environmental issues.

- ***Improving Public Access to Information:*** The President has made a commitment to providing all Americans with access to sound environmental information and involving the public in environmental decision-making. This commitment is based on the premise that all U.S. citizens have a right to know about the pollutants in their environment -- including the condition of the air they breathe and the water they drink, as well as the health effects of the chemicals used in the food and products they buy. Access to environmental information also helps make American citizens involved and informed environmental decision makers, and promotes creative and lasting solutions to environmental problems. EPA's participation in the President's Environmental Monitoring for Public Access and Community Tracking (EMPACT) initiative, funded at $35 million in this Annual Plan, helps to carry out this commitment to provide the public with crucial information on environmental conditions.

Summary

The EPA's 1999 Annual Plan helps to fulfill the Administration's commitment to protect human health and safeguard the environment, while continuing on the nation's path of unprecedented economic growth. As the Agency strengthens its relationships with the public, the regulated community, and its governmental partners, it will provide a more effective and efficient system of environmental

protection. These partnerships, along with a commitment to identify and solve the Nation's most pressing environmental problems, will lay the groundwork for a new era of environmental protection and serve the Agency's ultimate customer -- the American people.

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1999 Annual Plan: Request to Congress

Clean Air

Strategic Goal: The air in every American community will be safe and healthy to breathe. In particular, children, the elderly, and people with respiratory ailments will be protected from health risks of breathing polluted air. Reducing air pollution will also protect the environment, resulting in many benefits, such as restoring life in damaged ecosystems and reducing health risks to those whose subsistence depends directly on those ecosystems.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Clean Air	**$450,680.0**	**$490,448.2**	**$506,953.3**
Obj. 01 Attain NAAQS for Ozone and PM	$292,379.9	$337,060.9	$348,584.7
Obj. 02 Reduce Emissions of Air Toxics	$89,008.8	$85,837.4	$91,924.6
Obj. 03 Attain NAAQS for CO, SO2, NO2, Lead	$47,497.2	$46,749.6	$44,878.2
Obj. 04 Acid Rain	$21,794.1	$20,800.3	$21,565.8
Goal Total FTE	1,752.2	1,801.8	1,762.4

Strategic Objectives:

Objective #1:Attain National Ambient Air Quality Standards for Ozone and Particulate Matter. By 2010, improve air quality for Americans living in areas that exceed the National Ambient Air Quality Standards (NAAQSs) for ozone and particulate matter.

Objective #2: Reduce Emissions of Air Toxics. By 2010, reduce air toxic emissions by 75 percent from 1993 levels to significantly reduce the risk to Americans of cancer and other serious adverse health effects caused by airborne toxics.

Objective #3: Attain NAAQS for CO, SO2, NO2, and Lead. By 2005, improve air quality for Americans living in areas that do not meet the current National Ambient Air Quality Standards (NAAQSs) for carbon monoxide (CO), sulfur dioxide (SO_2), lead, and nitrogen dioxide (NO_2).

Objective #4:Acid Rain. By 2010, reduce ambient sulfates and total sulfur deposition by 20-40 percent from 1980 levels due to reduced sulfur dioxide emissions from utilities and industrial sources. By 2000, ambient nitrates and

total nitrogen deposition will be reduced by 5-10 percent from 1980 levels due to reduced emissions of nitrogen oxides from utilities and mobile sources.

Programs and Activities:

Air pollution continues to be a widespread public health and environmental problem in the United States, contributing to illnesses such as cancer and respiratory and reproductive problems. Air pollution reduces visibility, damages crops and buildings, and is deposited on the soil and in water bodies where it affects the chemistry of the water and resident life forms.

Since 1970, air pollutant emissions have been reduced and significant improvements in air quality have been achieved. However, millions of tons of toxic air pollutants are still released into the air. Also, approximately 46 million people live in areas that do not meet EPA's health-based air standards for at least one of six major pollutants.

The problem is nationwide in scope. Air pollution crosses local and state lines and, in some cases, even crosses our borders with Canada and Mexico. Federal assistance and leadership are essential for developing cooperative state, local, regional, and international programs to prevent and control air pollution and for ensuring that national standards are met. Efforts of many other Federal agencies, such as the Department of Transportation and the Department of Energy, are critical to the achievement of the Clean Air goal.

The 1999 Annual Plan is based on $506,953,300 and 1,762 workyears for the Clean Air goal, an increase of $17,000,000 and a decrease of 40 workyears over 1998. In support of this goal, the Agency will work with and support states and tribes in developing and implementing plans to address air quality problems. As part of this effort, EPA will support state and tribal development of a 1,500-site monitoring network for fine particulates ($PM_{2.5}$), a pollutant for which the Agency issued its first specific standards in 1997. The Agency also will develop and issue other standards, including national technology-based standards to reduce the quantity of toxic air pollutants that are emitted from industrial or manufacturing processes.

HIGHLIGHTS:

<u>Attaining National Ambient Air Quality Standards for Ozone and Particulate Matter</u>

The 1999 Annual Plan is based on $348,584,700 and 1090 workyears to attain national ambient air quality standards (NAAQS) for ozone and particulate matter.

Ozone and particulate matter are high risk pollutants, with high potential for risk reduction. Ozone can impair normal functioning of the lungs. More people are exposed to unhealthy levels of ozone than of any other air pollutant. It is projected that over 114 million people live in areas that will not meet the new health standard for ozone, which is 40 million more than under the previous standard.

The health risks estimated from current fine PM exposures represent tens of thousands of premature deaths each year, placing fine PM near the top of environmental health threats. It is estimated that approximately 68 million people live in areas that may not meet the new $PM_{2.5}$ standard. EPA estimates that, once attained, the new standard will prevent up to 15,000 premature deaths per year.

Under the Clean Air Act Amendments of 1990, EPA must set NAAQS for pollutants that endanger public health and the environment. States and tribes then must develop and carry out strategies and measures to attain the NAAQS. EPA reviewed NAAQS set for ozone and particulate matter, as required by the Clean Air Act, and promulgated new standards in July 1997. Following a directive the President issued with the standards, the Agency worked with states, tribes and local governments, other Federal agencies and regulated sources to develop an implementation strategy for the standards. The implementation strategy allows for implementing the standards in the most flexible, reasonable and least burdensome manner. In addition, the Agency is participating in an interagency research program, including a full scientific and technical review of the new fine particulate ($PM_{2.5}$) standard by 2002, and implementation of a PM monitoring network.

In support of the Agency's implementation strategy for attaining the new air quality standards, EPA will invest $65,700,000 to develop a national PM monitoring network. This monitoring network will provide the data needed for the identification of PM sources and potential PM "hotspots," as well as allow the Agency to designate areas in attainment with the new PM standard and develop control strategies to address PM on a regional basis. Attainment designations will not occur until 2002 when monitoring data will be complete for these decisions. EPA has committed to provide 100 percent of the costs of setting up the $PM_{2.5}$ monitoring network through state and tribal grants under the authority of Section 103 of the Clean Air Act. EPA will be conducting chemical speciation analyses to provide the basis for states and tribes to determine the chemical constituents of the $PM_{2.5}$ and better identify and understand the sources and characteristics of the pollution and its potential effects. States and tribes will use this information to develop control strategies to come into attainment with the new particulate matter standard by 2012 to 2017. This is consistent with the President's commitment to review the new standard before state and tribal plans take effect.

Under the research authorities of the Clean Air Act, EPA carries out ozone and particulate matter research to maintain a strong scientific basis for changing or reaffirming NAAQS, and implementing NAAQS. In the long term, the information gained through research helps protect public health, including the health of children and other sensitive populations, and provides the scientific and technical information required for NAAQS review, as well as the NAAQS implementation by regional, state, tribal and local government air quality managers. EPA research contributes to developing scientifically sound risk assessment procedures, cost-effective risk prevention/management approaches, credible methods, models and guidance, and environmental leadership through partnerships.

Reducing Emissions of Air Toxics

The 1999 Annual Plan is based on $91,924,600 and 390.4 workyears to reduce air toxic emissions by 12% in 1999, resulting in a cumulative reduction of 25 percent from 1993 levels. This would significantly reduce the risk to Americans of cancer and other serious adverse health effects caused by airborne toxics. Toxic air pollutants pose a significant health risk because they may cause cancer and other health problems such as reproductive disorders, birth defects, and damage to the nervous system.

EPA's air toxics objective focuses primarily on the statutory requirements of the toxics program in the Clean Air Act to reduce emissions levels through the promulgation and implementation of Maximum Achievable Control Technology (MACT) standards. The program will invest in improved and innovative monitoring and

modeling, inventories, development and refinement of environmental indicators, and risk assessment tools to better characterize the risk from air toxics and establish a baseline for measuring risk in carrying out the Government Performance and Results Act (GPRA). EPA will build on state efforts to create a national toxics monitoring and inventory program in order to better characterize exposures to hazardous air pollution.

In 1999, health effects researchers will quantitatively evaluate cancer and non-cancer health effects from air toxics exposures. Exposure researchers will develop methods to identify contributing sources from ambient air measurements, and improved models to characterize actual human exposure. Researchers also will develop and demonstrate new methods to assess risks from urban toxics.

Attaining NAAQS for CO, SO_2, NO_2, and Lead

The 1999 Annual Plan is based on $44,878,200 and 189.9 workyears to improve air quality for Americans living in areas that do not meet the current NAAQS for carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead, which are all high risk pollutants.

EPA and its partners have been relatively successful in reducing these air pollutants in many urban areas through mobile source measures. Controls included in state SIPs also reduce stationary source emissions. The Agency will continue existing carbon monoxide work, concentrating primarily on mobile source programs (such as oxygenated fuel and reformulated gasoline), and on assisting states to implement attainment and maintenance programs. EPA will continue to provide information to the scientific community and stakeholders on the environmental aspects of the use of oxygenated fuels and recommendations to improve the program.

In 1998, EPA will promulgate the new source review (NSR) reform rules which simplify the new source permitting process. In 1999, EPA will undertake training and technical support activities to ensure smooth implementation of this major regulatory reinvention effort.

Acid Rain

The 1999 Annual Plan is based on $21,565,800 and 92.0 workyears for reducing ambient sulfates and total sulfur deposition by 20 to 40 percent from 1980 levels due to reduced SO_2 emissions from utilities and industrial sources.

The Acid Rain program is authorized under Title IV of the Clean Air Act and has numerous statutory deadlines. The U.S. is also committed to reductions in SO_2 and NOx under the 1991 U.S.-Canada Air Quality Agreement. In addition to administering the SO_2 and Nox provisions of Title IV, the Acid Rain program will be developing and operating the emissions and NOx allowance tracking systems for the 12 states of the Ozone Transport Region. The first year of compliance for this program is 1999. Achieving this will assist the 12 Northeastern states to attain and maintain the ozone standard. Approximately 400 additional facilities will require certification of emissions monitors and will report quarterly emissions beginning in 1998.

The program is responsible for operating the Clean Air Status and Trends Network (CASTNet) dry deposition network and providing critical support for operations of the National Atmospheric Deposition Program (NADP) wet deposition network and for a number of visibility monitoring sites. These monitoring efforts will play a crucial role in the program's ongoing assessment activities, including reporting program results for the Government Performance and Results

Act and fulfilling assessment responsibilities under Title IX of the Clean Air Act and the U.S.-Canada Air Quality Agreement.

FY 1999 Annual Performance Goals:

The resources requested in this goal will enable the Agency, in conjunction with its state, local, and tribal partners, to meet a number of performance goals in 1999. The most significant of these include:

- Deploy $PM_{2.5}$ ambient monitors at 776 sites.
- Certify that 8 of the 38 estimated remaining nonattainment areas have achieved the current NAAQS for ozone.
- Certify that 13 of the 58 estimated remaining nonattainment areas have achieved the NAAQS for carbon monoxide, sulfur dioxide, or lead.
- Reduce air toxic emissions by 12% in 1999, resulting in a cumulative reduction of 25% from 1993 levels.
- In 1999, maintain 4 million tons of SO_2 emissions reductions from utility sources, and maintain 300,000 tons of NOx reductions from coal-fired utility sources.
- By 1999, identify and evaluate at least two biological mechanisms by which PM causes death and disease in humans.
- In 1999, complete health assessments for five high priority air toxics.

Key Performance Measures	1998	1999
Operating Permits	30 Applications	30 Applications
Tribal Rule	1 Rule	
Publish Notice Revoking 1-Hour Standard	21 Areas	8 Areas
Consumer Product Rules	3 Rules	4 Rules
National Guidance on Ozone SIP	1 Proposed	1 Issued
Support Publication of the Notice Revoking the 1 Hour Ozone Standard	21 Areas	8 Areas
States Submit Attainment Designations under the Revised Ozone Standard		50 States
National Guidance on PM-2.5 SIP and Attainment Demonstration Requirements	1 Proposed	1 Issued

Key Performance Measures	1998	1999
Issue No-backsliding Rule for Areas Not Meeting PM-10 Standard	1 Rule	
Provide Draft Documents to CASAC for PM NAAQS Review		Sept 30 99
Assure Ambient Monitoring Sites Comply with Siting Requirements	187 Sites	247 Sites
PM-2.5 Ambient Monitoring Sites Deployed	724 Sites	776 Sites
Report on PM mechanisms of toxicity		30-SEP-99
Identify hypotheses to explain PM toxicity		30-SEP-99
Air Toxics Emissions Reduced from 1993	13 Percent	25 Percent
States Assume Implementation of MACT for Major Sources	85% Standards	85% Standards
Air toxics assessments on IRIS		5 Assessment
Submit Requests for Redesignation to Attainment for CO	7 Requests	5 Requests
Submit Requests for Redesignation to Attainment for S02	5 Requests	5 Requests
Submit Requests for Redesignation to Attainment for Pb	2 Requests	1 Requests
Areas Redesignated to Attainment for Carbon Monoxide, Sulfur Dioxide, Lead, and Nitrogen Dioxide	22 Areas	14 Areas
SO2 Emissions	4,000,000 Tons Reduced	4,000,000 Tons Reduced
NOx Reductions	300,000 Tons Reduced	300,000 Tons Reduced

Key Performance Measures Verification

Data sources:

- EPA National Emission Trends Database;
- EPA AIRS Air Quality Subsystem;
- EPA Findings and Required Elements Data System (FREDS);
- Interagency Monitoring of Protected Visual Environments (IMPROVE) database.
- EPA's Toxics Release Inventory (TRI);
- National Toxic Inventory (NTI);
- AIRS
- MACTRAX
- Area redesignations in the Federal Register.

Databases

Data from the National Emission Trends Database and the AIRS Air Quality Subsystem is used to determine if nonattainment areas have their requisite three years of clean air data needed for redesignation. The FREDS system tracks the progress of states and Regions in reviewing and approving the required elements of the SIPs also needed for redesignation to attainment. The IMPROVE database provides data on visibility improvement from various sites nationally.

Quality Assurance/Quality Control

To assure that the ambient air quality data provides a sound basis for monitoring the progress in air quality, the following quality assurance steps are taken. There are quality control methods specified for the collection of data such as filter handling to ensure the technical quality of the data at each site. There are also methods in place such as co-location of monitors to ensure uniform readings across the monitoring network. Finally, there are systems audits which regularly review the overall air quality data collection activity for any needed changes or corrections.

Research

In the area of environmental science and research, EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants. The Agency is also working with various professional societies on research issues.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

ORD Management Information System (OMIS)

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Peer Review

Chief among the Agency's validation and verification mechanisms is a rigorous peer review process. In a July 1997 memorandum, EPA's Deputy Administrator states that peer review will be expanded, "to include both the major work products provided in the past and...all scientific and technical products supporting Agency decisions..." This expanded and strengthened focus on peer review will help ensure that the performance measures listed here are verified and validated by external organizations. The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB) and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will even examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

NTI

The NTI contains emission estimates for major, area, and mobile source categories. To date, we have collected emission inventory data to update the NTI from the externally and internally peer-reviewed Clean Air Act section 112(c)(6) inventory; MACT emissions data gathered for 2-, 4-, and 7-year standards; state and local inventories (five states); and the TRI. We have also developed emissions data using emission factors and activity level data to update source categories for which we do not have MACT, state or local, or TRI inventory data. We have identified an additional 12 states that have available HAP inventory data. By the end of the year, we will complete the update of NTI Version 3.0 for base year 1993, provide peer-reviewed inventories for 40 hazardous air pollutants to support Clean Air Act section 112(k), and complete compilation of MACT baseline emissions data for 2-, 4-, and half of the 7-year source categories. A 1993 baseline emissions inventory will allow us to track emission reductions of HAPs as control programs are implemented. We will be able to store and retrieve all these data from the AIRS system.

MACTRAX

MACTRAX provides a mechanism to track the air implementation activities by each state to insure that the emission reductions expected from the development of MACT standards can be realized through full implementation of the standards.

Procedures for quality assurance/quality control (QA/QC) of emission and ambient air toxics data are not as institutionalized as those used for the criteria pollutant program. Air toxics data are not required of states, but are voluntary. EPA does review the data to assure data quality and consistency, but no formal procedures are in place for QA. Regional offices do review all data before it is placed in MACTRAX. Procedures are now being finalized to

ensure the quality of emissions data collected from industry that are used for the development of technology-based emission standards.

Plans to Improve Data

The emissions data are much harder to quality assure because of the varying methods of determining the total emissions in a given area. In the future all state emissions data will be posted in a compiled data base so that states and other interested parties can provide a much more complete review of the inventory. One other method for developing better state emissions data will result from the Emissions Inventory Improvement Project which will provide consistent methods of estimating emissions data.

Acid Rain Data

The Acid Rain program performance data is some of the most accurate data collected by the EPA because the data consists of *actual* monitored, instead of estimated, emissions. The emissions data is collected through continuous emissions monitors (CEMS) and electronically transferred directly into EPA's Emissions Tracking System (ETS). Actual emissions of SO_2 and NOx are measured for each unit/boiler within a utility plant. The ETS allows EPA to track actual reductions for each utility, as well as aggregate emissions by all power plants. A principal output of the ETS is the publication of quarterly and annual utility emission reports based on emissions monitoring data. The ETS quarterly and annual reports include summary statistics for SO_2 and NOx emissions.

The Acid Rain program also tracks indicators which validate the quality of the emissions data, such as the accuracy of the monitors achieved during certification testing. There are four validation measures that help to demonstrate the high quality of the data collected: the number of CEMS certified; the percentage of CEMS that meet the 10% relative accuracy standard; the percentage of CEMS that exceed the 7.5% relative accuracy target; and, the number of quarterly reports processed.

Finally, the program also tracks trends in wet acidic deposition data from the National Acid Deposition Program (NADP) and dry acid deposition from the Clean Air Status and Trends Network (CASTNet).

Statutory Authority

Clean Air Act (CAA) (42 USC 7401-7671q)
Toxic Substances Control Act (TSCA) (15 USC 2601-2692)

Environmental Protection Agency

1999 Annual Plan: Request to Congress

Clean and Safe Water

Strategic Goal: All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve human health, enhance water quality, reduce flooding and provide habitat for wildlife.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Clean and Safe Water	**$2,706,342.7**	**$3,170,864.6**	**$2,801,869.3**
Obj. 01 Safe Drinking Water, Fish and Recreational Waters	$966,204.5	$979,216.6	$1,018,705.9
Obj. 02 Conserve and Enhance Nation's Waters	$270,281.6	$298,573.9	$296,643.9
Obj. 03 Reduce Loadings and Air Deposition	$1,469,856.6	$1,893,074.1	$1,486,519.5
Goal Total FTE	2,381.6	2,440.3	2,449.5

Strategic Objectives:

Objective #1: Enhance Human Health through Safe Drinking Water. By 2005, protect human health so that 95 percent of the population served by community water systems will receive water that meets drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbial and other forms of contamination in waters used for recreation will be reduced.

Objective #2: Conserve and Enhance Nation's Waters. By 2005, conserve and enhance the ecological health of the nation's (state, interstate, and tribal) waters and aquatic ecosystems -- rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and groundwater -- so that 75 percent of waters will support healthy aquatic communities.

Objective #3: Reduce Loadings and Air Deposition. By 2005, pollutant discharges from key point sources and nonpoint source runoff will be reduced by at least 20 percent from 1992 levels. Air deposition of key pollutants impacting water bodies will be reduced.

Programs and Activities:

Safe and clean water is needed for drinking, recreation, fishing, maintaining ecosystem integrity, and commercial uses such as agricultural and industrial production. Our health, economy, and quality of life depend on reliable sources of clean water.

Safe drinking water is the first line of defense in protecting human health. While most drinking water is very safe, occasional violations of pollutant standards are of concern because of the large number of people that can be exposed to microbiological contaminants or toxic chemicals. The greatest risks posed by such contaminants are to sensitive populations, such as children and adults with compromised immune systems.

The passage of the Federal Water Pollution Control Act of 1972 has led to tremendous success in reducing pollution entering surface waters. In 25 years, EPA has worked with its State, local, and Tribal partners to stop billions of pounds of pollution from flowing into our rivers, lakes, and streams, and doubled the number of waterways that are safe for fishing and swimming. Polluted rivers and lakes devoid of life are now restored centerpieces of healthy communities because of combined governmental and private sector efforts.

The goal of protecting our Nation's waters, however, remains unrealized. Approximately 40% of surveyed waters still do not meet Clean Water Act standards. The health of Americans continues to be threatened by exposure to harmful organisms in our waters; consumption of fish from many of our waters presents a threat to the most vulnerable among us; polluted runoff has had a degenerative effect on the country's watersheds and wetlands. All living things need clean water. Waterfowl, fish, and other aquatic life that live in and on the water, as well as plants, animals, and other life forms in terrestrial ecosystems are dependent on clean water. The challenge of maintaining clean water focuses on ensuring that the entire aquatic ecosystem remains healthy.

The 1999 Annual Plan is based on a total of $2,801,869,300 and 2,450 workyears to support its efforts to ensure clean and safe water. To achieve this goal, EPA will focus its efforts on carrying out the Safe Drinking Water Act Amendments of 1996 and will build on the Clean Water Act's success of maintaining water quality by implementing the Clean Water Action Plan -- a plan to restore and sustain the nation's watersheds and further address polluted runoff. Protecting watersheds involves participation by a wide variety of stakeholders, a comprehensive assessment of the condition of watersheds, and implementation of solutions based on the assessment of conditions and stakeholder input. The watershed approach enhances the abilities of EPA, its Federal partners, States, tribes, local governments, and other stakeholders to implement tailored solutions and maximize the benefits gained from the use of increasingly scarce resources.

As part of the Agency's commitment to using sound science to achieve clean and safe water, EPA's research activities will provide a better understanding of the risks to human health. Research activities in this goal will focus on increasing our understanding of health effects, exposure assessment, and risk management issues associated with contaminants in drinking water. EPA's research activities also will support watershed protection.

HIGHLIGHTS:

Protecting the Public Health and the Nation's Watersheds - Clean Water Action Plan

The current pace of implementation of Clean Water programs will not achieve the goal of providing safe and clean water to all Americans. In recognition of this, the Administration has called for a renewed effort to restore and protect our nation's waters - the Clean Water and Watershed Restoration Initiative. In 1999, EPA is requesting an additional $145,000,000 in support of this commitment. To achieve the key elements of the initiative, the Administrator of the Environmental Protection Agency and the Secretary of Agriculture, in consultation with other affected agencies, would implement a Clean Water Action Plan. This plan addresses three major goals:

-- strengthening and enhancing core programs, including protecting public health, preventing polluted runoff and addressing source water protection for safe drinking water, enhancing natural resources, and improving information and citizens' right-to-know;

-- promoting a state-led watershed approach, including restoring and sustaining watershed health through coordination of Federal programs across departments and agencies; and

-- assisting states with reducing nonpoint source pollution by expanding state grant assistance.

The Action Plan builds on the solid foundation of the existing clean water program and proposes important new steps to strengthen the program. A key new element of the program will be a cooperative effort by State, Federal, and local governments and citizens to restore the health of aquatic systems in watersheds not meeting clean water goals and to sustain healthy conditions in other watersheds. Other new elements of the program will reduce the public health threats of water pollution, enhance natural resources (e.g. wetlands, coastal areas, and stream corridors), prevent polluted runoff, and make water quality information more accessible to citizens. The 1999 Budget Request reflects this Plan to revitalize our efforts to ensure clean and safe water.

Enhancing Human Health through Safe Drinking Water

In 1999, EPA is requesting $1,018,705,900 and 855 workyears for efforts addressing the threats of unsafe drinking water. (These resources include $775,000,000 as part of the Drinking Water State Revolving Fund discussed in the Water Infrastructure section, and $3,200,000 as part of the Clean Water Action Plan investment.) Safe drinking water is essential to human health. Contaminated drinking water can cause illness and even death, and exposure to contaminated drinking water poses a special risk to such populations as children, the elderly, and people with compromised immune systems (susceptible populations). EPA's Science Advisory Board, in its 1990 report *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*, concluded that drinking water contamination is one of the highest environmental risks to human health. In 1994, 19 percent of those served by community water systems, or approximately 46 million people, drank water that violated health standards at least once during the year.

The drinking water program's highest priority is protecting human health from microbiological contaminants and disinfectant/disinfection byproducts, as well as critical chemical contaminants (e.g., arsenic and radon). Health assessments, risk characterizations, and regulatory support documents are integral components of the standard setting/rule development process and will be conducted for all these contaminants. In addition, the Agency-issued Contaminant Candidate List, which identifies known or anticipated priority contaminants that may require regulation, the unregulated contaminant monitoring rule, and the national drinking water contaminant occurrence data base are crucial tools in ensuring safe drinking water.

EPA's research efforts will continue to strengthen the scientific basis for drinking water standards, through the use of improved methods and new data to better evaluate the risks associated with exposure to chemical and microbial contaminants in drinking water.

Reducing Point and Nonpoint Source Loadings

EPA is requesting $1,486,519,500 and 886 workyears to address the fundamental problems concerning the nation's waters: point and nonpoint source pollution. (The resources requested include $1,075,000,000 for the Clean Water State Revolving Fund, and $78,000,000 as part of the water infrastructure financing resources for needy cities discussed in the Water Infrastructure section. These resources also include $110,768,600 as part of the Clean Water Action Plan investment.) A key element of the Agency's effort to achieve its overarching goal of clean and safe water is the reduction of pollutant discharges from point and nonpoint sources. To reduce pollutant loadings from sources, the Clean Water Act established requirements for national technology-based effluent limitations and water quality based limitations.

EPA and its partners have made much progress in reducing pollutant discharges from point sources. A key goal for the National Water Program in 1999 is to have local watersheds in more than 220 communities improved by controls on combined sewer overflows (CSOs) and storm water. CSOs contribute to shellfish bed closures, beach closures, aesthetic problems, and impairment of designated uses. Controlling CSOs will reduce pathogens, biological oxygen demand (BOD), total suspended solids (TSS), and will contribute to the overall reduction in pollutant loadings.

EPA's nonpoint source program provides program, technical, and financial assistance to help states implement programs to control various forms of runoff. While agricultural sources are the most significant category of nonpoint source runoff, state NPS programs address all categories of NPS runoff with a mix of voluntary and regulatory approaches. These state programs are the primary means for implementing nonpoint source TMDL allocations and for achieving water quality standards. EPA's nonpoint source program works closely with a number of other Federal agencies to help reduce runoff and encourage private sector partnerships to spur voluntary adoption of NPS controls. As the program moves forward, new tools, best management practices, and NPS and contaminated sediment control strategies will need to be developed in cooperation with States, tribes, other Federal agencies and the private sector. State implementation plans for nonpoint sources will be required to provide reasonable assurances that load allocations within an approved TMDL are met for waters impaired solely or primarily from nonpoint sources.

EPA's research program will also focus on aiding effective watershed management strategies for controlling Wet Weather Flows.

Reduce the Consumption of Contaminated Fish and Exposure to Contamination From Recreational Waters

EPA is requesting a total of $7,151,600 and 8 workyears to address the health threats from consumption of fish with elevated levels of contamination and exposures to pathogens and other pollution in recreational waters. (These resources include $1,250,000 as part of the Clean Water Action Plan investment, and are included in Objectives 1 and 3 of this Goal.) Protecting Americans from these threats is high priority. Exposure to contaminated water can cause serious illness. These types of exposures pose a special risk to children, women of childbearing age, subpopulations who fish for food or sport, and people with compromised immune systems. Through enhanced fish tissue monitoring, risk assessment, and beach assessment, EPA will work to improve the understanding of the effects exposure to contaminated waters and consumption of contaminated fish has on sensitive populations and human health as a whole.

Financing Water Infrastructure

The Annual Plan is based on a total of $1,928,000,000 for water infrastructure financing through the State and Tribal Grants (STAG) Appropriation under the Clean and Safe Water Goal. EPA's Water Infrastructure Program provides financial assistance to States, municipalities and Tribal governments to fund a variety of drinking water and wastewater infrastructure projects. These funds are essential to fulfill the Federal government's commitment to help our State, Tribal and local partners obtain adequate funding to construct the facilities required to comply with Federal environmental requirements. States and localities rely on a variety of revenue sources to finance their environmental programs and to pay for the facilities needed to keep the water clean and safe from harmful contaminants.

The Clean Water and Drinking Water State Revolving Funds (CW and DW SRFs) demonstrate a true partnership between States, localities, and the Federal government. In 1999, the President is requesting $1,850,000,000 for these funds. The Administration's 1999 request, combined with the outyear capitalization of these funds, enables the Administration to meet its long term goals for both funds to provide a total of $2,500,000,000 in annual financial assistance to needy communities. In addition, states will have more funding flexibility starting in 1998. The Safe Drinking Water Act Amendments of 1996 allow states to move funds between the two SRFs, based on a percentage of the state's annual allocation to the DW SRF.

The Annual Plan is based on $63,000,000 for the construction of wastewater treatment facilities for Boston Harbor and Bristol County, Massachusetts, and New Orleans, Louisiana. Funds are targeted to these areas because of special circumstances including financial hardship and unique sewer system problems. In addition, $15,000,000 is requested for Alaskan Native villages for the construction of wastewater and drinking water facilities, to address serious sanitation problems.

FY 1999 Annual Performance Goals:

The resources requested in this budget will enable the Agency, in conjunction with EPA's State, local, and Tribal partners, to achieve several important goals for 1999. The most significant of these goals include:

- 85% (an increase of 2% over 1998) of the population served by community water systems will receive drinking water meeting all health-based standards, up from 81% in 1994;

- 6,000 community water systems (serving 24 million people) will be implementing programs to protect their source water (an increase of 3,250 systems over 1998);

- EPA will issue and begin implementing two protective drinking water standards for high-risk contaminants, including disease-causing micro-organisms (Stage I Disinfection/Disinfection Byproducts and Interim Enhanced Surface Water Treatment Rules);

- EPA will develop critical dose-response data for disinfectant by-products (DBPs), waterborne pathogens, and arsenic for addressing key uncertainties in the risk assessment of municipal water supplies;

- As part of the Clean Water Action Plan, all states will be conducting or have completed unified watershed assessments, with support from EPA, to identify aquatic resources in greatest need of restoration or prevention activities;

- EPA will provide funding support to community-based projects for watershed restoration including restoration of wetlands and river corridors in 160 watersheds (an increase of 110 watersheds from 1998);

- EPA will provide data and information for use by states and regions in assessing and managing aquatic stressors in the watershed, to reduce toxic loadings and improve ecological risk assessment;

- Another 3.4 million people will receive the benefits of secondary treatment of wastewater, for a total of 183 million;

- More than 220 communities will have local watersheds improved by controls on combined sewer overflows and storm water;

- In support of the Clean Water Action Plan, 10 additional states will upgrade their nonpoint source programs, to ensure that they are implementing dynamic and effective nonpoint source programs that are designed to achieve and maintain beneficial uses of water; and

- By 2003, EPA will deliver support tools, such as watershed models, enabling resource planners to select consistent, appropriate watershed management solutions and alternatives, and less costly wet weather flow technologies.

Key Performance Measures	**1998**	**1999**
Population served by CWSs that will receive drinking water meeting all health-based standards	83 % Population	85 % Population

Key Performance Measures	1998	1999
Regulations promulgated that establish protective levels for high-risk contaminants		2 Rules
CWSs with ground or surface water protection programs in place	2750 CWSs	6,000 CWSs
Pathogens-Microbial enteric disease		30-SEP-99
DBPs- hazard id/screen studies etc.		30-SEP-99
Determination of infectious dose for Norwalk virus.		30-SEP-99
States that are conducting or have completed unified watershed assessments		50 States
Watersheds that received funding support for CBEP wetlands/river corridors	50 Watersheds	160 Watersheds
Impacts for Managing Watershed Prot		30-SEP-99
Big Darby Watershed reports		30-SEP-99
Additional people who will receive the benefits of secondary or better treatment of wastewater		3.4 M People
Communities that will have local watersheds improved by controls on CSOs and stormwater		220 Communities
States that have upgraded their NPS programs	5 States	10 States
By: 2000 Model Linking Urban Stormwater Management Models and Geographic Information System (GIS).		30-SEP-00

Key Performance Measures	1998	1999
Complete needs assessment and research plan for beach contamination from pathogens. Conduct peer re		30-SEP-99

Key Performance Measures Verification

Safe Drinking Water Information System (SDWIS)

The Safe Drinking Water Information System (SDWIS) is the primary data source for verifying and validating the performance measures related to the objective of enhancing public health through safe drinking water in the Agency's annual plan. There are two components to SDWIS. SDWIS/FED is a national data base (housed on a mainframe computer) that includes the core information needed by EPA to assure that public water systems are in compliance with all of the statutory requirements in SDWA. SDWIS/ STATE is a PC-based system at the state level that has been designed to address the specific drinking water information needs of the state. It includes not only the data that the state must report to SDWIS/FED but also data the state determines to be critical to carry out its primary enforcement authority. Formal QA/QC procedures have been implemented for both data entry and data retrieval. In addition, the SDWIS Executive Board reviews QA/QC approaches regularly and a peer review process is in place to test any new modules or revisions to existing modules of SDWIS.

Data will also be compiled on efforts to implement the underground injection control program, including performance data on mechanical integrity testing of UIC wells and permitting and closure efforts targeted at Class IV and V wells. EPA will collect this data from the UIC Federal Reporting System (7520 forms), which includes information submitted annually by EPA and State UIC Program directors to Headquarters.

Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants.

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The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Fish and Wildlife Advisories Database

The National Listing of Fish and Wildlife Advisories database is the primary data source for verifying and validating the performance measures related to safe consumption of fish and wildlife. Each year, states and tribes submit information that the Agency enters into the database and validates. The database contains information on the waterbodies under advisory, the types of advisories and bans in place, the special category and size ranges of fish and/or wildlife involved, chemical contaminants identified in the advisories, lake acreage of river miles under advisory, the data advisories were issued, and the proportion of assessed waters that are under advisory in a given year.

Beach Monitoring and Closures

EPA data is not currently available on beach monitoring and closures. However, the Agency issued an Information Collection Request (ICR) to solicit data on beach monitoring and actions taken to protect the public from contamination in these recreational waters. The state/local government survey that will be developed as a result of the ICR will be the key piece of information used to report progress. The EPA survey will be phased in to obtain data on all beaches. The survey will be designed to report all information necessary to measure progress against the annual performance measure.

Water Quality Monitoring

Each State, Territory, Interstate Water Commission, the District of Columbia and participating Tribe must, per Clean Water Act Section 305(b), develop a program to monitor water quality of its surface and ground waters and prepare a report describing the status of its water quality. This 305(b) process is the principal means by which EPA, Congress, and the public evaluate whether U.S. waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of the remaining problems.

EPA with the assistance of the States, other jurisdictions and participating Tribes prepares guidance to delineate the water quality elements needed as well as guidance to ensure consistency and comparability of the water

quality monitoring and assessments. The Water body System (WBS) defines and tracks the data elements at the water body level and summarizes at various scales. The WBS provides coding guides with technical instructions for data users. The numbers of total State waters are obtained using EPA's Reach File Version 3.0. The guidance describes annual electronic protocols for submission of the water quality data.

In addition to our Section 305(b) reporting, several of our 1999 performance measures for this objective are based largely on programmatic outputs and activities that can, in the near-term, serve as adequate surrogates for determining the extent to which our programs are moving the Agency toward its environmental goals. As such, verification of the quality of data will be conducted through normal communications among EPA offices and Regions and with states and other partners. For example, the review of the ocean dumping testing requirements will provide numerous opportunities for stakeholders nation-wide to help identify the issues and priorities involved in the review. In addition, the review process and outcome will be guided by a Federal Advisory Committee, assuring high quality, independent advice on the most appropriate revisions to the testing requirements. These measures, in contrast to certain environmental outcome measures planned for the future, typically include annual or other routine reports from state agencies, but also include milestones in established processes where verification can be established through EPA staff involvement.

Wetlands Trends Data

EPA is a member of an interagency working group that will reconcile wetlands trends data from the Department of Interior's National Wetlands Inventory and the Department of Agriculture's Natural Resources Conservation Service's Natural Resource. In addition, EPA has requested that the Wetlands Subcommittee (Chaired by the Fish and Wildlife Service) of the Federal Geographic Data Committee reconcile differences among agencies in the reporting of wetland acres created or restored that are appropriate for tabulating as increases in the inventory of the nation's wetlands.

The Gulf of Mexico Program's performance evaluation process is supported through the distributed Quality Assurance/Quality Control Plan of the Office and those of the participating federal departments and agencies. Additionally, the Gulf Program has organized a Scientific Review Committee of regional experts (both public and private) that assist in the review and verification of the environmental analyses and performance evaluations administered by the Program.

Permit Compliance System (PCS) Database

Performance data related to NPDES permits will be tracked largely through the Agency's Permit Compliance System (PCS) database which is managed by the Office of Enforcement and Compliance Assurance (OECA). Data entered into this system by the Regions and states is subjected to data entry QA procedures to verify that the information is consistent with facility-provided information. The system includes additional QA features related to discharge data. Performance data on CWSRF management will be compiled by EPA's Regional offices through interaction with the states.

Nonpoint Source (NPS) Pollutants

The Agency's progress toward the goal of clean and safe water can be measured in part by the extent to which point source and nonpoint source (NPS) pollutants are discharged into the Nation's waters. Our longer-term measurement of NPS discharges will involve analyses of current versus baseline loading

estimates conducted by the U.S. Geological Survey and the Department of Agriculture. Since states are the primary implementers of NPS programs and policies, the extent to which states have upgraded their nonpoint source programs to reflect recent guidance will serve as an effective surrogate for measuring progress toward our NPS reduction targets. State program upgrades will be measured by evaluating each state's explicit short- and long-term goals and objectives and their associated indicators that demonstrate progress.

Data on the promulgation of effluent guidelines and support for existing technology based standards is collected through internal tracking processes in the Agency organizations where the work is performed (no outside reporting is involved for these measures).

Statutory Authority

Clean Water Act (CWA)(33 U.S.C. 1251-1387)

Safe Drinking Water Act (SDWA)(42 U.S.C. 300f-300j-26)

Toxic Substances Control Act (TSCA)(15 U.S.C. 2601-2692)

[Other related authorities, directives, obligations: Clean Air Act section 309 (42 U.S.C. 7609); TSCA sections 4 and 6 (15 U.S.C. 2603 and 2605)], Endangered Species Act (16 U.S.C. 1531-1544), and National Environmental Policy Act (42 U.S.C. 4321-4370d)]

Great Lakes Water Quality Agreement

Treaties with Indian tribes

1971 Ramsar Convention on Wetlands

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Safe Food

Strategic Goal: The foods Americans eat will be free from unsafe pesticide residues. Children especially will be protected from the health threats posed by pesticide residues, because they are among the most vulnerable groups in our society.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Safe Food	**$59,764.9**	**$56,459.3**	**$63,552.4**
Obj. 01 Reduce Agricultural Pesticides Risk	$22,952.3	$19,651.3	$24,926.2
Obj. 02 Reduce Use on Food of Pesticides Not Meeting Standards	$36,812.6	$36,808.0	$38,626.2
Goal Total FTE: Safe Food	687.2	681.0	682.3

Strategic Objectives:

Objective #1: Reduce Agricultural Pesticides Risk. By 2005, the risk from agricultural use of pesticides will be reduced by 50 percent from 1995 levels.

Objective #2: Reduce Use on Food of Pesticides Not Meeting Standards. By 2005, use on food of current pesticides that do not meet the new statutory standard of "reasonable certainty of no harm" will be substantially eliminated.

Programs and Activities:

The abundance, affordability, and wholesomeness of America's food supply depend in part upon the safe use of pesticides during food production, processing, storage, and transportation. Before any pesticide can be used legally, the law requires EPA to conclude that its use will not lead to unreasonable adverse effects, and that any food residues resulting from its use are reasonably certain to cause no harm. EPA recognizes that older pesticides with approved food uses may sometimes lead to residues which could result in adverse health effects. EPA's priority is to minimize dietary exposure to these potentially toxic pesticides, especially to children, by screening the pesticides through the regulatory processes of registration and reregistration/special

review, thereby eliminating those pesticides that present a danger to human health and the environment. The Food Quality Protection Act (FQPA) of 1996 mandated a more stringent health standard for EPA's pesticide reviews. Through these processes, pesticides found to be harmful will be removed from the market or restricted in their use to ensure the continued safety of our food supply.

The 1999 Annual Plan provides $63,552,400 and 682.3 workyears for the Safe Food goal, an increase of $7,093,100 and 1.3 workyears over 1998. EPA will continue to focus its efforts on implementing FQPA, which amends both of EPA's principal pesticide regulatory authorities, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FFDCA). In 1999, the implementation of FQPA will continue to be a priority for the Agency, with significant efforts going toward tolerance reassessments, periodic reconsideration of food-use registrations, effective management of minor use pesticides, and expedited registration of reduced-risk pesticides. EPA will ensure that newly registered agricultural pesticides meet the current, more stringent standards mandated in FQPA to ensure reasonable certainty of no harm to human health and the environment. Implementation of FQPA is essential to reducing dietary exposure to potentially toxic pesticides by subjecting them to the new, more stringent health standard.

Highlights:

Reduce Agricultural Pesticides Risk

The 1999 Annual Plan is based on $24,926,200 and 282.7 workyears to ensure that the risk from agricultural use of pesticides will be reduced. FIFRA and FFDCA authorize EPA to set terms and conditions of pesticide registration, marketing and use. EPA will use these authorities to reduce the use of pesticides with the highest potential to cause adverse effects, including those which pose particular risks to children. Under EPA's Registration program, new food/feed-use pesticides are registered after extensive review and evaluation of human health and ecosystem data. The Registration program includes special registration activities, tolerance setting, and permits for use of pesticides for emergency situations, and experimental use. In 1999, EPA will continue to emphasize addressing children's special sensitivities through registration review.

In 1999, the Agency will decrease the adverse risk from agricultural pesticides from 1995 levels through the regulatory review and approval of safer pesticides (including new biopesticides). The registration of safer pesticides will increase the availability of safer alternatives to the consumer, resulting in a reduction in the use of high risk pesticides. Under the Reduced Risk Initiative, which began in 1993, EPA will continue to provide expedited review of pesticides which meet the criteria of reduced risk i.e., reduce the level of acute toxicity, reduce exposure to humans or non target organisms, and reduce the environmental burden. These expedited pesticide review actions provide the incentive to industry to develop, register, and use lower risk pesticide products that result in reduced risk to human health and the environment when compared to existing alternatives.

Reduce Use of Pesticides on Food Not Meeting Current Standards

The 1999 Annual Plan is based on $38,626,200 and 399.6 workyears to ensure that use on food of current pesticides that do not meet the new statutory standard of "reasonable certainty of no harm" will be substantially eliminated. Implementation of FQPA is essential to reducing dietary exposure to potential toxic pesticides by subjecting them to the new, more stringent health standard. This new standard requires the Agency to revise its risk-assessment practices to ensure adequate protection of the health of children and other vulnerable subpopulations and to reconsider some 9,700 tolerances for specific pesticide residues approved before the passage of FQPA. To meet this requirement, the Agency will complete approximately 1,850 tolerance reassessments in 1999.

In 1999, EPA will continue to work on the following additional requirements mandated by FQPA: (1) develop a new program to reconsider registered pesticides on a 15-year cycle, bringing them into compliance with contemporary standards; (2) provide a special emphasis on management of minor use pesticides; and (3) expedite registration of reduced risk pesticides.

In 1999, through the Reregistration program, the Agency will continue to regulate pesticides approved for food use, with particular emphasis on those that have been classified as potential human carcinogens or neurotoxins. The reregistration process for pesticides registered prior to November 1984 is in its final phase which is the issuance of Reregistration Eligibility Decisions (REDs). The issuance of a RED summarizes the findings of the reregistration review of the chemical after examining its health and environmental effects. In 1999, EPA will complete approximately 1,000 product reregistrations, and 42 REDs for active ingredients subject to reregistration.

Pesticide User Fees

EPA is proposing appropriations language to reinstate pesticide registration fees to collect $16,000,000 in 1999. The fee applies to pesticide manufacturers to recover the costs of EPA's review of registration applications. The Agency continues to collect Tolerance and Maintenance Fees at $18,000,000 a year. In 1999, EPA will promulgate the needed rules to increase tolerance fees to ensure that the tolerance setting process will be as self-supporting as possible. EPA expects these rules to take effect in 2000.

FY 1999 Annual Performance Goals:

The resources requested for the Safe Food goal will enable the Agency to meet a number of important performance goals. The most significant of these include:

- Decrease adverse risk from agricultural pesticides from 1995 levels and assure that new pesticides that enter the market are safe for humans and the environment through such actions as registering 17 safer pesticide chemicals and biopesticides, issuing 95 new tolerances and approving 95 new pesticide uses.

- Under pesticide reregistration, EPA will reassess 19% of the existing 9,700 tolerances (cumulative 33%) for pesticide food uses to meet the new statutory standard of "reasonable certainty of no harm."

Key Performance Measures	1998	1999
Safer Chemicals/Biologicals	16 Registrations	17 Registrations
New Chemicals	17 Registrations	17 Registrations
Amendments	2056 Actions	2000 Actions
Me-toos	639 Actions	600 Actions
New Uses	99 Actions	95 Actions
Inerts	41 Actions	45 Actions
Special Registrations	366 Actions	370 Actions
Tolerance Petitions	91 Actions	95 Actions
Tolerance Reassessment	1450 Actions	1850 Actions
REDs	40 Decisions	42 Decisions
Product Reregistration	750 Actions	1000 Actions

Key Performance Measures Verification

Indices of progress will include the number of safer chemicals registered, and the number of REDs issued. Another reference or indirect measure may include the number of environmental partnerships in place or the number of IPM programs in effect. As output measures, these will be readily counted or recorded upon completion.

Through the Reregistration Program, EPA will ensure that pesticides and products failing to meet current standards will not remain on the market.

Reassessment of current tolerances will ensure that pesticide residues in food do not constitute a health risk.

Primary indices of progress are completions of new REDs for food-use Active Ingredients, completions of product reregistrations for food-use products, and completions of tolerance reassessments. As output measures, these will be readily counted or recorded upon completion.

The registration of safer alternatives, which will encourage reduced use of the potentially more hazardous older conventional chemicals, will be used be an indirect measure.

Statutory Authority

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136-136y)

Federal Food, Drug, and Cosmetic Act (FFDCA) (21 U. S. C. 346a) Section 408 (21 U.S.C. 346a)

World Trade Organization Agreements

Environmental Protection Agency

1999 Annual Plan Request to Congress

Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems

Strategic Goal: Pollution prevention and risk management strategies aimed at cost-effectively eliminating, reducing, or minimizing emissions and contamination will result in cleaner and safer environments in which all Americans can reside, work and enjoy life. EPA will safeguard ecosystems and promote the health of natural communities that are integral to the quality of life in this nation.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Preventing Pollution and Reducing Risk in Communities, Homes, Workplaces and Ecosystems	**$239,993.1**	**$240,466.0**	**$258,845.0**
Obj. 01 Reduce Public and Ecosystem Exposure to Pesticides	$50,789.4	$47,108.9	$50,626.1
Obj. 02 Reduce Lead Poisoning	$31,078.6	$30,453.7	$30,957.6
Obj. 03 Safe Handling and Use of Commercial Chemicals and Microorganisms	$31,646.7	$41,024.6	$41,272.5
Obj. 04 Healthier Indoor Air	$33,235.0	$30,292.2	$33,219.4
Obj. 05 Improve Pollution Prevention Strategies, Tools, Approaches	$27,074.1	$25,245.9	$26,865.5
Obj. 06 Decrease Quantity and Toxicity of Waste	$22,327.2	$21,783.3	$25,053.2
Obj. 07 Assess Conditions in Indian Country	$43,842.1	$44,557.4	$50,850.7
Goal Total FTE	1,045.8	1,143.6	1,125.5

Strategic Objectives:

Objective #1: Reduce Public and Ecosystem Exposure to Pesticides. By 2005, public and ecosystem risk from pesticides will be reduced through migration to lower risk pesticides and pest management practices, improving education of the public and at-risk workers, and forming "pesticide environmental stewardship" partnerships with pesticide user groups.

Objective #2: Reduce Lead Poisoning. By 2005, the number of young children with high levels of lead in their blood will be significantly reduced from the early 1990's.

Objective #3: Safe Handling and Use of Commercial Chemicals and Microorganisms By 2005, of the approximately 2,000 chemicals and 40 genetically engineered microorganisms expected to enter commerce each year, we will significantly increase the introduction by industry of safer or "greener" chemicals which will decrease the need for regulatory management by EPA.

Objective #4: Healthier Indoor Air. By 2005, fifteen million more Americans will live or work in homes, schools, or office buildings with healthier indoor air than in 1994.

Objective #5: Improve Pollution Prevention Strategies, Tools, Approaches. By 2005, reduce by 25% (from 1992 level) the quantity of toxic pollutants released, disposed of, treated, or combusted for energy recovery. Half of this reduction will be achieved through pollution prevention practices.

Objective #6: Decrease Quantity and Toxicity of Waste. By 2005, EPA and its partners will increase recycling and decrease the quantity and toxicity of waste generated.

Objective #7: Assess Conditions in Indian Country. By 2003, 60% of Indian Country will be assessed for its environmental condition and Tribes and EPA will be implementing plans to address priority issues.

Programs and Activities:

EPA seeks to manage environmental risks to communities, homes, and workplaces, and to protect the environmental integrity of ecosystems, by a mix of regulatory programs with alternative approaches to achieve results at less cost and in more innovative, sustainable ways. Rather than "end of pipe" controls, preventing pollution at the source is our strategy of first choice. Where pollution prevention at the source is not a viable alternative, the Agency will employ risk management and remediation strategies in a cost effective manner. These efforts will be directed towards the greatest threats, such as those in our communities, homes, schools, and workplaces that have significant impact on our most sensitive populations: children, the elderly, and individuals with chronic diseases.

The 1999 Annual Plan is based on $258.8 million and 1,125.5 workyears for this goal, an increase of $18.3 million and decrease of 18.1 workyears over 1998.

EPA will focus on pollution prevention and reducing risks by minimizing the exposure from pesticide misuse, lead poisoning, and by targeting persistent, bioaccumulative, and toxic pollutants. The Agency will also enhance hazardous waste minimization projects to reduce wastes at their source.

HIGHLIGHTS:

Reduce Public and Ecosystem Exposure to Pesticides

The 1999 Annual Plan is based on $50.6 million and 241 workyears to ensure that public and ecosystem risk from pesticides will be reduced through migration to lower risk pesticides and pest-management practices, improving education of the public and at-risk workers, and forming "pesticide environmental stewardship" partnerships with pesticide user groups.

The objective to reduce exposure to pesticides will be achieved through continued application of the Worker Protection Standards (WPS) and certification and training programs. The WPS for agricultural pesticides represents a major strengthening of national efforts to safeguard agricultural workers from occupational exposure to pesticides on farms, in forests, greenhouses and nurseries. Additionally, EPA will continue to protect the nation's ecosystems through the groundwater program, Pesticide Environmental Stewardship Program (PESP), integrated pest management (IPM), and endangered species programs.

One of EPA's concerns in 1999 will be the prevention of accidental or deliberate pesticide misuse in urban and rural environments, particularly in poor communities where significant public health risks to residents, especially children and other sensitive populations, are likely to occur. In 1999, EPA will support a new initiative to prevent misuse and reduce exposure. Pesticide misuse prevention activities will focus on the reduction of risk in residential settings. EPA will work with other Federal, state, and local agencies; the private sector; and communities to identify the critical deficiencies and to carry out effective solutions. Also in 1999, EPA will continue to carry out the Pesticide Groundwater Strategy. This strategy is based on cooperative efforts with the states/tribes and the Regions to develop State Management Plans (SMPs) to prevent groundwater pollution from pesticides.

Reduce Lead Poisoning

The 1999 Annual Plan is based on $31.0 million and 121 workyears to ensure that the number of young children with high levels of lead in their blood will be significantly reduced from the early 1990s.

Beginning in 1999, EPA will start implementing a training, certification, and accreditation program for lead-based paint professionals in approximately 15 states that do not administer their own programs. Other regulations and public outreach, such as publication of a lead information pamphlets, will ensure that parents have access to information to make an informed decision about lead-based paint in their homes, with a special emphasis on children in low-income, urban areas. Another important effort in 1999 will be a collaborative project with the Centers for Disease Control (CDC) to assist states and local communities in targeting resources by examining 50-75 metropolitan areas to identify the most

vulnerable communities where lead poisoning prevention efforts should be targeted. The identification of communities will be followed with a multi-pronged outreach program to ensure awareness of the risk to children and to ensure that steps are taken to provide assistance to the communities at risk. Also in 1999, EPA plans to issue final rules on disposal of lead-based paint debris and standards for lead-based paint hazards in paint, dust and soil. In addition, EPA plans to issue proposed rules on training, accreditation and certification requirements for renovation and remodeling activities and for lead-based paint activities in buildings and superstructures.

Safe Handling and Use of Commercial Chemicals and Microorganisms

The 1999 Annual Plan is based on $41.3 million and 344 workyears to ensure that, of the approximately 2,000 chemicals and 40 genetically engineered micro-organisms expected to enter commerce each year, EPA will significantly increase the introduction of safer or "greener" chemicals that will decrease the need for regulatory management.

In 1999, EPA will focus on efforts to implement the Toxics Agenda. An important part of the implementation effort will center on persistent, bioaccumulative, and toxic (PBT) chemicals as part of a coordinated Agency effort. One of the key health issues facing our nation's children today is the threat posed by exposure to PBTs. These chemicals also imperil the health of ecosystems as they accumulate and biomagnify in the food chain for years and decades. To facilitate development of the Agenda, EPA will complete the Chemical Use Inventory (CUI) amendment to the Inventory Update Rule. Promulgation of the CUI rule, by identifying chemical uses of industrial, commercial, and consumer products, will facilitate risk screening, including identifying risks to children. In 1999, the completion of testing actions on new and existing chemicals will result in the development of test data needed to support adequate assessments of chemical risks by government, industry, and the public. Also, EPA's Green Chemistry Program will continue to recognize and promote chemical methods that reduce or eliminate the use or generation of toxic substances during the design, manufacture and use of chemical products and processes and that have broad application in industry.

A crucial element of EPA's approach is chemical information gathering and testing to provide EPA and others, including the public, sufficient data for screening, assessing, and managing the risks. EPA's research program will support this effort by generating scientific information used in improving the test methods used to generate the data. Research seeks to improve our understanding of both the risks to human health and adverse ecological effects. To the extent that this research supports testing guidelines that relate to both toxic substances in general and to pesticides, research under this objective additionally supports EPA's goal to reduce the risks to the nation's food supply and the non-dietary pesticide risks posed to human health and the environment.

Achieving Healthier Indoor Air

The 1999 Annual Plan is based on $33.2 million and 152 workyears to accomplish its healthy indoor air performance goals.

Indoor air pollution poses high risks to human health, especially in sensitive populations, and has ranked among the top four environmental risks. Radon, for example, is the second leading cause of lung cancer and is responsible for about 14,000 deaths per year.

To help achieve healthier indoor air, EPA's priorities in 1999 include radon testing, radon mitigation, and radon-resistant construction; implementing "Tools for Schools"; increasing awareness of the harmful effects of children's exposure to secondhand smoke; completing the analysis of data from the Building Assessment Survey and Evaluation (BASE); privatizing the radon proficiency program; and focusing on community-based risk reduction. These programs support the 1999 goal of having 850,000 additional people living in healthier residential indoor environments, including 530,000 people living in homes built with radon-resistant features.

EPA's research program will produce the scientific information needed to understand indoor air effects. Research will identify, characterize, and compare the health risks associated with indoor exposures to air pollutants so that risk managers can make informed decisions to protect public health.

Improve Pollution Prevention Strategies, Tools, Approaches

The 1999 Annual Plan is based on $26.9 million and 80 workyears to ensure that the quantity of toxic pollutants released, disposed of, treated, or combusted for energy recovery will be reduced 10% from 1992 levels. Half of this reduction will be achieved through pollution prevention practices.

Beginning in 1999, EPA will develop innovative, multi-media strategies and tools (through inter-office and regional coordination) to target 12-14 priority persistent, bioaccumulative and toxic pollutants for pollution prevention (P2) at domestic levels. The targeting will be done as a collaborative effort between multiple offices and their regional components. Also, obtaining 2% reductions in reported Toxics Release Inventory (TRI) chemical wastes in 1999 and beyond will be the result of the cumulative efforts of EPA's pollution protection, clean technologies, and green chemicals programs which encourage the use of source reduction and integrated environmental management systems by American industry and businesses.

Decrease the Quantity and Toxicity of Waste

The 1999 Annual Plan is based on $25.1 million and 133 workyears to support the objective of decreasing pollution in communities, workplaces, and ecosystems by decreasing the quantity and toxicity of wastes.

In 1999, the Agency will emphasize helping generators prioritize and focus their efforts to reduce the volume and toxicity of hazardous wastes. EPA's objective is to reduce the amount of waste generated annually, therefore decreasing pollution or the risk of pollution in communities, workplaces, and ecosystems. EPA will work together with state, tribal, and local governments, business and industries, and non-governmental organizations to: encourage reduced generation of industrial (hazardous and non-hazardous) waste through material substitution and manufacturing process changes; encourage recycling of

wastes that must be generated; and assure the safe recycling of any wastes. EPA will also focus on reducing the toxicity of wastes as states and regions begin measuring and reporting reductions of PBTs. To accomplish this, the Agency's waste minimization program will provide tools and assistance to identify

hazardous wastes containing the most PBTs among 900 chemicals in the waste stream.

Assess Conditions in Indian Country

The 1999 Annual Plan is based on $50.9 million and 55 workyears to continue its efforts to improve environmental conditions in Indian Country in this Goal.

EPA places particular priority on working with Federally recognized Indian tribes on a government-to-government basis to improve environmental conditions in Indian country. This is pursuant to our trust relationship with tribes and the nation's interest in conservation of cultural uses of natural resources. In 1999, the Agency will continue to work with the tribes to establish an environmental presence in Indian country and produce substantial progress towards developing Tribal capacity to implement their own environmental programs. EPA will complete its design and begin initiation of a framework for the baseline assessment of environmental conditions on tribal lands.

EPA will also improve health and environmental conditions in Alaska Native villages through training and education on sampling and assessing environmental quality conditions. This investment will advance these villages capabilities to correct health and environmental problems through the development of Environmental Action Plans.

FY 1999 Annual Performance Goals

The resources requested in this budget will enable the Agency to meet a number of important performance goals in 1999. The most significant of these include:

- 850,000 additional people will live in healthier residential indoor environments.
- Reduce by 2% in 1999 (for a cumulative total of 10%) the quantity of TRI pollutants released, treated or combusted for energy recovery, with emphasis on the use of Pollution Prevention practices.
- Divert an additional 1% (for a cumulative 29% or 64 million tons) of RCRA municipal solid waste (MSW) from landfilling and combustion, an increase from the 1990 baseline of 17%.
- Ensure that of the approximately 2,500 new chemicals and micro-organisms submitted by industry each year, those that are introduced in commerce are safe to humans and the environment for their intended uses.
- Complete the building of a lead-based paint abatement certification and

training program in 50 states to ensure significant decreases in children's blood lead levels by 2005 through reduced exposure to lead-based paint.

- 15% of Tribal environmental baseline information will be collected and 30 additional tribes (cumulative total of 90) will have tribal/EPA environmental agreements or identified environmental priorities.

- Protect homes, communities, and workplaces from harmful exposures to pesticides and related pollutants through improved cultural practices and enhanced public education, resulting in a reduction of 10% (1995 reporting base) in the incidences of pesticide poisonings reported nationwide.

Key Performance Measures	1998	1999
Environmental Stewardship Strategies	21 Complete	42 Complete
Reduce Workers Suffering from Adverse Health Effects	10% Health Effects	15% Health Effects
Labor Population will be adequately trained	30% Trained	40% Trained
Pesticides w/ high probability to leach/persist in GW	5% contamination	10% contamination
Federal training/accred./certif. program for States		15 Programs
TSCA PMN Reviews	2500 Notices	2500 Notices
People Living in Healthier Indoor Air	850,000 People	850,000 People
People Living in Radon Resistant Homes	530,000 People	530,000 People
People Living in Radon Mitigated Homes	130,000 People	130,000 People
Children Under 6 Not Exposed to ETS	195,000 Children	195,000 Children
Cummulative reduction of TRI pollutants released	8% Reduced emissions	10% Reduced emissions
Tons of MSW Recycled	60 million tons MSW	64 million tons MSW

Key Performance Measures	1998	1999
Tribal environmental baseline information collected	1 Framework	15 % Baseline
TEAs/Tribes with identified priorities	32 TEAs/tribes	30 TEAs/tribes

Key Performance Measures Verification

National Pesticides Telecommunications Network (NPTN)

EPA will measure incidents of adverse effects reported by workers and handlers, early identification of pesticide misuse, completion and implementation of SMPs, lower numbers of poisonings reported through National Pesticides Telecommunications Network (NPTN) and poison control centers, number of improved labels completed, and increased number of endangered species protected.

Lead-based Paint Program

The accomplishment of EPA's lead-based paint program will be verified by realizing a significant reduction of children's blood lead levels in high risk groups compared with average levels. For the past two decades, the NCHS has collected data on the general health of the Nation's population through the NHNES. The collection and laboratory analysis of children's blood for lead has been part of this program since its inception and has become the standard for the estimation of national blood lead averages. It is also the only national survey of children's blood lead levels. NCHS is preparing to begin another survey. The results, scheduled for release in 2002, will be used to measure the success of EPA's lead program. The verification and validation of data from NHNES will be conducted by NCHS through a rigorous quality assurance program to ensure that the sample selected for examination is truly representative of the U.S. population and that laboratory analyses of collected blood samples are of known accuracy and precision (NCHS has more than 20 years experience in conducting this survey and these analyses).

In addition, EPA will evaluate the effectiveness of regulations promulgated over the next two years. Through mechanisms including focus groups and surveys, the Agency will measure the awareness of and any changes in behavior of the regulated community due to these regulations. For example, at the end of 1999, EPA will have established a training, certification, and accreditation program for lead-based paint professionals in states that do not seek approval from the Agency to administer their own program (about fifteen states are not expected to seek authorization). In 2000, following an outreach effort to increase awareness of state residents on EPA's certification program, the Agency will measure the success of this regulation in certifying professionals. The success will be determined by the degree of awareness of the program among professionals who are likely to become certified. Similar evaluations will be developed for other regulations.

Pre-Manufacture Notice Submissions (PMN's)

Performance will be measured by counting the number of new chemicals Pre-Manufacture Notice submissions (PMN's) that are determined by EPA to be safe and not to require EPA management controls. PMN's submissions and determinations are tracked under formal EPA document management and decision-making systems to ensure compliance with statutory deadlines for Agency action. The "greener" the new chemical EPA receives for review, the more success achieved in protecting human health and the environment. Performance will also be measured by how much knowledge we gain in understanding the risks of toxic chemicals to human health and the environment. EPA will gain this knowledge through required and voluntary chemical testing by industry. When EPA identifies specific risks posed by toxic chemicals, performance will be judged by its success to mitigate through actions such as labeling, banning of the chemical or its use in certain products. These counts will be drawn from formal regulatory action tracking systems maintained by EPA that have thorough QA/QC procedures to ensure the integrity of the data maintained therein. Last, success will be judged by lowering risk through preventing pollution and achieving this through voluntary compliance over regulated controls.

ORD Management Information System (OMIS)

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Radon

In order to determine progress on the number of homes tested for radon, homes fixed if levels are elevated, and the number of children aged 6 and under exposed to ETS in their homes, the program utilizes the biennial survey conducted by the Conference of Radiation Control Program Directors. The National Association of Home Builders (NAHB) conducts an annual survey of home builders which includes questions concerning the extent to which they are employing radon-resistant construction techniques. This information is made available to EPA through an agreement with NAHB. We also determine progress by tracking the number of kits distributed and kits analyzed, by conducting follow up inquiries with partners, and using lab files for evaluations and tracking.

IAQ Tools for Schools

The number of schools that implement the IAQ Tools for Schools kit are tracked through a centralized database where data are provided by program office staff, the Government Printing Office, national cooperative partners, contractor staff, and the EPA regional offices. In addition, we access the National Association of Energy Service Companies database which tracks companies which have performed ventilation work in schools as well as public school student enrollment numbers.

Large Buildings Measure

The first measure for large buildings, which involves completing the measurement and characterization of 100 randomly selected large buildings, is performed by the program which is responsible for conducting the BASE study. The second measure is reported on by the International Union of Operating Engineers as a condition of its continuing cooperative agreement with EPA under which it trains building engineers and then assesses the implementation of good IAQ management practices. The Las Vegas laboratory also collects and tracks the number of samples and analyses from buildings where measures are collected.

Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants; the Agency is also working with the National Research Council to identify emerging environmental issues for which we must begin planning the necessary research.

The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB) and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

Toxic Release Inventory

A measurement matrix will be established to quantify the changes in TRI releases which are due to source reduction activities. Also, the Agency will publish a guidance document providing technical advice on using the measurement matrix.

Biennial Reporting System (BRS)

The Biennial Reporting System (BRS) is a national database which supports EPA's RCRA program. BRS is a biennial compilation of information supplied by

entities which provides data on types and amounts of waste handled. Data is supplied or entered into the data bases by states and EPA regional offices.

The BRS data system has validation/verification controls in place to help ensure that data is complete and accurate. The BRS data entry software includes a series of basic and advanced edits which check for completeness and accuracy. Additionally, while states and regions submit essentially complete BRS databases, Headquarters runs BRS data quality verification reports and then coordinates with states and regions to discuss potential data errors. Analysis also is conducted on significant changes which have occurred since the last biennial report. Prior to issuing the final BRS report, a second set of BRS data quality verification reports are run and follow-on discussions are conducted for those states with significant changes to verify/validate data.

BRS has a suite of user and system documentation which describes the overall administration of the data collection and management activities. The documentation identifies which information, for example, is mandatory versus optional and describes how to enter the data into the system. All information is provided to the appropriate state and regional user of the system. Training on use of the systems is provided on a regular basis, usually annually depending on the nature of system changes and user needs.

PBT Measurement

The data used for measuring the reduction of PBTs will come from existing data sources or modifications to them, if possible. These include the Toxics Release Inventory, the Biennial Reporting System, the 1986 RCRA Generator Survey, the National Hazardous Waste Constituent Survey (1996), and information submitted through current internal Agency reports. Any additional reporting required by the regions, states or tribes will be developed after discussion with all partners. Data for the reduction of PBTs is available by using the Biennial Reporting System and a "Chemical-Waste Code Crosswalk" developed by the RCRA program, which identifies those waste codes most likely to contain persistent, bioaccumulative, and toxic chemicals.

Hazardous Waste Recycling

The Agency will rely primarily on the Biennial Reporting System to track, monitor, and evaluate its efforts to increase safe recycling of hazardous waste by 25% between 1993 and 2005. The Agency has identified several measures that will enable the Agency to track, monitor, and evaluate its effectiveness in achieving a 25% increase in the amount of hazardous waste safely recycled in 2005, relative to 1993. These measures focus on who is recycling (numbers of facilities, by industrial sector and size of firm), what hazardous wastes are being recycled (metals, solvents, acids, etc), how these wastes are being recycled (reclamation, burning for energy recovery, etc.), how much waste is being recycled as a percentage of waste generated, and where they are being recycled (on-site v. off-site). Most importantly, these measures also focus on changes occurring over time in these areas, as well as changes in waste management behavior; i.e., shifts from treatment and disposal to safe recycling, or vice-versa.

Municipal solid waste is waste from residences, commercial establishments, institutions, and industrial cafeterias and administrative offices. It excludes sewage sludge, construction and demolition waste, incinerator ash, auto bodies, and industrial waste from manufacturing. Recycling percentage is calculated as amount (weight) recycled over amount generated. Per capita generation of municipal solid waste is calculated as amount (weight) generated over number of people generating the waste. The EPA report "Characterization of Municipal Solid Waste in the United States" is the source of the recycling percentage as well as the amount of municipal solid waste generated per capita. The report is produced by EPA and is based on a materials flow methodology; thus, no reporting from outside sources will be required.

Tribes

Twice each year, EPA updates an internal database on the number of Tribes with delegated/approved environmental programs, the number of tribal environmental programs that EPA has delegated/approved, and the number of Tribal/EPA Environmental Agreements and the number of Tribes that have developed similar plans for environmental protection.

As part of the Agency effort to develop a strategy for conducting a comprehensive environmental assessment of Indian Country, EPA will develop mechanisms for measuring the amount of baseline environmental information collected.

Statutory Authority

Federal Food, Drug, and Cosmetic Act (FFDCA) (21 U. S. C. 346a)

Endangered Species Act (ESA) (16 U.S.C. 1531-1544)

Toxic Substances Control Act (TSCA) section 6 and TSCA Titles II and III (15 U.S.C. 2605 and 2641-2671)

TSCA Title IV (15 U.S.C. 2605 and 2681-2692)

TSCA section 4 (15 U.S.C. 2603)

TSCA section 5 (15 U.S.C. 2604)

TSCA section 6 (15 U.S.C. 2605)

TSCA section 8 (15 U.S.C. 2607)

TSCA section 12(b) (15 U.S.C. 2611)

TSCA section 13 (15 U.S.C. 2612)

Safe Drinking Water Act sections 1412 and 1417 (42 U.S.C. 300g-1, 300g-6)

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42U.S.C. 9601-9675)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3, 4, 5, 6, 11, 18, 24, and 25 (7 U.S.C. 136a, 136a-1, 136c, 136d, 136i, 136p, 136v, 136y and 136w)

"Radon Gas and Indoor Air Quality Research Act" of Title IV of the Superfund Amendments and Reauthorization Act (SARA)

Safe Drinking Water Act (SDWA)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Clean Air Act (CAA) section 309 (42 U.S.C. 7609)

Clean Water Act (33 U.S.C. 1251-1387)]

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001-11050)

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)

Indian Environmental General Assistance Program (GAP) Act as amended (42 U.S.C. 4368b)

National Environmental Policy Act (NEPA) (42 SC 4321-4370d)

Environmental Protection Agency

1999 Annual Plan Request to Congress

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

Strategic Goal: America's wastes will be stored, treated, and disposed 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.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response	**$2,254,977.3**	**$1,636,785.3**	**$2,251,327.7**
Obj. 01 Reduce or Control Risks to Human Health	$2,096,061.5	$1,491,429.1	$2,091,457.3
Obj. 02 Prevent Releases by Proper Facility Management	$138,141.5	$126,471.5	$139,531.0
Obj. 03 Respond to Known Emergencies	$20,774.3	$18,884.7	$20,339.4
Goal Total FTE	4,348.1	4,373.6	4,304.1

Strategic Objectives:

Objective #1: Reduce or Control Risks to Human Health. By 2005, EPA and its partners will reduce or control the risks to human health and the environment at over 375,000 contaminated Superfund, RCRA, UST, and brownfield sites. (Total comprises 1,200 NPL and 480 non-NPL sites; 2,475 RCRA facilities; 370,000 LUST cleanups initiated or completed; and 1,500 brownfield properties.)

Objective #2: Prevent Releases by Proper Facility Management. By 2005, over 282,000 facilities defined by RCRA Subtitles C, D, and I, the Oil Pollution Act (OPA), and the Emergency Planning and Community Right to Know Act (EPCRA), and the Clean Air Act, section 112(r), will be managed according to practices that prevent dangerous releases to the environment.

Objective #3: Respond to All Known Emergencies. By 2005, EPA and its partners will have the capability to successfully respond to 100 percent of known emergency actions at facilities defined under the Oil Pollution Act (OPA) and the

Emergency Planning and Community Right-to-Know Act (EPCRA), to reduce the risk to human health and the environment.

Programs and Activities:

Improper management of wastes can lead to fires, explosions, and contamination of air, soil, and water. A frequent result of improper hazardous waste disposal is the contamination of groundwater -- the source of drinking water for nearly half of all Americans. At some waste sites, toxic vapors from evaporating liquid wastes or chemical reactions contaminate the air. Pollutants, such as metals, organic solvents, and oil, can damage vegetation, endanger wildlife, and harm the health of people who live in nearby communities. In some cases, toxic and hazardous substances (including radioactive waste) are carried far from their source by air, ground water, and surface water runoff into streams, lakes, and rivers.

EPA's efforts to control and restore releases of waste center on protecting human health and the environment by applying the fastest, most effective waste management and cleanup methods available, while involving affected communities, states, tribal governments, and municipalities in the decision-making process. Different types of waste require different means of treatment and disposal--what is suitable for one contaminant may be inappropriate for another. Cleaning up abandoned or under-used industrial land demonstrates that economic, environmental and social goals can be integrated so that economic growth can improve, rather than diminish, environmental quality.

EPA will use its statutory authority under the Oil Pollution Act (OPA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), Clean Air Act (CAA), and Emergency Planning and Community Right-to-Know Act (EPCRA) to promptly monitor and respond to releases, accidents, or spills. EPA will help ensure that places in America currently contaminated by hazardous waste no longer endanger public health or the environment and are restored to uses desired by surrounding communities. State, local, and other Federal agency efforts will be integrated with EPA activities to reduce cleanup costs and revitalize contaminated and abandoned private property for economic reuse.

In addition, EPA will focus on controlling human exposures and groundwater releases at RCRA facilities designated as high priority for corrective actions. Support for radioactively contaminated Superfund sites will be continued. EPA research provides a technical foundation for decisions made in the environmental cleanup programs. The full spectrum of EPA's cleanup programs will respond to priority sites and releases in a fast and effective manner, while maximizing the participation of potentially responsible parties (PRPs) and other stakeholders in the cleanup efforts.

The 1999 Annual Plan is based on $2,251,327,700 and 4,304 workyears for this strategic goal, an increase of $614,542,400 and decrease of 70 workyears from 1998. To meet this goal, EPA will continue to regulate existing waste management practices at facilities defined under CERCLA, RCRA, OPA, CAA, CWA, and EPCRA.

HIGHLIGHTS:

Reduce or Control Risks to Human Health

The 1999 Annual Plan is based on $ 2,091,457,300 and 3,494 workyears to reach the Agency's objective of waste management, cleanup, and control of releases. This objective includes the following resources: Superfund, $1,926,599,800; Environmental Program & Management, $56,139,200; Leaking Underground Storage Tanks, $69,122,200; State and Tribal Assistance Grants, $32,700,600; Science and Technology, $5,935,600; and Oil Spills, $959,900.

In 1996, President Clinton announced a national commitment to protect communities from toxic pollution by accelerating toxic waste cleanup. In 1999, the Superfund program will support this initiative by doubling the pace of Superfund cleanups. This effort will achieve 900 construction completions, approximately two-thirds of the National Priorities List (NPL), by the end of calendar year 2001. This initiative not only puts contaminated sites back into productive use but protects our children and our communities from exposure to uncontrolled toxic waste releases. EPA seeks to partner with other Federal agencies, state, local, tribal governments, and the communities to more effectively address and leverage on-going cleanup efforts. Through this investment, the Agency restates its emphasis on risk reduction by addressing the growing backlog of site cleanups and accelerating the pace of Superfund construction completions. The Agency requests a total of $1,630,679,800 for Superfund response.

EPA will pursue violators and responsible parties to maximize PRP participation in site cleanup. Maintaining a PRP participation rate of 70% preserves fund dollars for sites where there is no viable PRP. At the same time, EPA will promote enforcement fairness, especially for small contributors to sites, will reduce third party transaction costs, and will recover the government's cost for site cleanup. A total of $164,725,500 is requested for Superfund enforcement.

The brownfield pilot program has demonstrated that cleaning up abandoned or under-used contaminated land and supporting new business growth can have significant payoffs. Building on the pilot program, EPA will continue to combine Federal, state, local and private sector efforts to restore contaminated property to economic reuse and reduce cleanup costs. In 1999, EPA will fund brownfield site assessments in 100 additional communities in order to reach the Agency's commitment of 300 communities by the year 2000, support 10 brownfield showcase communities, and sign agreements with 100 communities to capitalize revolving loan funds. In some cases, parties interested in developing such properties are concerned about the presence of contamination and the attendant potential liabilities (including Federal Superfund liability). EPA will address liability barriers in the brownfield program by issuing comfort/status letters or prospective purchaser agreements in appropriate instances which will facilitate sustainable redevelopment of these properties. The Agency is requesting $91,366,200 to fund brownfield activities.

The Agency will assist in the cleanup of 22,000 Leaking Underground Storage Tanks (LUST) in 1999. States have reported that leaking underground storage

tanks are the leading source of groundwater pollution, and petroleum is the most prevalent contaminant. Resources provided by EPA support oversight and cleanup of petroleum releases from underground storage tanks when the owner/operator is unknown, unwilling, or unable to perform the cleanup. EPA's goal is to ensure rapid and effective responses to releases from underground storage tanks containing petroleum and to restore contaminated sites to beneficial use. The Agency requests a total of $69,122,200 for the LUST program.

The RCRA Corrective Action Program will take remedial action at operating hazardous waste facilities in the event of an uncontrolled release. The most serious contamination problems occur when releases migrate off-site, contaminating public and private drinking water supplies, wetlands, and other sensitive ecosystems. These sites are the program's highest priority. Efforts to help tribal governments develop hazardous waste management and municipal solid waste programs will expand in 1999. The Agency requests $6,433,600 for RCRA tribal activities. Intergovernmental information and resource sharing will be facilitated through a range of mechanisms including forums, university-level courses, professional training, Internet sites, and circuit riders in partnership with other Federal agencies, states, local communities and of course the tribes themselves.

Preventing Releases by Proper Facility Management

The 1999 Annual Plan is based on $139,531,000 and 686 workyears to reach its objective for preventing releases by proper facility management.

Dangerous releases to the environment are responsible for causing illnesses to the public, especially to sensitive populations such as children, the elderly and individuals with chronic diseases. Dangerous releases to the environment are also responsible for polluting soil, air, and groundwater which may lead to costly cleanups and environmental mitigation. In 1999, the RCRA program will focus on reducing risks of exposures to hazardous wastes using a combination of regulations, permits and voluntary standards and programs. EPA will continue to concentrate on minimizing the quantity and toxicity of waste, reducing administrative burdens on states and industry, and preventing accidental releases of hazardous substances.

The Underground Storage Tanks program will continue to focus on promoting and enforcing compliance with regulatory requirements aimed at preventing and detecting UST releases. EPA will also approve additional states to operate their own programs in lieu of the Federal program. Currently 24 states and the District of Columbia have state program approval.

As the Oil Prevention Program implements a comprehensive approach to integrate prevention, preparedness, and response, efforts will be made to reduce the risk of oil spills from facilities which pose human health, ecological, and economic risks. In 1999, the number of facilities brought into compliance with the Spill Prevention, Control, and Countermeasures (SPCC) provisions of the oil prevention regulation will be doubled. Also in 1999, the Agency will increase assistance to Indian Tribes by identifying problems and developing and improving response plans in the event of oil spills.

The Agency will also, using information from facility Risk Management Plans (RMPs), develop a chemical risk information system in coordination with industry to prevent chemical releases into the environment. EPA will also concentrate on implementing the RMP program at the state level. The Agency assists Local Emergency Planning Committees (LEPCs) by facilitating access and use of the RMP information database and provide technical assistance grants to develop accident preparedness and prevention programs.

Responding to Emergencies

The 1999 Annual Plan is based on $20,339,400 and 124 workyears for promoting effective response to chemical and radiological accidents, terrorist events and oil spills.

Hazardous chemical releases have caused billions of dollars in property damage, serious damage to the environment and hundreds of deaths and injuries during the past 30 years. In 1999, EPA will support efforts to prevent, prepare for and respond to chemical accidents and terrorist events involving chemical releases by providing guidance and assistance to state and local governments and industry; assisting in removing immediate health threats; and providing information on chemical hazards and risks to state and communities. The Agency is currently performing many of its investigative functions concerning chemical accidents. The continuation of these activities is uncertain with the recent establishment of a Chemical Safety and Hazard Investigation Board.

Each year over 12,000 oil spills occur, with well over half of them being in inland waters (EPA's area of responsibility). Working with state and local governments and industry, EPA is ensuring the effective and immediate removal of discharges (or substantial threat of a discharge) of oil. The Agency will also continue to work with state and local governments on oil spill prevention, preparedness, and enforcement activities. Of particular concern in 1999 is improving the area contingency plans, especially those for environmentally and economically important areas. These plans integrate prevention, preparedness, and response by coordinating regional resources with logistics. The Agency requests $3,820,900 for contingency planning and improving the quantity and quality of data used, resulting in a more effective and efficient response to oil spills.

FY 1999 Annual Performance Goals

The resources requested in this budget will enable the Agency to meet a number of important goals, the most significant of which include:

- Accelerate the pace of Superfund cleanups by completing 136 cleanups in 1999 and achieving 900 construction completions by the end of calendar year 2001.

- 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.

- Obtain PRP commitments for 70% of the work conducted at new construction starts at non-Federal facility sites on the NPL and emphasize fairness in the settlement process.

- Fund brownfield site assessments in 100 additional communities, implement 10 brownfield showcase communities and sign agreements with 100 communities to capitalize revolving loan funds.

- Complete 22,000 Leaking Underground Storage Tank (LUST) cleanups.

- Approve 2,080 hazardous waste management facilities' (62 percent of existing in the nation) controls in place to prevent dangerous releases to air, soil, and groundwater.

- Approve 153 hazardous waste management facilities (to approve a cumulative 62 percent of such existing facilities in the nation) to prevent dangerous releases to air, soil, and groundwater.

- Control human exposure to toxins at 127 RCRA sites (to address a cumulative of 277 RCRA sites), and control groundwater releases at 69 high priority RCRA sites (to address a cumulative of 144 such sites).

- Bring 400 new facilities into compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution regulations.

- Demonstrate and verify the performance of 18 innovative technologies by 2001, emphasizing remediation and characterization of groundwater and soils.

- Complete prototype model for assessing cumulative exposure-risk assessment integrating the environmental impact of multiple chemicals through multiple media and pathways.

Key Performance Measures	**1998**	**1999**
Section 106 Civil Actions	40 Agreements	38 Agreements
Orphan Share Offers	30 Settlements	36 Settlements
De Minimis Settlements	23 Settlements	23 Settlements
Address Cost Recovery at all NPL & Non-NPL sites w/tot. past costs = or > $200K	100% Cases	100% Cases

Key Performance Measures	1998	1999
Remedial Admin. Orders	20 Orders	19 Orders
Human Exposures to Toxins Controlled at High-Priority RCRA Sites	150 facilities	127 facilities
Toxic Releases to Groundwater Controlled at High-Priority RCRA Sites	75 facilities	69 facilities
LUST Cleanups Completed	20000 USTs	22000 USTs
Construction Completions	87 completions	136 completions
Coop. Agreements for Site Assessment	100 agreements	100 agreements
Showcase Communities	10 communities	10 communities
Coop. Agrmnts-Capitalize Rev. Loans	100 Coop. Agrs.	100 coop. agrs.
Complete needs assessment and research plan for beach contamination from pathogens. Conduct peer re		30-SEP-99
Facilities in SPCC Compliance	200 facilities	400 facilities
Final RCRA Permits or Other Controls	1927 permits	153 determinations
HWIR screening model Systems Design for Comprehsive Modeling Franework		30-SEP-99
Beta Version for Comprehensive Modeling System		30-SEP-99

Key Performance Measure Verification

CERLA Information System

EPA is taking steps to ensure that all accountability data are rigorously validated. CERCLIS is the official database used by Superfund and Oil Spill programs to help track and store national site information. CERCLIS was

developed in accordance with Agency Life Cycle Guidance which establishes criteria for software development, and it adheres to Agency platform, software and hardware standards.

The Superfund program has defined the various roles and responsibilities of key individuals who are responsible for development, operation and maintenance of CERCLIS. The headquarters sponsor of the data is responsible for (1) identifying the data elements needed, (2) defining the data elements, and (3) informing the appropriate people that the information needs to be collected and loaded into CERCLIS. The regional person who owns the data (e.g., Superfund remedial project manager) is responsible for reviewing, verifying, and validating site data in CERCLIS. The Information Management/Program Measurement Center, under the Office of Emergency and Remedial Response (OERR, responsibility is to ensure: (1) there is a data element with an accurate definition for all data; (2) the data element is accessible to searches and can be retrieved for reports; (3) the source for the data is referenced in the system; (4) the data is accurately entered or converted into the system; (5) data from other sources is considered draft until it has been checked against its source data, and is found acceptable; and (6) data integrity is maintained in all system applications and reports.

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 users such as *regional IMCs*, program personnel, report owners and data input personnel; (4) Quality Assurance (QA) Unit Testing --Unit testing is an extensive QA check made by the report programmer to assure that its product is producing accurate data that conforms to the 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.

For enforcement measures, EPA will use the end-of-year frozen CERCLIS database 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 of the data. In addition, EPA will track certain information manually until incorporation into CERCLIS. This data will also be subject to the same quality assurance requirements as the information tracked through the CERCLIS database.

Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management

as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants; the Agency is also working with various professional societies to identify research issues.

Chief among the Agency's validation and verification mechanisms is a rigorous peer review process. In a July 1997 memorandum, EPA's Deputy Administrator states that peer review will be expanded "to include both the major work products provided in the past and...all scientific and technical products supporting Agency decisions..." This expanded and strengthened focus on peer review will help ensure that the performance measures listed here are verified and validated by external organizations. The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB)and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will even examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

This research program is consistent with ORD's mission and the enumerated goals to (1) Develop Scientifically Sound Risk Assessment Approaches; (2) Integrate Human and Ecological Assessment Methods; (3) Provide Cost-Effective Risk Prevention/Management Approaches; (4) Provide Credible Methods, Models and Guidance; and (6) Provide Environmental Leadership & Develop Partnerships. The science conducted in this area and will support all programs conducting multimedia, multi pathway exposure and risk assessments and will provide data to assist state and local regulatory officials to make informed decisions on the most effective way to reduce releases from waste generating facilities.

Resource Conservation Recovery Information System (RCRIS)

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 a Corrective Action Module which tracks the status of facilities for which potential needs for corrective actions have been identified.

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 the databases, manage data quality control. RCRIS has a suite of user and system documentation which describes the overall administration of the data collection and management activities. Training on use of the systems is provided on a regular basis, usually annually depending on the nature of system changes and user needs.

RCRA data verification procedures ensure that the valid data collected at the field or facility level are not corrupted or confused before they are presented, aggregated, and analyzed at the Federal level. Environmental monitoring data (such as measures of combustion facility emissions) will meet standard Quality Assurance/Quality Control (QA/QC) procedures for the RCRA program, as documented in the Office of Solid Waste Quality Assurance Management Plan and the Guidebook for QA/QC Procedure for Submission of Data for the LDR Program. These procedures, in part, define requirements for sampling and analysis to assure data quality. Another common method of verification involves examination of data collected and evaluating the relationship of those data to other data collected under similar circumstances.

Data verification procedures must ensure that the valid data collected at the field or facility level are not corrupted or confused before they are presented, aggregated, and analyzed at the Federal level. To the extent possible, the Agency conducts data verification through comparing results of data collection with similar collections or repetition. Correlation of results is a strong mechanism for data verification.

Because the RCRA statute provides for delegation of program implementation to the states, the majority of data for the RCRA information system (RCRIS) and the Biennial Reporting System (BRS), originates with and is received from the states. In addition the system architectures provide states with the ability to use software other than the national software managed by EPA for their data management activities provided that they supply the mandatory data to EPA in the required quality and format. The Agency consolidate data from the states which is then used to construct the national databases used for program oversight and public information.

The national RCRA software provides a range of functions to ensure data quality. Both systems employ on-line data validation checks (e.g., range limits, mandatory data entry for required elements before saving of a record) to assure data type integrity as well as batch edits (performed when data is extracted and consolidated) to enforce program rules requiring associated consistency across data components for which on-line edits are impracticable or inappropriate. Beyond the system enforced data quality controls, states and regions who implement the program perform data validation reviews to ensure that the data properly inventories the essential program activities and is programmatically

correct. During periodic program reviews, EPA headquarters also confirms the timeliness and accuracy of key data elements which support national program status reporting. Training on use of the systems is provided on a regular basis, usually annually, depending on the nature of system changes and user needs.

Non-hazardous waste management is delegated to the states. Federal guidance is provided, but no actual federal program implementation exists. For this reason, individual states collect and verify data on waste management practices for Industrial D and municipal wastes in accordance with local needs. The Agency receives aggregate data more indirectly than in the case of hazardous waste, through reports, studies, or statistical sampling rather than a national data system.

Risk Management Plans

Facilities will be required to submit information on the chemical risks in their facilities and how they manage those risks (Risk Management Plans) in 1999. This information will be placed into a database accessible to Federal, state, and local officials as well as the public. The information will be verified through regional and state facility audits and reports. LEPCs will be contacted periodically to verify risk reduced in their community. ERNS database will be used to confirm releases reported in RMPs.

States and LEPCs will be surveyed to determine the extension and current status of their chemical emergency preparedness and prevention program. A database will be kept on the status of States which have taken the RMP program. Regions and headquarters will routinely enter information on the status of each states effort to manage the RMP program. Regions will ensure quality of the data through quarterly reviews of the states and random checks of LEPCs.

Statutory Authority

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601-9675)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901-6992k)

Clean Water Act (CWA) (33 U.S.C. 1251-1387)Section 311

Oil Pollution Act (OPA) (33 U.S.C. 2701-2761)

Energy Policy Act of 1992

Waste Isolation Pilot Project

Clean Air Act (CAA) (42 U.S.C. 7601-7671q)

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 U.S.C. 11001-11050)

Environmental Protection Agency

1999 Annual Plan Request to Congress

Reduction of Global and Cross-Border Environmental Risks

Strategic Goal: The United States will lead other nations in successful, multilateral efforts to reduce significant risks to human health and ecosystems from climate change, stratospheric ozone depletion, and other hazards of international concern.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Reduction of Global and Cross-border Environmental Risks	**$335,952.1**	**$236,144.4**	**$395,960.5**
Obj. 01 Reduce Transboundary Threats: Shared North American Ecosystems	$122,113.7	$99,730.2	$122,172.8
Obj. 02 Climate Change	$175,299.7	$109,218.1	$230,644.0
Obj. 03 Stratospheric Ozone Depletion	$27,381.4	$17,321.8	$26,914.3
Obj. 04 Protect Public Health and Ecosystems From Persistent Toxics	$4,155.0	$4,250.8	$6,873.7
Obj. 05 Prevent Degradation of the Marine and Polar Environments	$1,318.2	$1,307.7	$1,397.5
Obj. 06 Achieve Cleaner and More Cost-Effective Practices	$5,684.1	$4,315.8	$7,958.2
Goal Total FTE	443.3	448.7	527.4

Strategic Objectives:

Objective #1: Reduce Transboundary Threats, Shared North American Ecosystems

By 2005, reduce transboundary threats to human health and shared ecosystems in North America consistent with our bilateral and multilateral treaty obligations in these areas, as well as our trust responsibility to tribes.

Objective #2: Climate Change. By 2000 and beyond, U.S. greenhouse gas emissions will be reduced to levels consistent with international commitments agreed upon under the Framework Convention on Climate Change, building on initial efforts under the Climate Change Action Plan.

Objective #3: Stratospheric Ozone Depletion. By 2005, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery.

Objective #4: Protect Public Health and Ecosystems From Persistent Toxics. By 2005, reduce the risks to U.S. human health and ecosystems from selected toxics that circulate in the environment at global and regional scales, consistent with international obligations.

Objective #5: Prevent Degradation of the Marine and Polar Environments. By 2005, the United States will prevent significant degradation of the marine and polar environments, consistent with U.S. obligations under relevant international agreements.

Objective #6: Achieve Cleaner and More Cost-Effective Practices. By 2005, increase the application of cleaner and more cost-effective environmental practices and technologies in the U.S. and abroad through international cooperation.

Programs and Activities:

Ecosystems and transboundary pollutants do not respect international boundaries. As a result, unilateral domestic actions of the U.S. are inadequate to achieve some of EPA's most important environmental goals. Reduction of global and cross-border environmental risk is important because of the significant problems that originate in other countries and may significantly impact U.S. investments in environmental protection. Achieving our environmental goals requires us to work with other countries to address external sources of pollution impacting human health and the environment of our nation. Conversely, the U.S. also holds itself responsible for preventing or minimizing the impacts of transboundary pollution originating here.

Efforts under this goal demonstrate EPA's continued leadership to build international cooperation and technical capacity that are essential to prevent harm to the global environment and ecosystems that we share with other nations. A coordinated international response is needed to confront the climate change threat, depletion of the stratospheric ozone layer, transboundary circulation of toxics, and other environmental issues significant to the interests of the United States. Continued leadership by the U.S. and EPA is necessary to successfully address these issues in a manner that provides efficient and sustainable long-term solutions.

The Annual Plan is based on $ 395,960,500 and 527.4 total workyears for the Reduction of Global and Cross-Border Environmental Risks goal, an increase of $ 159,816,100 and 78.7 workyears over 1998. In order to maintain U.S. leadership role in this area, EPA will increase its activities to address Climate Change by

focusing on efforts to achieve stabilization of greenhouse gas concentrations in the atmosphere, as well as focusing on minimizing the global impacts of greenhouse gas emissions originating in the U.S. In addition, EPA's activities will include programs that reduce persistent organic pollutants and selected metals that circulate in the environment at global and regional scales.

HIGHLIGHTS:

Reduce Transboundary Threats: U.S.-Mexico Border

The 1999 Annual Plan is based on $108,010,400 and 23.1 total workyears, of which $100 million will be direct federal grants, to reduce transboundary threats to human health and shared ecosystems along the U.S.-Mexico border.

Along the 2,000 mile U.S.-Mexico border, communities live side-by-side, sharing the benefits of rapid economic growth and the subsequent environmental problems. Today, there are over 11 million border residents, a population that has doubled in the last 15 years. The effects of urban and industrial growth have contributed to the problems of inadequate environmental infrastructure. In the Mexico border area, programs are designed to 1) improve air quality, 2) provide wastewater and drinking water services to underserved communities, 3) manage chemical accidents, 4) support pollution prevention programs that will over the long term reduce the adverse health and environmental effects of toxic pollution, and 5) reduce and effectively manage hazardous and solid wastes.

The Agency will also continue to cooperate with its Mexican counterpart agencies to implement the provisions of the LaPaz agreement and the Border XXI Framework Document which provides a long term strategy to improve public health and the environmental and essential natural resources in the border.

Climate Change

The 1999 Annual Plan is based on $230,644,000 and 331.1 total workyears for Climate Change, of which $205,407,600 and 251.6 total workyears are for the Climate Change Technology Initiative.

There is scientific consensus that global change threatens human health and the environment; EPA must address this problem to reduce adverse environmental impacts. In 1997, the framework developed under the Kyoto Protocol established significant targets for greenhouse gas reductions. The agreements reached in Kyoto provide an important opportunity to achieve meaningful reductions in greenhouse gases with an environmentally sound and economically strong strategy. EPA will play an integral role in the President's Plan under the Climate Change Technology Initiative (CCTI). For several years, EPA has been building successful partnerships to reduce greenhouse gas emissions with businesses and other organizations in all sectors of the economy. Many of these programs focus on the deployment of existing, proven technologies that reduce emissions but are underutilized. These partnerships will continue to be the foundation for achieving greenhouse gas reductions beyond 2000.

Under CCTI, EPA will expand its effort in each sector of the economy in order to meet the targeted emissions reductions that protect the environment

while promoting economic growth. In 1999, there are key areas where EPA is expanding its effort. These include: 1) Industry Initiatives - EPA will consult with key industries to develop greenhouse gas reduction strategies, promote the deployment of clean technologies, and build a program that credits industry for early action; 2) Transportation Initiatives - EPA will accelerate its efforts under the Partnership for a New Generation of Vehicles (PNGV). PNGV will develop technology for delivery and long-haul trucks that achieve significant increases in fuel economy, as well as, meeting stringent emission targets; 3) Buildings Initiatives - promote GHG reduction and improve energy performance of facilities by increasing awareness of energy efficient technology that is applicable for both residential and commercial buildings; and 4) Domestic and International Outreach to State and local entities to integrate Climate Change into programs and policies and engage developing countries in the implementation of Climate Change protocols.

Stratospheric Ozone Depletion

The 1999 Annual Plan is based on $26,914,300 and 34.4 total workyears to work towards recovery of ozone concentrations in the stratosphere.

The United States has signed the Montreal Protocol on Substances that Deplete the Ozone Layer. Through this international treaty, EPA will implement and enforce rules controlling the production and emission of ozone depleting compounds, and identify safer alternatives and promote their use to curtail ozone depletion. In addition, EPA will continue to provide financial support to the Montreal Protocol Multilateral Fund.

EPA will focus on domestic and international production phaseout of five ozone-depleting chemicals and chemical classes, promote more intensive recycling programs in the U.S. and abroad, enhance environmental data development and public outreach aimed at informing the public of risks of overexposure to UV radiation, and encourage earlier voluntary phaseout of CFCs and HCFCs in developing countries.

Protect Public Health and Ecosystems from Persistent Toxics

The 1999 Annual Plan is based on $6,873,700 and 39.3 total workyears to reduce the risks to U.S. human health and ecosystems from selected toxics that circulate in the environment at global and regional scales, consistent with international obligations.

Selected toxics which can persist, bioaccumulate and move long distances pose serious risks to human health and the ecosystem in the U.S., not to mention in remote regions where the substances may not be produced or used. The actions of individual nations to control the adverse effects of these persistent bioaccumulative toxics (PBTs) often are insufficient because of the long-range transport of such substances. Thus, it takes coordinated international action to reduce the risks posed by PBTs globally, let alone in the U.S.

As part of the Agency-wide, multi-media collaborative effort to reduce risks associated with priority PBTs, the Agency will work to reduce the risks

associated with priority PBTs through the Binational Strategy, the Commission for Environmental Cooperation, the Persistent Organic Pollutants international negotiations, and further national prioritization of chemicals for coordinated reduction strategies.

Achieve Cleaner and More Cost-Effective Practices

The 1999 Annual Plan is based on $ 7,958,200 and 37.6 total workyears to increase the application of cleaner and more cost-effective environmental practices and technologies in the U.S. and abroad through international cooperation.

As part of the Agency's international technology and technical assistance programs, EPA will provide access to microbiologically safe drinking water and the protection of drinking water sources in developing nations. This priority is consistent with the Administrator's interest in improving the environmental health of children, who are most vulnerable to water-borne diseases. In 1999, EPA proposes the "Ensuring Children's Health through Microbiologically Safe Drinking Water and Adequate Sanitation" initiative. The specific focus area in this initiative will be the improvement of children's health in less developed countries through provision of safe drinking water and adequate sanitation. The initiative will include environmental technology transfer and environmental management capacity building components.

FY 1999 Annual Performance Goals:

The resources requested in this budget will enable the Agency to meet a number of important performance goals in 1999. The most significant of these include:

- Sixteen additional water/wastewater projects along the Mexican border will be certified for design-construction.

- As part of the President's Climate Change Technology Initiative, reduce U.S. greenhouse gas emissions in total by 40 million metric ton carbon equivalent through partnerships with businesses, schools, state and local governments and other organizations.

- Reduce U.S. energy consumption by 45 billion kilowatts.

- Conduct preliminary assessment of consequences of climate change at three geographic locations (mid-Atlantic, Gulf Coast, and Upper Great Lakes).

- Ensure that domestic consumption of class II hydrochlorofluorocarbons (HCFCs) will be restricted to below 208,400 metric tons and domestic exempted production and import of newly produced class I CFCs and halons will be restricted to below 130,000 metric tons.

- Obtain international agreement on criteria for selecting Persistent Organic Pollutants (POPs) to be covered in a new global POPs treaty, and

on capacity building activities to support the convention's implementation.

- Deliver 30 international training modules; implement 6 technical assistance or technology dissemination projects; implement 5 cooperative policy development projects; and disseminate information products on U.S. environmental technologies and techniques to 2,500 foreign customers.

Key Performance Measures	1998	1999
Projects certified for design-construction along the Mexican Border	16 Projects	16 Projects
Green Programs - GHG Reductions	6.1 MMTCE	9.3 MMTCE
Green Programs - Annual Energy Savings	32 Billion kWh	47 Billion kWh
Methane Programs - GHG Reductions	5 MMTCE	14 MMTCE
Methane Programs - Methane Savings	1 Teragram	2.5 Teragram
HFC/PFC Programs - GHG Reductions	8 MMTCE	15 MMTCE
Reg. scale wkshps at Baton Rouge, LA and Ann Arbor, MI. Problem formulation wkshps in the Mid-Atlan		30-SEP-99
Preliminary assessment of regional scale consequences of climate change at three geographic location		30-SEP-99
Domestic Consumption of Class II HCFCs	<208,400 MTs	<208,400 MTs
Domestic Exempted Production and Import of Newly Produced Class I CFC s and Halons	<130,000 MTs	<130,000 MTs
Number of commitments to Pb phaseout	5 countries	4 countries
Agreement on USG selection criteria proposal		1 negotiations

Key Performance Measures	1998	1999
Number of training modules delivered	25 modules	5 modules
Number of tech assistance or tech dissemination projects carried-out	5 projects	6 projects
Number of info products disseminated to foreign customers	2000 products	2500 products

Key Performance Measures Verification

Many annual performance goals and measures in the Objectives within this Goal are the completion of explicit tasks (e.g. air monitoring stations fully functioning, Number of water projects certified for design/construction, number of border states using Haztrak system.) These measures will be verified as completed or, if incomplete, what percentage of the task remains outstanding. Verification of these measures does not involve any pollutant database analysis, but is a straight-forward determination of tasks completed and outstanding.

Great Lakes Program

Performance measures for the Great Lakes program are derived from open lake measurements taken by GLNPO and from annual programmatic analysis of activities pursuant to the Great Lakes Water Quality Agreement (GLWQA), the Binational Toxics Strategy, and the GLNPO programs for information management, sediments, and habitat. Individual projects which generate data are required to comply with the Agency's standards for quality assurance and control (QA/QC.) A QA/QC tracking system is in place to ensure that QA/QC requirements are part of all applicable GLNPO projects. GLNPO uses its annual planning process as a check on performance from indirect performance measures. Under the GLNPO structure, each of the GLNPO programs conducts an end of year review of its progress regarding identified measures and activities, draws conclusions, and makes recommendations to management regarding the subsequent year's activities and measures.

Energy Efficiency Measurement

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. These programs monitor and evaluate accomplishments based on extensive information from partnership programs. For example, the Green Lights partners provide detailed information on investments and energy savings from over fourteen thousand completed energy-efficiency projects (e.g., the annual kilowatt-hour savings from completed lighting upgrades). These standardized reports on energy efficiency projects can be easily translated into annual emission reductions by applying the appropriate emission factor (lbs/kWh) for each pollutant of concern. The voluntary programs continually use the information collected to improve the program's performance and more accurately assess its future potential.

Energy Information Agency

Another measure of progress for the voluntary programs is obtained by using the Voluntary Reporting of Greenhouse Gases Program developed by the Energy Information Agency under the 1992 Energy Policy which reports the results and achievements of individual companies. Through this program, companies submit reports directly to the Energy Information Agency which reviews them for accuracy and to ensure plausibility.

Federal Test Procedure, FTP

For measures related to miles per gallon, actual measurements are made using set test procedures, the FTP (Federal Test Procedure), which has been the standard test for these types of measurements since the mid-1970s.

Research

The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants; the Agency is also working with various professional societies on research issues.

Chief among the Agency's validation and verification mechanisms for research and development is a rigorous peer review process. In a July 1997 memorandum, EPA's Deputy Administrator states that peer review will be expanded "to include both the major work products provided in the past and...all scientific and technical products supporting Agency decisions..." This expanded and strengthened focus on peer review will help ensure that the performance measures listed here are verified and validated by external organizations. The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB) and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will even examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Atmospheric Data

The restriction of domestic exempted production and importation of newly produced class I CFCs, halons, methyl chloroform, carbon tetrachloride and HBFCs will be measured using atmospheric models and data provided by NASA, NOAA, the World Meteorological Organization, and the UNEP where available. Actual measurements of stratospheric ozone will be made by NASA's Upper Atmospheric Research Satellite and the Total Ozone Mapping Spectrometer, and also by the Solar Backscatter Ultraviolet Spectrometer(SBUV)-2 and Operational Vertical Sounder instruments on the NOAA Polar Orbiting Environmental Satellite and subsequent National Polar-orbiting Operational Environmental Satellite. Progress on the restriction of domestic consumption of methyl bromide and class II HCFCs will be tracked by monitoring industry reports of compliance with EPA's phaseout regulations. The Allowance Tracking System results are compiled and published in annual UNEP reports.

The progress of international implementation goals will be measured by tracking the number of countries receiving assistance, dollars allocated to each, and the expected reduction in ozone-depleting substances in assisted countries.

Statutory Authority

Clean Air Act Title VI (42 U.S.C. 7671-7671q)

CAA Title I, Parts A and D (42 U.S.C. 7401-7431, 7501-7515)

Clean Water Act (CWA) sections 112, 118 and 308 (33 U.S.C. 1318)

CWA (33 U.S.C. 1251-1387)]

Toxic Substances Control Act (TSCA) sections 4, 5, 6, 12, and 13 (15 U.S.C. 2603, 2604, 2605, 2611, 2612)

North American Agreement on Environmental Cooperation
Treaties:

- The Boundary Waters Treaty of 1909
- 1987 Great Lakes Water Quality Agreement
- 1997 Canada-U.S. Great Lakes Binational Toxics Strategy

Framework Convention on Climate Change

Global Climate Protection Act of 1987

Climate Change Research and Development Act of 1990

Resource Conservation and Recovery Act (RCRA) sections 3001-3006 and 3017 (42 U.S.C. 6921-6926, 6938)

Resource Conservation and Recovery Act (RCRA) sections 3002-3005 (42 U.S.C. 6922-6925)

1987 Montreal Protocol on Ozone Depleting Substances

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) sections 3,4,5,6,10,11,18,20,23,24,25,30 and 31 (7 U.S.C. 136a, 126a-1, 126c, 136d, 136h, 136i, 136p, 136r, 136u, 136v, 136w, 136w-5 and 136w-6)

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 11023)

U.S./Canada Agreements on Arctic Cooperation

1989 US/USSR Agreement on Pollution

1991 U.S./Canada Air Quality Agreement

1978 U.S./Canada Great Lakes Water Quality Agreement

World Trade Organization Agreements

North American Free Trade Agreement

North American Agreement on Environmental Cooperation (NAAEC)

U.S./ Mexico Agreement Establishing a Border Environmental Cooperation Commission and a North American Development Bank

1996 Habitat Agenda, paragraph 43bb

Marine Protection, Research and Sanctuaries Act of 1972 as amended

V.A., H.U.D., and Independent Agencies Appropriations Acts

Water Quality Act of 1987 section 510

1983 La Paz Agreement on U.S./ Mexico Border Region, Annex 2, Article 3

1989 U.S./ Mexico Agreement on Mexico Border

Treaties with Indian tribes

Border XXI

Ocean Dumping Act (33USC 1401-1445)

Convention on International Trade in Endangered Species

1972 London Convention on the Prevention of Marine Pollution by Dumping Waste and Other Matters

[other possible authorities, directives, obligations--Clean Water Act (33 U.S.C. 1251-1387)]

Environmental Protection Agency

1999 Annual Plan Request to Congress

Expansion of Americans' Right to Know About Their Environment

Strategic Goal: Easy access to a wealth of information about the state of their local environment will expand citizen involvement and give people tools to protect their families and their communities as they see fit. Increased information exchange between scientists, public health officials, businesses, citizens, and all levels of government will foster greater knowledge about the environment and what can be done to protect it.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Expansion of Americans' Right to Know About their Environment	**$156,730.7**	**$140,371.4**	**$159,087.8**
Obj. 01 Increase Quality/Quantity of Education, Outreach, Data Availability	$76,246.5	$72,202.0	$75,343.7
Obj. 02 Improve Public's Ability to Reduce Exposure	$51,493.5	$47,120.6	$51,875.5
Obj. 03 Enhance Ability to Protect Public Health	$28,990.7	$21,048.8	$31,868.6
Goal Total FTE	774.4	771.7	757.0

Strategic Objectives:

Objective 1: Increase Quality/Quantity of Education, Outreach, Data Availability. By 2005, EPA will improve the ability of the American public to participate in the protection of human health and the environment by increasing the quality and quantity of general environmental education, outreach and data availability programs, especially in disproportionally impacted and disadvantaged communities.

Objective #2: Improve Public's Ability to Reduce Exposure. By 2005, EPA will improve the ability of the public to reduce exposure to specific environmental and human health risks by making current, accurate substance-specific information widely and easily accessible.

Objective #3: Enhance Ability to Protect Public Health. By 2005, EPA will meet or exceed the Agency's customer service standards in providing sound environmental information to federal, state, local, and tribal partners to enhance their ability to protect human health and the environment.

Programs and Activities:

Providing all Americans with access to sound environmental information and informing and involving the public in our work are essential parts of a comprehensive approach to protecting the environment. All U.S. citizens have a "right to know" about the pollutants in their environment - including the condition of the air they breathe and the water they drink, as well as the health effects of the chemicals used in the food and products they buy. Increased information is especially valuable for minority, low-income, and Native American communities that suffer a disproportionate burden of health consequences from poor environmental conditions. As U.S. citizens, they need to receive adequate knowledge of and representation in public policy and environmental decision-making.

Access to environmental information enables American citizens to be involved and informed environmental decision makers. Through the dissemination of information, citizens are given the ability to create and promote lasting solutions to environmental problems. The relative severity of environmental risks, the opportunities for preventing pollution, and the uncertainties and complex trade-offs that underlie many environmental decisions need to be understood and addressed. Public awareness is critical to developing sustainable solutions that all stakeholders -- industry, agriculture, government, and the public will support and carry out.

The 1999 Annual Plan is based on $159,087,800 and 757.0 total workyears for this goal, an increase of $18,716,400 and a decrease of 14.7 workyears over 1998 Enacted. The Agency will use a variety of strategies to accomplish this goal. Critical to the success of these strategies will be cooperation and collaboration with all potential partners, including Federal, state, tribal and local governments, education institutions, nonprofit organizations, and businesses. In 1999, the Agency will expand Americans' "right to know" by improving the quality and increasing the quantity of general environmental education outreach and data availability programs, and improving electronic access to information.

HIGHLIGHTS:

Expanding Communities' Right-to-Know

The 1999 Annual Plan is based on $51,875,500 and 255.1 total workyears, an increase of $4,754,900 over 1998 Enacted, to improve the public's ability to reduce exposure. Under the Emergency Planning and Community Right-to-Know Act (EPCRA), EPA is required to provide the public with valuable chemical release data through the Toxic Release Inventory (TRI). EPA has recently expanded the TRI by adding seven new industry sectors and by nearly doubling the number of reportable chemicals. The goal of these actions is to provide a broader picture of industrial releases and transfers so the public will have more information about potential risks.

In 1999, EPA will perform quality analyses of at least two additional industries reporting to TRI and process 110,000 TRI Form R's as part of the operation. EPA will finalize the persistent, bioaccumulative, and toxics (PBT) rule to add more chemicals to the TRI. To ensure that the public has information on chemicals that may be highly toxic but are manufactured, processed, or used in lower volumes, the Agency will lower the thresholds for reporting PBTs. The Agency has expanded the TRI effort and will propose a

chemical use reporting rule. Finally, to ensure the efficacy of this information, five focus groups will be conducted to determine how to better serve those who would use TRI information.

The Agency aggressively seeks to integrate all relevant sources of data and information to support comprehensive approaches to environmental protection that include community-based environmental protection (CBEP) and ecosystem protection. This information is to be coordinated and integrated across the Agency to provide comprehensive views of environmental data based on increased availability and accuracy of locational and spatial data, the establishment of the central structure required to support data standards, and a registry of environmental data.

Increasing Public Access

The 1999 Annual Plan is based on $67,487,300 and 302.9 total workyears, a $3,150,200 increase over 1998 Enacted, to enhance American's access to environmental information. In 1999, the Agency will provide environmental information through a variety of initiatives.

The Agency's One Stop Reporting Initiative will provide one-stop access to and reporting of environmental information. This initiative focuses on streamlining reporting by regulators and improving the availability of environmental performance data for the public and the educational community. Information such as databases, press releases, phone numbers, fact sheets, and regulations will be made available on the World-Wide Web.

In 1999, the Agency's Public Access Strategic Initiatives will provide the necessary infrastructure to integrate EPA data electronically so that the public has access to information on environmental requirements and regulations, and is provided an opportunity to comment. Under the Enforcement and Compliance Information (ECI) initiative, the Agency will provide the public access to user-friendly information on enforcement and compliance data policies, guidance and interpretations. This initiative will improve citizens' and small businesses' access to, and their understanding of, compliance and enforcement information.

Lessons learned from the Regulatory Information Inventory and Team Evaluation Project (RIITE) will be made available nationally, providing a toolbox of successful approaches, establishing a web site of forms, and testing the use of web sites for submission of compliance data. Collection, analysis, and use of data are at the heart of effective environmental management. Electronic reporting for many of the Agency's core compliance reports will be available; e.g., municipal water system laboratory reports, some transactions involving the hazardous waste manifest, and reporting of annual emissions inventories in some delegated states. Additionally, EPA is now developing a "second generation" approach on Internet/Web-based forms, which will be much more appropriate for small companies and for individuals.

The Agency will ensure that small business and other small entities are full participants in Agency regulatory activities, especially regulatory development and compliance assistance. Under the requirements of the Small Business Regulatory Enforcement Fairness Act of 1996, the Agency provides small entities the opportunity to participate in the development of proposed rules subject to the Regulatory Flexibility Act. One of the Agency keys for successful small business participation in the environmental decision making process is a well informed and educated small business community. A focal point of the Agency's small business information activities is EPA's Office of Small Business Ombudsman (SBO). This office coordinates over 12,000 small business

inquiries each year, supports an Internet Web page for small business, and coordinates agency regional small business activities. In addition, the SBO provides oversight for and reports to Congress on small business compliance activities under §507 of the Clean Air Act. Through this process the Agency and the small business community stay abreast of each other's needs and concerns.

The creation of the Center for Environmental Information and Statistics (CEIS) will play a crucial role in our efforts to improve delivery of environmental information to the public and ensure a cooperative and collaborative approach to environmental decision making. The CEIS will provide a "Master Atlas" that integrates various mapping software and provides multimedia data on environmental quality, status and trends. CEIS will also have a web site for visitors to identify and contact Agency representatives so that they may discuss the environmental data used and the Agency's interpretation. The CEIS will also serve as the Agency's source of internal information on environmental quality, status and trends - informing individuals, communities, businesses and the public of environmental information which will be easily accessible, objective, and reliable.

Ensuring Environmental Justice

The 1999 Annual Plan is based on $7,856,400 and 45.7 total workyears to support environmental justice. In 1999, the Agency will work to ensure that minority, low-income, and Native American communities will be able to meaningfully participate in environmental decision-making and protect themselves from undue risks. The Agency will hold National Environmental Justice Advisory Council meetings to advise the Administrator on Environmental Justice concerns.

The Agency will continue to develop the Environmental Justice program to ensure that all people, regardless of race, national origin, or income, are protected from a disproportionate impact of environmental hazards. Environmental programs do not always equally benefit all communities or all populations. To remedy this problem, the Agency will raise the awareness and understanding of environmental issues affecting high risk communities by holding at least one Enforcement Roundtable in an affected community. To facilitate community involvement, EPA will provide grants to minority and low income communities to address Environmental Justice issues.

Through the Interagency Workgroup meetings and joint projects, EPA will work to ensure that all Federal agencies comply with the Executive Order on Environmental Justice and incorporate environmental justice concerns into program planning and implementation. EPA will also integrate Environmental Justice into its own program operations, Regional Memoranda of Agreement, and state Performance Partnership Agreements.

Tools for Enhancing the Ability to Protect Human Health

The 1999 Annual Plan is based on $31,868,600 and 153.3 total workyears, an increase of $10,819,800 over 1998 Enacted, to enhance American's ability to protect human health. In pursuing this objective, the Agency ensures that all Americans have easy access to sound environmental information. Providing this information will allow citizens to expand their involvement in protecting the environment.

The President's Environmental Monitoring for Public Access and Community Tracking (EMPACT) initiative is a cross-agency program established to provide the public with information regarding local environmental conditions (e.g. toxic pollutants, water and air quality). This program will continue to report and

provide access to selected communities throughout the nation. EMPACT will provide at least 75 of the largest U.S. metropolitan areas with access to information regarding the quality of their local environments, and relevant scientific and technical tools to interpret and evaluate potential impacts and risks to these environments. The Agency will expand EMPACT's effectiveness by improving technological approaches to data management and communications and by improving its discourse with the public regarding environmental risks.

Citizen involvement in protecting the environment will also be expanded through the Integrated Risk Information System (IRIS). IRIS is an EPA database of Agency consensus health information on environmental contaminants which is used extensively by EPA Program Offices and Regions where consistent, reliable toxicity information is needed for credible risk assessments. Each of the 535 IRIS "files" contains chemical-specific information on cancer and noncancer health effects. Each IRIS file summarizes a more detailed health assessment or support document. IRIS is heavily used for risk assessments and other health evaluations across the Agency. The most frequent users are Regional and State risk assessors, but use has grown to include all levels of government, as well as the public and private sectors, both nationally and internationally.

FY 1999 Annual Performance Goals:

The resources requested in this budget will enable the Agency to meet a number of important performance goals in 1999. The most significant of these include:

- Add 10 state participants to the One-Stop Reporting Program (Total=30).
- Provide over 100 grants to assist communities with understanding and addressing Environmental Justice issues.
- Increase compliance with right to know reporting requirements by conducting 1300 inspections and undertaking 200 enforcement actions.
- 3,300 large and very large community water systems (serving approximately 185 million Americans) will issue annual consumer confidence reports containing information about the systems' source water and the level of contaminants in the drinking water.
- Process 110,000 facility chemical release reports, publish the TRI Data Release Report and provide improved information to the public about TRI chemicals, enhancing community right to know and efficiently processing information from industry.
- By 1999, EPA will complete 5-7 monitoring pilot projects in EMPACT cities, and implement timely and high quality environmental monitoring technology in 5-7 EMPACT cities.

Key Performance Measures	1998	1999
EJ Community Grants	100 Grants	100 Grants
Specialized Asst. & Tng	100 Courses	100 Courses

Key Performance Measures	1998	1999
Section 313 Inspections	600 Inspections	600 Inspections
EPCRA APO Complaints	200 APO Complaints	200 APO Complaints
Other EPCRA Inspections	700 Inspections	700 Inspections
TRI Public Data Release	1996 Rept. Published	1997 Rept. Published
Form R's Processed	110,000 Forms	110,000 Forms
Community water systems that will comply with the regulation to publish consumer confidence reports		3,300 Lg CWSs
Award grants to establish research for EMPACT	5 - 7 grants	12 - 16 grants
# of States With One-Stop Reporting	23	30

Key Performance Measures Verification

NACEPT and NAFTA Reports

Staff within the Office of Cooperative Environmental Management are responsible for publishing the NACEPT and NAFTA reports. At the end of the year, they will identify the number of reports issued by the NACEPT and NAFTA FACA committees.

Customer Service Survey

The Agency has attempted to develop measures which adequately reflect program goals and objectives. These measures emphasize quantifiable aspects of program processes, incorporating realistic program outputs and outcomes. The Agency recognizes the importance of verifying the validity of performance measures and indicators. Consequently, efforts are planned and currently underway to ensure that measures accurately reflect and support our assumptions. An important first step in this process has been the undertaking of a Customer Service survey to measure customer satisfaction. The results of this survey will provide us with a framework by which to validate and revise many of our assumptions. As the process evolves, the program output and outcome data provided will allow us to refine both our measures and our supporting information management system.

Index of Watershed Indicators

While the planned performance measure for this objective is output-oriented, the availability of refinements to the Index of Watershed Indicators will provide the Agency and the public significant opportunities to better understand the extent of the health of the nation's ecosystems. Working with a broad array of inter-governmental partners, we can assure the validity of the data presented in our comprehensive assessments by continually refining data layers that undergo frequent change and by ensuring that the entire system is updated and refreshed on a periodic basis. This will enable the establishment of a firm analytical footing for measuring progress in the future.

Outreach to Small Business

The success in improving the regulatory development process will be visible through the number of stakeholders participating in the development of Agency rulemaking through a variety of consensus-based forums (i.e., negotiated rulemakings and public advisory committees). Success in outreach to small business will be measured by identifying the number of these entities participating in regulatory development, using compliance guides, and requesting information and clarification of Agency rules, through the Small Business Ombudsman Homepage. Verification of CEIS performance will be determined by the integration of multi-media information and the quality of products available. Surveys will measure the user satisfaction with these activities.

Right-to-Know

Verification and validation continue to be important parts of the right-to-know program. Verification procedures are built into the data entry process both at the facility level and when the data are entered into the national database. Procedures internal to the reporting form check whether data entered are internally consistent. If this is not the case, an error message is generated. Once data are entered into the national database, data are compared to those previously submitted by a facility to determine whether large increases or decreases at the largest TRI facilities have occurred. In cases where there are large changes relative to previous reports submitted, facilities are called by staff engineers to verify the information.

Verification of progress for the right-to-know programs will include the development of pesticide information, dissemination of such information, the appearance on the Internet of pesticide-specific risk information, and development of maintenance tools and quality standards for all Internet-resident pesticide data.

TRI, the right-to-know program, generates data so that individuals will be informed about what occurs in their communities. Data collected and disseminated as part of TRI has been assembled and used by a wide variety of parties, including other Federal agencies, state and local governments, environmental, labor and community groups, and academics. In order to facilitate appropriate usage of the data, EPA publishes various analyses as part of the annual data release.

Envirofacts Warehouse Database

The Agency is enhancing the quality and presentation of enforcement and compliance assurance data on the Agency's Envirofacts Warehouse Database which is located on the World Wide Web. EPA is providing core enforcement program data - along with enhanced report capabilities - to assure greater access by the public.

Quality Management Plans

EPA will be developing and implementing detailed system specific Quality Management Plans for all systems we directly manage. These plans will include development of Data Quality Objectives (establishing measurable criteria for data quality); Quality Assurance Project Plans (determine how QA activities will be implemented through the system life cycle), and Standard Operating Procedures (to provide a consistent and routine process for assessing data quality measurements).

Enforcement and Compliance Information Initiative

Central to the ECI project is the development and adoption of data standards for compliance and enforcement information. The ECI plan includes developing and formalizing these data definitions through the EDR and making these standards available to encourage widespread adoption.

EPA's Enforcement and Compliance Information Initiative will re-engineer the Agency's multimedia compliance and enforcement data to increase public access and understanding and enhanced data quality to support EPA's mission. EPA will ensure that data is consistent across the Agency and give the public comprehensive compliance and enforcement data linked to demographic and risk information. EPA will construct a warehouse of key enforcement and compliance data with consistent, user-friendly interfaces.

Consumer Confidence Reports

Performance data regarding preparation of consumer confidence reports will be provided to EPA by the states through existing national databases or other means. States will collect the data from public water systems and will have chief responsibility for validating the information.

Comparative Risk Projects

Performance will be judged by the number of comparative risk projects completed and the number of environmental actions taken by state, local and tribal governments as a result of EPA's assistance.

Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants; the Agency

is also working with the National Research Council to identify emerging environmental issues for which we must begin planning the necessary research.

Chief among the Agency's validation and verification mechanisms is a rigorous peer review process. In a July 1997 memorandum, EPA's Deputy Administrator stated that peer review will be expanded "to include both the major work products provided in the past and...all scientific and technical products supporting Agency decisions" This expanded and strengthened focus on peer review will help ensure that the performance measures listed here are verified and validated by external organizations. The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB)and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will even examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

ORD Management Information System (OMIS)

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Statutory Authority

Clean Air Act (CAA) (42 U.S.C. 7601-7671q)

Clean Water Act section 308(CWA)(33 U.S.C. 1251- 1387)

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. 9601-9675) sections 104 and 106 (42 U.S.C. 6904 and 6906)

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 (42 U.S.C. 110001-11050) sections 325, and 326 (42 U.S.C. 11023, 11045, 11046)

Environmental Education Act

Federal Advisory Committee Act (FACA) (5 U.S.C. App.)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S.C. 136-136y) sections 3 and 10 (7 U.S.C. 136a and 136h)

Freedom of Information Act (FOIA) (5 U.S.C. 552)

Paperwork Reduction Act Amendment of 1995 (44 U.S.C. 3501-3520)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Resource Conservation and Recovery Act (RCRA) sections 3007, 3013, and 7003 (42 U.S.C. 6927, 6934, 6973)

Safe Drinking Water Act (SDWA) section 1445 (42 U.S.C. 300f-300j-26) section 1445 (42 U.S.C. 300j-4)

Toxic Substances Control Act (TSCA) section 14 (15 U.S.C. 2601-2692) section 14 (915 U.S.C. 2613)

North American Agreement on Environmental Cooperation

Federal Food, Drug, and Cosmetic Act

Environmental Protection Agency

1999 Annual Plan Request to Congress

Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems

Strategic Goal: An important aspect of the Agency's mission is to ensure a strong scientific foundation for the process of identifying public health and environmental issues and the approaches taken to address them. EPA's 1999 request continues to support this commitment. The programs proposed will allow EPA to develop and apply the best available science for addressing current and future environmental hazards, as well as new approaches toward improving environmental protection.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Sound Science, Improved Understanding of Env. Risk and Greater Innovation to Address Env. Problems	**$403,644.3**	**$404,721.2**	**$366,867.6**
Obj. 01 Research for Ecosystem Assessment and Restoration	$85,172.3	$100,712.5	$85,505.6
Obj. 02 Research for Human Health Risk Assessment	$52,631.1	$49,006.9	$47,618.5
Obj. 03 Emerging Risk Issues	$56,414.1	$47,744.4	$55,387.0
Obj. 04 Pollution Prevention and New Technology	$51,435.0	$69,919.2	$46,387.8
Obj. 05 Enable Research on Innovative Approaches to Current and Future Environmental Problems	$120,875.0	$86,927.7	$88,745.5
Obj. 06 Increase Use of Integrated, Holistic, Partnership Approaches	$18,049.3	$19,386.3	$16,810.5
Obj. 07 Increase Opportunities for Sector Based Approaches	$10,342.7	$16,478.4	$11,496.8
Obj. 08 Regional Enhancement of Ability to Quantify Environmental Outcomes	$6,306.5	$5,969.0	$7,995.1
Obj. 09 Science Advisory Board Peer Review	$2,418.3	$2,415.8	$2,586.7

Obj. 10 Incorporate Innovative Approaches to Environmental Management	$0.0	$6,161.0	$4,334.1
Goal Total FTE	1,384.3	1,165.0	1,256.3

Strategic Objectives:

Objective #1: Research for Ecosystem Assessment and Restoration. By 2008, provide the scientific understanding to measure, model, maintain and/or restore, at multiple scales, the integrity and sustainability of highly-valued ecosystems, now, and in the future.

Objective #2: Research for Human Health Risk Assessment. By 2008, improve the scientific basis to identify, characterize, assess, and manage environmental exposures that pose the greatest health risks to the American public by developing models and methodologies to integrate information about exposures and effects from multiple pathways.

Objective #3:Research to Detect Emerging Risk Issues. By 2008, establish capability and mechanisms within EPA to anticipate and identify environmental or other changes that may portend future risk, integrate futures planning into ongoing programs, and promote coordinated preparation for and response to change.

Objective #4:Pollution Prevention and New Technology for Environmental Protection. By 2006, develop and verify improved tools, methodologies, and technologies for modeling, measuring, characterizing, preventing, controlling, and cleaning up contaminants associated with high priority human health and environmental problems.

Objective #5: Enable Research on Innovative Approaches to Current and Future Environmental Problems. Provide services and capabilities, including appropriate equipment, expertise, and intramural support necessary to enable ORD to research innovative approaches to current and future environmental problems and improve understanding of environmental risks.

Objective #6:Increase Use of Integrated, Holistic, Partnership Approaches. By 2005, EPA will increase the number of places using integrated, holistic partnership approaches, such as community-based environmental protection (CBEP), and quantify their tangible and sustainable environmental results in places where EPA is directly involved.

Objective #7: Increase Opportunities for Sector Based Approaches. By 2005, EPA will increase the number of opportunities for and applications of sectors-based approaches to environmental management by 150 percent over 1996 levels.

Objective #8: Regional Enhancement of Ability to Quantify Environment.
By 2005, Regions will have demonstrated capability to monitor and measure environmental conditions in their Regions, compare the relative risk of health

and ecological problems, and assess the environmental effectiveness of management actions in priority geographic areas.

Objective #9: Science Advisory Board Peer Review. Conduct peer reviews and provide guidance on the science underlying Agency decisions.

Objective #10: Improve the Agency's Core Business Practices. Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection.

Programs and Activities:

Among EPA's highest research priorities is our Assessing Health Risks to Children research program to expand information on exposure, effects and risk assessment to address children's risk. This program will provide the data to strengthen Agency risk assessments for children, both in the near and long term. Two important efforts will produce much of this data, the Children's Health Risk Centers, and EPA's participation in studies in the National Health and Nutrition Examination Survey (NHANES) being conducted by the National Center for Health Statistics (NCHS).

We will increase our efforts in the Advanced Measurement Initiative (AMI). The focus of this program is to facilitate the application of technologies to enhance individual monitoring and measurement technologies, as well as to improve coordination of existing monitoring research and programs such as the mapping of waste sites, the development of ground water and surface water transport models and the characterization of soils and surface water vegetation quality and land use. AMI will develop working partnerships between technology developers, environmental policy makers, and environmental managers to ensure that advanced measurement technologies will meet the needs of EPA, the regulated community, and the public.

Additionally, we will strengthen our intramural research program through the allocation of additional workyears to recruit post-doctoral students to work at EPA laboratories.

The Agency has requested resources to support research within Goal 8, Sound Science, as well as Goals 1,2,4,5,6 and 7. The research program areas requested and described under Goal 8 represent research support that cuts across multiple goals.

The 1999 Annual Plan is based on $366,867,600 and 1,256.3 workyears for this goal, a change of -$37,853,600 and +91.3 FTE from 1998.

HIGHLIGHTS:

Ecosystem Protection Research

The Annual Plan is based on $85,505,600 and 378 workyears to support Ecosystems Protection research. The Environmental Monitoring and Assessment Program (EMAP) is one of the areas of investment in this objective.

The EMAP Program monitors the condition of the nation's ecological resources to evaluate the cumulative success of current policies and programs and to identify emerging problems before they become widespread or irreversible. Policies and programs that promote the sustainable use of resources and the preservation of ecosystem integrity must be based upon our scientific knowledge of the environment. EMAP seeks to improve the quality of that knowledge and to fill in any gaps in that knowledge through research in two primary areas: developing a better understanding of the mechanisms that control ecosystem structure and function and assessing the role of human actions in altering them; and, monitoring ecosystem characteristics and the human influences that change them over time.

Research to Improve Human Health Risk Assessment

The Annual Plan is based on $47,618,500 and 224 workyears to support Human Health Risk Assessment research. One key focus under this objective is in the area of Susceptible Subpopulations research.

Research activities are designed and implemented to provide insights into subpopulations that experience higher than normal exposures or have underlying biological factors that place them at greater risk. Research on susceptible populations assumes that certain segments of the population may not be afforded adequate consideration in current risk assessment practices and/or sufficient protection under ensuing risk management decisions. Efforts associated with this research activity will evaluate the adequacy of current approaches to identify, characterize and explain the increased susceptibility of various subpopulations. This evaluation will subsequently direct the evolution of improved tools and approaches to assess risk to these populations. A unique dimension of these efforts will be the incorporation of risk management research as these key parameters and populations are defined (exposure or biologic) so that appropriate intervention strategies can be developed and applied in parallel.

Emerging Risk Issues

The Annual Plan is based on $55,387,000 and 185 workyears to support Emerging Risk Issues research. The Endocrine Disruptors (ED) research program and the One Atmospheric research program are two key areas of investment within this objective.

The ED research program was established in response to growing scientific concern and public awareness regarding potential effects of environmental exposure to chemicals that interact with the endocrine system, causing adverse reproductive and other health and ecological effects. Research on endocrine

disruptors is being conducted according to priorities described in the Endocrine Disruptors Research Strategy, which is targeted at addressing the major uncertainties in this important area. In 1999, the ED research program will include integrated toxicology and exposure studies in ecological systems or human populations with suspected contamination or exposure to ED chemicals.

In 1999, the One Atmospheric research program is intended to assess and prevent risks from air pollution present in mixtures, the way people and ecosystems commonly experience it. EPA's focus will be on understanding the health and ecological effects associated with exposures to air pollutants in combination, without emphasis on a particular constituent, as well as the interplay of source emissions transformation, transport and fate, and the impacts of multi-pollutant controls to achieve balance in pollution control and avoid unnecessary costs. EPA will look at multiple scales and at all environments, thereby, focusing on the fact that all air pollution merges in one atmosphere.

Pollution Prevention and New Technologies

The Annual Plan is based on $46,387,800 and 188 workyears for pollution prevention and new technologies. Research on Advanced Measurement Initiative (AMI) and Environmental Technology Verification (ETV) are among the focus areas for this objective.

The purpose of AMI is to identify, evaluate, adapt, and apply new and emerging measurement and monitoring technologies to facilitate effective environmental risk management. Through AMI, EPA seeks to meet current environmental measurement requirements more effectively, to permit the collection of important environmental data that is not available using conventional monitoring methods, and to create opportunities for entirely new and innovative approaches to environmental measurement needs.

ETV was created to substantially accelerate the introduction of new environmental technologies into the domestic and international marketplace. This will be done by verifying the environmental performance characteristics of commercial-ready technology through the evaluation of objective and quality assured data, so that potential purchasers and permitters are provided with an independent and credible assessment of what they are buying and permitting. EPA's ETV research program began with a three to five year pilot phase to test a wide range of partner and procedural alternatives in various pilot areas, as well as the true market demand for the response to such a program. In 1999, the ETV program will transition from a pilot phase to establishment of the particular verification areas.

Enable Research on Innovative Approaches to Current and Future Environmental Problems

The Annual Plan is based on $88,745,500 and 97 workyears to Enable Research on Innovative Approaches to Current and Future Environmental Problems.

Resources requested in this objective provide the support required to accomplish the science and technology program at EPA. The effectiveness of the

support provided in this objective is integral to the achievement of numerous Agency goals, including Goals 1,2,4,5,6,7,and 8. The implementation of a strong science and engineering program requires necessary infrastructure support, operating expenses and other operational resources. The staff support activities include program review, health and safety, resource planning and execution, administrative and financial contract and grant management, equipment and facilities maintenance, and automated data processing.

FY 1999 Annual Performance Goals

The resources requested in this goal will enable the Agency to meet a number of performance goals in 1999. The most significant of these include:

- In 2001, complete and evaluate a multi-tiered ecological monitoring system for the Mid-Atlantic region and provide select land cover and aquatic indicators for measuring status and trends.
- In 1999, analyze existing monitoring data for acid deposition and UVB and implement a multiple site UVB monitoring system for measuring status and trends.
- In 1999, provide ecological risk assessment case studies for two watersheds, final guidelines for reporting ecological risk assessment and ecological risk assessment guidance and support.
- By 2008, develop and verify innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing risk assessment and management strategies and guidance.
- By 1999, a total of 50 Project XL projects will be in development or implementation, an increase of 15 over 1998.
- In 1999, produce first generation exposure models describing residential exposure to pesticides.
- In 1999, initiate Field Exposure Study of children to two endocrine disruptor chemicals.
- In 1999, complete and submit external review draft of the Air Quality Criteria Document for carbon monoxide.
- By 1999, improve computational efficiency of fine particulate model by 25%.

Key Performance Measures	1998	1999
Landscape Characterization		30-SEP-99
Landscape Indicator for Mid-Atlantic		30-SEP-99
Condition of Estuaries Indicators		30-SEP-99
Mid-Atlantic Region Stressor Profiles		30-SEP-99
Bioacc Model for Aquatic Ecosystems		30-SEP-99
Landscape Characterization		30-SEP-99
Measurement Methods & Technologies		30-SEP-99
UV radiation monitor installations		30-SEP-99
Ecological Risk Assessment Guidance		30-SEP-99
Ecological Risk Assessment Tools		30-SEP-99
Development and use of ecological information management system		30-SEP-99
First Generation Residential Exposure Models		30-SEP-99
In 1999 award up to 10 peer reviewed STAR research grants that support studies to quantify the expos		30-SEP-99
Carbon Monoxide AQCD/ERD		30-SEP-99
Protocol for field exposure study of children to 2 EDC's		30-SEP-99
High Performance Parallel Algorithms		30-SEP-99
Complete XL project agreements	35 projeects	50 agreements

Performance Measure Verification and Validation

Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and research. The Agency has implemented a risk-based research planning process to use risk assessment and risk management as principal priority-setting criteria. EPA conducts annual research program reviews to both evaluate the status and accomplishments of its research and determine planning priorities. To better draw upon the expertise of the environmental academic community, EPA created the Science to Achieve Results (STAR) program of peer-reviewed, mission-driven extramural grants; the Agency is also working with a number of professional societies and scientific organizations to identify emerging environmental issues for which we must begin planning the necessary research.

Chief among the Agency's validation and verification mechanisms is a rigorous peer review process. In a July 1997 memorandum, EPA's Deputy Administrator states that peer review will be expanded "to include both the major work products provided in the past and...all scientific and technical products supporting Agency decisions..." This expanded and strengthened focus on peer review will help ensure that the performance measures listed here are verified and validated by external organizations. The Agency utilizes peer review throughout the research planning and implementation process, both to ensure that planned research addresses critical knowledge issues within EPA's mission, and to assess the quality of scientific research plans, products, and proposals. This is accomplished through the use of independent entities such as the Science Advisory Board (SAB)and the Board of Scientific Councilors (BOSC). The BOSC, established under the Federal Advisory Committee Act, will even examine the way the Agency uses peer review, as well as the management of its research and development laboratories.

EPA's external research program undergoes extensive peer review. Proposals from the external scientific community are peer-reviewed and projects are then selected for funding through grants or cooperative agreements. In addition, Requests for Applications (RFAs) under the STAR program are often developed jointly with outside partners such as the National Science Foundation. In this way, EPA has developed a mechanism by which to check the quality and relevance of its research program.

ORD Management Information System (OMIS)

The Office of Research and Development Management Information System (OMIS) will be another accountability tool used to verify and validate performance measures. The recently developed GPRA structure will be incorporated into OMIS to ensure consistent maintenance and reporting, resulting in greater accuracy and consistency of information to users.

Usage of Economic Information Resources

Performance will also be verified by identifying customer usage of economic resources within OPPE and by surveying customers to determine their satisfaction with and the adequacy of economic information available and provided; the number of economic issue papers produced; economic analysis assisting the regulatory development process; improved economic models, analytic methods, and databases; completion of paper outlining 5-year social science research agenda; and development of new methods to assess demographic distribution of exposures.

Community Based Environmental Protection (CBEP)

Regions will identify priority places for implementation of CBEP approaches, delivery of tools and technical assistance. In 1999, the CBEP strategy will be implemented in 10 priority places nationally.

Common Sense Initiative (CSI)

Performance targets for CSI will be verified by actual completion of each phase of CSI, development of national performance goals, and plans for implementation of lessons learned from the Metal Finishing Sector. Selection of additional sectors will validate expansion of sustainable industries program.

Scientific Equipment Inventory

Regional scientific equipment inventory will be maintained. Annual assessment will be made to determine Regional needs to further upgrades and new technologies.

Report Time to Completion

The SAB will maintain records on report time to completion and will summarize its findings at the end of each fiscal year.

Reinvention Activities

Records will be maintained on reinvention initiatives including Project XL, and changes to the Agency's core business practices. The results will be reported at the end of the fiscal year.

Statutory Authority

Clean Air Act (CAA) (42 USC 7601-7671q)

Toxic Substances Control Act (TSCA) section 4, 5and 6 (15 U.S.C. 2603, 2604 and 2605)

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 USC 9601-9675)

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 USC 136-136y)

Resource Conservation and Recovery Act (RCRA) (42 USC 6901-6992k)

Emergency Planning and Community Right-to-Know Act (EPCRA) (42 USC 11001-11050)

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Clean Water Act (CWA) Title I (33 U.S.C. 1251-1271)

CWA sections 304 and 308 (33 U.S.C. 1314, 1318)

CWA Title I (33 U.S.C. 1251-1271)

Safe Drinking Water Act (SDWA) section 1412 (42 U.S.C. 300g-1)

Federal Technology Transfer Act (15 USC 3710a et.seq)

Patent Statute

The Economy Act of 1932

The National Environmental Policy Act

Federal Advisory Committee Act (5 U.S.C. App.)

Environmental Protection Agency

1999 Annual Plan Request to Congress

A Credible Deterrent to Pollution and Greater Compliance with the Law

Strategic Goal: EPA will ensure full compliance with laws intended to protect public health and the environment.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
A Credible Deterrent to Pollution and Greater Compliance with the Law	**$320,827.7**	**$315,828.2**	**$330,951.3**
Obj. 01 Enforcement Tools to Reduce Non-Compliance	$275,311.8	$268,534.7	$281,743.1
Obj. 02 Increase Use of Auditing, Self-Policing Policies	$45,515.9	$47,293.5	$49,208.2
Goal Total FTE:	2,538.3	2,537.8	2,535.9

Strategic Objectives:

Objective #1: Enforcement Tools to Reduce Non-Compliance. Identify and reduce significant non-compliance in high priority program areas, while maintaining a strong enforcement presence in all regulatory program areas.

Objective #2: Promote Voluntary Compliance. Promote the regulated community's voluntary compliance with environmental requirements through compliance incentives and assistance programs.

Programs and Activities:

Protecting the public and the environment from risks posed by violations of environmental requirements is, and always has been, basic to EPA's mission. Many of America's environmental improvements over the last 25 years are attributable to a strong set of environmental laws and an expectation of compliance with those laws. EPA's strong and aggressive enforcement program has been the centerpiece of efforts to ensure compliance, and has achieved real and significant improvements in public health and the environment. The Agency will continue to aggressively punish violators and deter future violations, level the economic playing field for law-abiding companies, and ensure that the price of goods and services reflects true costs.

However, to meet the challenges presented by the continuing, serious, and complex environmental problems and the changes in the types and scope of activities and entities regulated, EPA must seek a broader range of solutions. To this end, EPA is developing additional tools and capabilities for ensuring compliance through assistance and incentives to the regulated community. By ensuring compliance through an array of traditional and innovative approaches, EPA is working to mitigate and avoid risks to human health and the environment.

The 1999 Annual Plan is based on $330,951,300 and 2535.9 workyears for deterrence and compliance in this goal, an increase of $15,123,100 and a decrease of 1.9 workyears from 1998. These resources will support the use of enforcement and compliance tools to ensure deterrence and compliance including inspections to target violators, assistance to help the regulated community understand its responsibilities, and incentives to make it economically beneficial to comply with the law. EPA will also continue to provide technical assistance and grants to states and Tribes to help them build effective and well targeted compliance and enforcement programs. EPA will support international environmental commitments, especially along U.S. borders, and work with other Federal agencies to promote environmental protection abroad and encourage a level economic playing field in an increasingly global trading system.

HIGHLIGHTS:

Target High Priority Areas for Enforcement and Compliance Assistance

The 1999 Annual Plan is based on $281,743,100 and 2,055.6 workyears to address the most significant environmental problems through improved targeting of high-risk portions of the regulated community, and increased monitoring. The foundation of this effort will be the completion by EPA's enforcement and compliance assurance program of baseline data improvements that began in 1998, the selection of the most appropriate compliance indicators and types of facilities to be addressed, and the setting of challenging but realistic targets for compliance.

Improve Compliance by Providing Assistance and Incentives to the Regulated Community

The 1999 Annual Plan is based on $49,208,200 and 480.3 workyears to provide more sophisticated and targeted compliance assistance to the regulated community using compliance baseline data developed for selected sectors, and the Agency's analysis of the root causes of compliance problems. EPA will also increase the regulated community's use of compliance incentives and programs by 10% over 1998 levels, by encouraging communities to voluntarily discover, disclose, and correct violations.

Assist States and Tribes with Their Compliance Assurance and Incentive Programs

Included in the 1999 President's Budget is $2,000,000 for Pesticides Enforcement grants to help prevent future misuses of pesticides in communities and workplaces. EPA also requests $500,000 to help states protect vulnerable

children from lead poisoning by increasing enforcement of the lead-based paint provisions of the Toxic Substances Control Act (TSCA). A requested increase of $100,000 will provide compliance assistance to Tribes.

FY 1999 Annual Performance Goals:

The resources requested in this budget will enable the Agency to meet a number of important performance goals. The most significant of these are:

- Target high priority areas for enforcement and compliance assistance and complete baseline data needed to measure changes in key indicators of compliance. The Agency will identify five high priority areas and improve 3 of their data systems.

- Deter non-compliance by maintaining levels of field presence and enforcement actions, particularly in high risk areas and/or where populations are disproportionately exposed. In 1999, EPA will conduct 15,000 inspections and undertake 2,600 enforcement actions.

- Increase the regulated community's use of compliance incentives and their understanding of, and ability to comply with, regulatory requirements. EPA will offer 20 small entities relief under the Small Business Policy, an increase of 100% over the 1998 levels, and obtain 400 self disclosures. The Agency will also continue to operate 8 Compliance Assistance Centers, and provide compliance assistance tools such as 7 sector notebooks and 4 sector guides.

- Assist states and Tribes with their enforcement and compliance assurance and incentive programs. EPA will provide specialized assistance and training, including 100 courses, to state and tribal officials to enhance the effectiveness of their programs.

- Review 100% of significant proposed Federal actions subject to the National Environmental Policy Act (NEPA) which require EPA follow-up to determine their likely environmental effects and remedy 70% of EPA's concerns with these proposed actions.

Key Performance Measures	1998	1999
Lab Integrity Inspections	86 Inspection	86 Inspections
Lab Integrity Audits	230 Audits	230 Audits
Multimedia Inspections - HQ	15 Inspections	15 Inspections
Multimedia Inspections - RT	120 Inspections	115 Inspections

Key Performance Measures	1998	1999
Federal Facility Inspections	28 Inspections	28 Inspections
Mobile Sources Inspections	2250 Inspections	2250 Inspections
NPDES Inspections	2400 Inspections	2325 Inspections
UIC / PWSS Inspections	5700 Inspections	5500 Inspections
Stationary Source Inspections	2100 Inspections	2040 Inspections
FIFRA Inspections	125 Inspections	125 Inspections
TSCA Inspections	1100 Inspections	1060 Inspections
Single Media Inspections - FD	14 Inspections	14 Inspections
Multimedia Inspections - FD	15 Inspections	15 Inspections
Administrative Orders Issued	90 Admin. Orders	100 Admin. Orders
Administrative Cases Concluded	80 Admin. Cases	80 Admin. Cases
Civil Judicial Cases Concluded	2 Civil Cases	3 Civil Cases
RCRA Inspections	1100 Inspections	1090 Inspections
NPDES Civil Referrals	50 Case Referrals	50 Case Referrals
UIC / PWSS Civil Referrals	20 Case Referrals	20 Case Referrals

Key Performance Measures	1998	1999
Stat. Source Civil Referrals	70 Case Referrals	70 Case Referrals
FIFRA Civil Referrals	3 Case Referrals	3 Case Referrals
Toxics Civil Referrals	2 Case Referrals	2 Case Referrals
RCRA Civil Referrals	12 Case Referrals	13 Case Referrals
NPDES APO Complaints	150 APO Complaints	150 APO Complaints
UIC / PWSS APO Complaints	60 APO Complaints	60 APO Complaints
Stat. Sources APO Complaints	90 APO Complaints	90 APO Complaints
FIFRA APO Complaints	80 APO Complaints	80 APO Complaints
Toxics APO Complaints	185 APO Complaints	185 APO Complaints
RCRA APO Complaints	64 APO Complaints	72 APO Complaints
NPDES Compliance Orders	505 Compl. Orders	505 Compl. Orders
UIC / PWSS Compliance Orders	300 Compl. Orders	300 Compl. Orders
Stat. Sources Compl. Orders	155 Compl. Orders	155 Compl. Orders
FIFRA Compliance Orders	10 Compl. Orders	10 Compl. Orders

Key Performance Measures	1998	1999
RCRA Compl. Orders	20 Compl. Orders	22 Compl. Orders
Wetlands Compl. Orders	40 Compl. Orders	40 Compl. Orders
Criminal Cases Initiated	700 Cases	700 Cases
Criminal Cases Referred	310 Cases	310 Cases
Specialized Asst. & Tng	100 Courses	100 Courses
High priority areas identified		5 Areas
Data system improve. to capture chgs to 98 base		3 Data System
Sector Inspections		390 Inspections
Number of small entities receiving relief under Sm. Business Policy	10 Entities	20 Entities
Compl. Assistance Centers in Oper.	8 Centers	8 Centers
Compliance Tools Development	7 Sector Notebks	7 Sector Notebks
Compliance Tools Development	4 Sector Guides	4 Sector Guides
NEPA Compliance Actions	30 Actions	30 Actions
EIS Filing and Data Reporting	650 Fed. Register	650 Fed. Register
Fed Fac Mgt Reviews	15 Reviews	15 Reviews
Number of disclosures resulting from targeted Agency action	75 Disclosures	75 Disclosures

Key Performance Measures	1998	1999
Major Federal actions requiring followup	300 Actions	300 Actions
Concerns resolved on major Federal Actions	294 Concerns	294 Concerns
Number of self-disclosures	330 disclosure	400 Disclosures

Key Performance Measures Verification

Enforcement and Compliance Assurance Data

EPA's enforcement and compliance assurance data are contained in 14 database systems across the Agency. While specific data entry/quality control practices may vary by individual system, each current system has been developed in accordance with the Office Information Resources Management (OIRM) Life Cycle Management Guidance which establishes the Agency's processes for development, implementation and maintenance of the Agency's data systems throughout their life cycle. The systems incorporate data validation processes and include internal screen audit checks and verifications; development of detailed system and user documentation (include training guides, data element dictionary, security plans); data quality audit reports (available to Regional and Headquarters staff); third party testing protocols for system enhancements; and detailed report specifications for showing how data are calculated.

Strategic and Tactical Automation Management Plan

EPA has prepared a Strategic and Tactical Automation Management Plan which will significantly impact the quality and reliability of nine of the Agency's systems. This plan will integrate the Agency's enforcement and compliance mission, priorities and goals into a comprehensive strategy for improving information management for the National Enforcement and Compliance Assurance Program.

Quality Management Plans

EPA is also developing and implementing detailed system specific Quality Management Plans for all systems it manages directly. These plans will include: development of Data Quality Objectives (establishing measurable criteria for data quality); Quality Assurance Project Plans (to determine how QA activities will be implemented through the system life cycle); and Standard Operating Procedures (to provide a consistent and routine process for assessing data quality measurements).

National Performance Measures Strategy

Through the Agency's Enforcement and Compliance Assurance's National Performance Measures Strategy and other efforts, EPA is improving its ability to identify measures to assess the effectiveness of compliance assistance and compliance incentives efforts. Compliance assistance data are or will be collected through a number of sources, including the end-of-year reporting on accomplishments under the Regional Memorandum of Agreement process, the Docket (a national database for tracking EPA civil, judicial, and administrative enforcement actions), manual reporting by the regions and the states, and through OMB-approved surveys on the effectiveness of compliance assistance. Information on the regulated communities' use of voluntary approaches, such as the Environmental Leadership Program and Project XL, will be collected at the Headquarters level, although as these programs mature over the next few years, EPA regional offices will collect information on participation in these programs. Regions and Headquarters' offices enter audit policy case data on self-disclosures into the DOCKET database.

Environmental Review Tracking System (ERTS)

The Environmental Review Tracking System (ERTS) is the national database that serves as the official filing system for environmental impact statements and other actions, as required under regulations of the Council on Environmental Quality implementing the National Environmental Policy Act. ERTS also tracks EPA's review responsibilities under Section 309 of the Clean Air Act.

Statutory Authority

Resource Conservation and Recovery Act sections 3007, 3008, 3013, and 7003 (42 U.S.C. 6927, 6928, 6934, 6973)

Comprehensive Environmental Response, Compensation, and Liability Act sections 106, 107, 109, and 122 (42 U.S.C. 9606, 9607, 9609, 9622)

Clean Water Act (CWA) sections 308, 309, and 311 (33 U.S.C. 1318, 1319, 1321)

Safe Drinking Water Act sections 1413, 1414, 1417, 1422, 1423, 1425, 1431, 1432, 1445 (42 U.S.C. 300g-2, 300g-3, 300g-6, 300h-1, 300h-2, 300h-4, 300i, 300i-1, 300j-4)

Clean Air Act sections 113, 114, and 303 (42 U.S.C. 7413, 7414, 7603)

Toxic Substances Control Act (TSCA) sections 11, 16, and 17 and TSCA Titles II and IV (15 U.S.C. 2610, 2615, 2616, 2641-2656, 2681-2692)

Emergency Planning and Community Right-to-Know Act sections 325 and 326 (42 U.S.C. 11045, 11046)

Federal Insecticide, Fungicide, and Rodenticide Act sections 8, 9, 12, 13, and 14 (7 U.S.C. 136f, 136g, 136j, 136k, 136l)

Ocean Dumping Act sections 101, 104B, 105, and 107 (33 U.S.C. 1411, 1414B, 1415, 1417)

North American Agreement on Environmental Cooperation

1983 La Paz Agreement on US/Mexico Border Region

National Environmental Policy Act (NEPA)

Federal Facility Compliance Act

Pollution Prevention Act (PPA) (42USC 13101-13109)

Small Business Regulatory Enforcement Fairness Act of 1996 (5 USC 601 note)

Executive Order 12088 "Federal Compliance with Pollution Control Standards"

Environmental Protection Agency

1999 Annual Plan Request to Congress

Effective Management

Strategic Goal: EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Goal Summary
(Dollars in Thousands)

	1998 Pres Bud	1998 Enacted	1999 Pres Bud
Effective Management	**$716,580.2**	**$668,857.3**	**$659,860.5**
Obj. 01 Executive Leadership	$26,003.4	$27,897.8	$30,895.9
Obj. 02 Management Services, Administrative, and Stewardship	$175,284.8	$165,331.7	$180,937.4
Obj. 03 Building Operations, Utilities and New Construction	$367,905.0	$331,959.5	$299,921.3
Obj. 04 Regional Management Services and Support	$110,769.2	$107,103.7	$108,189.1
Obj. 05 Provide Audit and Investigative Products and Services	$36,617.8	$36,564.6	$39,916.8
Goal Total FTE	2,927.9	2,919.6	2,974.7

Strategic Objectives:

Objective #1: Executive Leadership. EPA will establish a management infrastructure that will set and implement the highest quality standards for effective internal management and fiscal responsibility.

Objective #2: Management Services, Administrative, and Stewardship. The Agency will provide the management services, administrative support and operations to enable the Agency to achieve its environmental mission and to meet its fiduciary and workforce responsibilities.

Objective #3: Building Operations, Utilities and New Construction. OARM will provide the Agency with a quality work environment that considers employee safety and security, building operations, utilities, facilities, new construction, repairs and pollution prevention within Headquarters as well as nationwide.

Objective #4: Regional Management Services and Support. The Regions will continue to provide the management services, infrastructure support and facility operations necessary for the Agency to achieve its environmental mission, and meet its fiduciary and workforce responsibilities.

Objective #5: Provide Audit and Investigative Products and Services. Provide audit and investigative products and services all of which can help EPA accomplish its mission.

Programs and Activities:

Efforts under this goal support the full range of Agency activities for a healthy and sustainable environment. Agency management provides vision and leadership within the Agency, and conducts policy oversight for all Agency programs. The effectiveness of EPA's management will determine, in large measure, how successful we will be in pursuit of the other goals identified in the Agency's annual plan. Sound management principles, practices, results-based planning and budgeting, fiscal accountability, quality customer service, rational policy guidance and careful stewardship of our resources are the foundation for everything EPA does to advance the protection of human health and the environment. Agency management systems and processes will be supported by independent evaluations that promote efficient and effective programs, so that we can obtain the greatest return on taxpayer investment.

The 1999 Annual Plan is based on $659.9 million and 2,975 workyears for the Effective Management goal, a decrease of $9.0 million and increase of 55 workyears over 1998. Managerial accomplishments will include implementation of automated and streamlined human resources and financial management processes, construction of new facilities, and establishment of state-of-the-art laboratories. The Agency will also honor its obligations to protect children from environmental hazards by working to make the protection of children's health a fundamental goal of environmental protection in the United States.

HIGHLIGHTS:

Protecting Children's Health

The 1999 Annual Plan is based on $30.9 million and 265 workyears to provide vision and leadership, as well as executive direction and policy oversight, for all Agency programs, including Children's Health.

The Agency will honor its obligation to protect children from environmental hazards by targeting resources toward the Agency's many diverse children's activities. Children today face significant and unique health threats from a range of environmental hazards. They are often more heavily exposed and more vulnerable than adults to toxins in the environment, from asthma-exacerbating air pollution and lead-based paint in older homes, to treatment-resistant microbes in drinking water, to persistent chemicals that may cause cancer or induce reproductive or developmental changes. Children's developing immune and nervous

systems can be highly vulnerable to disruption by toxins in the environment, and the consequences may be lifelong.

In 1999, major activities include establishing, with the Department of Health and Human Services, six Children's Environmental Research Centers, ensuring that EPA's public health regulations consider children's health, and providing information to parents to better protect their children from environmental hazards.

Improving Management Services, Administrative Support, and Stewardship

The 1999 Annual Plan is based on $289.1 million and 2,154 workyears for management services, administrative support, and stewardship. EPA will provide the management services and administrative support to achieve its environmental mission and to meet its fiduciary and workforce responsibilities.

The Agency wants to ensure that its workforce is of the highest caliber and is fully prepared to deliver national leadership and expertise in environmental protection. To do so, the Agency will invest in its employees through training and education. The Agency is also striving toward increasing efficiencies in hiring and placement of staff with the necessary scientific and technical skills to sustain effective environmental protection programs. By implementing an automated and streamlined human resources process, the Agency will take major steps toward achieving these goals.

Previously, the Agency has relied on cost-plus, level-of-effort contracting. In an effort to enhance the timeliness and quality of contract products and service, the Agency will be transitioning from this more costly and less efficient method of contracting to the more programmatic and cost effective method of performance-based service contracting. Furthermore, by improving the Agency's contract management information systems, the Agency will improve the quality and availability of information on the status and use of resources, thereby assuring that the Agency acquires the best quality goods and services in support of Agency objectives.

The Agency is also taking steps toward reducing reporting burdens by the Agency's highest volume submitters by encouraging and supporting electronic reporting. These efforts will facilitate EPA's acquisition of key information about environmental conditions across the country.

In 1999, upon correction of grants management vulnerabilities, emphasis will be placed on all aspects of post award grants management to ensure fiscal integrity. This will be accomplished by supporting and maintaining an Agency-wide Integrated Grants Management System that will provide for significant and immediate customer service and communication, as well as substantial time and resource savings, increased integrity of data quality, and post award management/closeout support.

Improving the Agency's ability to focus on environmental results and ensuring effective stewardship of Agency resources is a high priority for the Agency. To strengthen the Agency's accountability through a performance-based management system, EPA will continue development of its integrated planning,

budgeting, and accountability process, and will further its achievement of the substantive statutory requirements of the Government Performance and Results Act (GPRA), Chief Financial Officers Act (CFO Act), and related legislation. The Agency will also focus on development of effective financial management systems, and greater efficiency through streamlining, customer service, and automated systems development.

Maintaining and Improving Agency Infrastructure

The Agency is requesting a total of $299.9 million and 155 workyears to provide a quality work environment that considers employee safety and security, building operations, utilities, facilities repairs, new construction, and pollution prevention throughout the Agency's ten Regional offices, research and development laboratory complexes, field stations, and Headquarters locations.

In support of effective management, the Agency will provide for construction and establishment of state-of-the-art laboratories, providing the tools essential to researching innovative solutions to current and future environmental problems and enhancing our understanding of environmental risks. The consolidated laboratory office complex at Research Triangle Park, North Carolina is an excellent example. For 1999, the Agency is requesting $32.0 million for the continued construction of this complex. This facility will consolidate several locations that EPA currently leases, saving taxpayers over $100 million over the facility's life. Also, EPA is requesting and advance appropriation of $40.7 million in fiscal year 2000 to complete the project.

The Agency's goal of consolidating its Headquarters personnel into one central location is closer to being realized. In 1999, EPA is requesting $16.0 million for relocation to and continued construction of the new Headquarters buildings. The single largest component of this request is for the telecommunication costs to conform to EPA's Integrated Services Digital Network (ISDN) and local area network standards. Significant accomplishments for 1999 include completion of the buildout in the Ariel Rios North building, and 50% completion of the Interstate Commerce Commission building. Furthermore, lab construction at Ft. Meade, Maryland will be completed.

EPA's employees are a major asset and the Agency will continue to take steps to provide a wide range of facilities management and safety, health and environmental management policies, procedures and services. Facilities operations include rent; preventive maintenance of existing space; security and property management; printing services; postage and mail management services; transportation services; Agency recycling; and health, safety and environmental compliance activities, including medical monitoring and training.

Assisting EPA in Reaching Its Mission by Providing Audit and Investigative Products and Services

The Agency is requesting $39.9 million and 401 workyears to provide audits and investigations of EPA's program, administrative, and financial activities by the Office of Inspector General. This will ensure that the Agency's programs are delivered in an effective, efficient, and economical manner and in compliance with all applicable laws and regulations. Audits and investigations assist the

Agency in identifying areas of potential risk and necessary improvements that can significantly contribute to EPA's fulfillment of its mission. Services also include working in partnership with Agency management to find more effective and efficient solutions to environmental problems.

FY 1999 Annual Performance Goals:

The resources requested in this budget will enable the Agency to meet a number of important performance goals. The most significant of these include:

- By the end of 1999, continue renovation of the new Headquarters complex by completing 100% buildout of the Ariel Rios north building and 50% of the Interstate Commerce Commission/Customs building, and moving 47% of EPA personnel from vacated spaces to the new consolidated complex.

- By the end of 1999, complete at least 50% of construction of the consolidated research lab at Research Triangle Park in North Carolina.

- By the end of 1999, implement performance-based contracting for 10% of EPA contracts awarded to improve quality and timeliness.

- By the end of 1999, implement Phase I of the Integrated Grants Management System (IGMS) award module in all regions.

- By the end of 1999, evaluate 5 EPA standards to ensure they are protective of children's health.

- By March, 1999, 100% of EPA category 1 & 2 systems tested will calculate the Year 2000 correctly.

- By the end of 1999, the Agency can plan and track performance against annual goals and capture 100% of costs through the new PBAA structure, based on modified budget and financial accounting systems, a new accountability process and new cost accounting mechanisms.

- In 1999, the OIG will provide objective, timely, and independent auditing, consulting, and investigative services through such actions as completing 15 construction grant closeout audits.

Key Performance Measures	1998	1999
Select standards for evaluation to ensure they consider children's special health needs	5 standards	<5 standards
Re-evaluate standards to ensure they consider children's special health needs	5 standards	<5 standards

Key Performance Measures	1998	1999
Calculate yr 2000 in category 1&2 Sys		100 Percent
Performance base contracts awarded	5 Percent	10 Percent
Implement the IGMS awards module in all regions		10 regions
Accountability system captures 100% of key EPA performance measures.		09-30-99
Cost acctg. capability achieved thru revised acct structure to capture costs at subobj level	100 %	100 %
Buildout in the Ariel Rios North Bldg	130,000 Sq ft	
Construction of new RTP building		50 Percent Complete
Complete buildout of Ariel Rios north building		260,000 sq ft
Begin buildout of ICC/Customs building		50 percent
$VALUE/RECOMMENDATION,QUESTION COST,SAVING	138.5 $s in millions	118.5 $s in MILLIONS
$svalue/Fines,Recoveries,Judgement,Restitutions	4.06 $s IN MILLIONS	4.16 $s IN MILLIONS
IG RECOMMENDATION & ACTIONS	57 RECOM/ACTION	57 RECOM/ACTIO
Judicial, Administration and other Actions taken to enforce law, reduce or avoid risk.	51 ACTIONS	52 ACTIONS
Construction Grants Closeout Audits	15 Audits	15 Audits

Key Performance Measures Verification

EEO Complaints Closed

The Office of Civil Rights will maintain records on the number of complaints closed during the year.

Title VI Complaints Closed

The Office of Civil Rights will maintain records on the number of complaints closed during the year.

Office of Children's Health Protection

The Office of Children's Health Protection will select and evaluate up to five standards to ensure they consider the special needs of children's health. Records will be maintained.

Customer Service Survey

The Agency has attempted to develop measures which adequately reflect program goals and objectives. These measures emphasize quantifiable aspects of program processes, incorporating realistic program outputs and outcomes. The Agency recognizes the importance of verifying the validity of performance measures and indicators. Consequently, efforts are planned and currently underway to ensure that measures accurately reflect and support our assumptions. An important first step in this process has been the undertaking of a Customer Service survey to measure customer satisfaction. The results of this survey will provide us with a framework by which to validate and revise many of our assumptions. As the process evolves, the program output and outcome data provided will allow us to refine both our measures and our supporting information management system. Many of the key measures are verifiable through quantitative means. The measures are output oriented and actual outputs or products will be counted or verified.

OCFO Accountability System

The Office of the Chief Financial Officer has developed validation methods for key performance measures for 1998 and 1999. One 1998 key performance measure is that the "Accountability System is developed and ready to implement." To verify whether this performance measure has been met, we will evaluate and document whether all components of the Accountability System have been fully developed and tested; whether all policies, procedures and guidance related to use of the Accountability System have been developed, approved, and promulgated; and whether all appropriate Agency personnel have been trained in policy, procedures and processes related to use and application of the Accountability System. To validate the results of this performance measure, we will evaluate and document whether the Accountability System achieves all development standards established in the planning phase. The other OCFO Fiscal Year 1998 key measure relates to Year 2000 compliance. To validate the performance measure "Agency financial management system is Year 2000 compliant in time to achieve invisible processing of financial transactions," we will conduct independent testing and

evaluation to demonstrate results of systems programming changes on the processing of financial transactions.

In 1999, the key Accountability System measure is that the "Accountability System captures 100% of key EPA performance measures." To verify and validate this measure, we will evaluate and document whether the Accountability system contains a complete and accurate set of key EPA performance measures articulated in the Agency's Annual Plan. There is also a key 1999 performance relating to Year 2000 compliance: "Agency payroll and all related systems are Year 2000 compliant in time to achieve invisible processing of payroll transactions." To validate this performance measure, we will conduct independent testing evaluation to demonstrate results of systems programming changes on the processing of payroll transactions.

Prime Audit Tracking System (PATS)

The primary source of key performance measure data for the Office of Audit (OA) is the Prime Audit Tracking System (PATS). The reports generated by PATS are used by OA management to monitor progress, workload assignments, and the general productivity of the office. Specifically, PATS provides detailed listings of audits and reports, personnel time data, summary financial information, and quantifiable results. Headquarters and divisional OA personnel are the users of PATS and are responsible for entering data in accordance with the PATS Handbook. Each user must verify that the data has been accurately reported in the system. System security is maintained by limiting access through the use of passwords. The accuracy of data in PATS is subject to daily internal management review and independent reviews by the Management Assessment Review team (within the Program Support Staff) and a peer review team from another Federal Office of Inspector General.

Office of Investigations (OI) Management Information System

The primary source of key performance measure data for the Office of Investigations (OI) is the OI Management Information System. The reports generated by this system are used by management to evaluate productivity by tracking the number of cases open and closed, personnel time charges, judicial and administrative actions (such as indictments, convictions, suspensions and debarments, sentencing or personnel actions), and financial information to include fines, recoveries, judgments, settlements, restitutions, and savings. Divisional personnel are responsible for entering data on personnel time charges and verifying that these charges are accurately reflected in the system. An investigative information specialist in Headquarters monitors data entered by divisional personnel and enters information on case openings and closings, judicial and administrative actions, and financial information. Management accountability reports are prepared and sent to Headquarters desk officers and divisional personnel for review and verification. System security is maintained by limiting access through the use of passwords. The accuracy of data in the OI system is also subject to independent review by the Management Assessment Review team (within the Program Support Staff).

Integrated Financial Management System (IFMS)

The primary sources of key performance measure data within the Program Support Staff are the EPA Integrated Financial Management System (IFMS) and the EPA Budget Planning System. The IFMS generates the information necessary to prepare annual operating plans and monthly status of funds reports which are used by management to effectively and efficiently use available resources. This system provides detailed information on operating plan projections as well as expenditures and remaining balances by account and budget object class. The BPS contains budget development information which is used by management to estimate future budget needs and to implement the requirements of the Government Performance and Results Act. Data is entered in IFMS and BPS by both OIG and Agency personnel who are responsible for verifying that the information is accurately reflected. System security is maintained through the use of passwords. The accuracy of data in the IFMS and BPS are subject to audit by the EPA Office of Inspector General and the General Accounting Office.

Inspector General Operations and Reporting System (IGOR)

The Office of Inspector General is currently developing an integrated management information system called the Inspector General Operations and Reporting System (IGOR) in conjunction with correcting the Year 2000 problem to recognize four-digit dates. IGOR will consolidate and upgrade the functions of several existing systems and integrate management and performance data, including project cost accounting.

Statutory Authority

42 USC 2000e-16

Administrative Procedures Act (5 USC Chapter 5)

Civil Rights Act of 1964, Title VI, Title VII

Comprehensive Environmental Response, Compensation, and Liability Act

Civil Service Reform Act of 1978

Clinger-Cohen Act

Chief Financial Officers Act

Federal Financial Management Improvement Act of 1996

Federal Managers Financial Integrity Act of 1982

Competition in Contracting Act

Contract Disputes Act

Federal Grant and Cooperative Agreement Act

Federal Records Act

Federal Claims Collection Act

Government Performance and Results Act of 1993

Public Buildings Act

Federal Property and Administrative Services Act

V.A., H.U.D., and Independent Agencies Appropriations Act

Paperwork Reduction Act Amendments of 1995

Federal Records Act

Inspector General Act of 1978, as amended

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THE CUSTOMER SERVICE PROGRAM AND ITS GOALS

EPA has been seeking ways to provide better customer service for several years, and developed a formal centralized activity after President Clinton signed Executive Order 12862, "Setting Customer Service Standards," in 1993. The Office of Policy, Planning, and Evaluation provides staff support and chairs EPA's Customer Service Steering Committee (CSSC), the management group that provides policy guidance and leadership for the Customer Service Program (CSP). The goal of the CSP is to improve the Agency's ability to achieve its mission of protecting public health and the environment by more efficiently and effectively serving the public, industry, state and local agencies, and other customers.

To guide the Agency in achieving this goal, EPA developed a Customer Service Plan in September 1995, and adopted Six Rules of Customer Service that apply to all the work of the Agency as well as eight sets of process-specific customer service standards to cover the activities that provide the majority of services to EPA customers. The different services are permitting, rulemaking, enforcement & compliance assistance, partnership programs, public access, research grants, state/tribal and local grants, and pesticides registration. The Six Rules address professionalism (courtesy, flexibility, honesty, and active listening leading to improved services), telephone service (respond by close of business the next day, and/or give an accurate referrals), correspondence response (within 10 work days or provide an interim response), public involvement (seek ideas from customers on our policies, rules and programs), information access and clarity (provide information that is clear, easy to access and understand, in formats that meet customers needs), and dealing with partners in service delivery (relationships of cooperation, helpfulness and flexibility). By 2003, if the CSP is fully successful, all EPA staff should be meeting the customer service standards that apply to their work and have received any training necessary to assist them to achieve the standards.

The Importance of Improving Customer Service

Achieving improved customer service is central to reinventing government. Customer focused agencies will better meet the needs of those they serve. EPA's Customer Service work will establish stronger connections between our employees and their customers, encourage and gather customer input on what our customers need and value, and how to do our work better. Listening to customers articulate their needs and opinions will help us shift our focus to products and services, their outcomes and values to the public, away from the number of transactions and activities to the quality and value produced by them. Over time, shifting to a customer focus will help us reduce dissatisfaction with government, and reduce rework as we learn more about and then meet the needs of customers. With our focus on customers, we will be able to better define what we can do best and what others can do better to satisfy customers. In essence, good customer service is important because it promotes activities that build efficiency in meeting environmental goals and build public trust in government.

What Improved Customer Service Will Achieve

When EPA becomes a more customer focused agency, staff will seek ways to improve their personal skills such as pro-active listening, problem solving and negotiation, we will have better personal and program evaluation and measurement tools, and will recognize opportunities to learn from our partners and customers. With customers as our focus, we can better plan for and execute improvements in

communication and information access systems, and appropriately train EPA staff to be fully responsive to customer needs. As we improve relationships with our regulatory partners, the public, industry, states, recipients of permits and registrations, and others, we can expect to reduce complaints, increase trust in the Agency, and improve EPA staff moral. The CSP requires minimal resources to produce measurable benefits.

Strategies for Accomplishing the Objectives

The Customer Service strategy is centered upon the five objectives:

- helping all EPA employees understand the importance and substantial benefits of improving service to the public;
- providing employees with goals and guides for that improvement (the Six Rules and eight sets of process standards) and involving them in identifying and attempting to eliminate barriers to achieving standards (core process improvement groups);
- providing training to build staff capacity to achieve the standards and effectively apply customer service skills;
- developing measurement and tracking systems to document improvements in service; and
- learning what we need to do to increase satisfaction with our services and improve our treatment of customers.

To achieve these five objectives, the CSP is working with many individuals across the Agency and several contractors. Customer Service Coordinators in all Regions and Offices are disseminating information about the standards, their potential impact and the importance of their implementation and achievement. Many Offices and Regions have established working groups to assist the Coordinators to increase awareness of the standards, the potential for improvement, training opportunities, and methods to measure improvement.

A customer service skills training program was launched in January 1998, after EPA employees were trained to teach the course work. There is an overview course called "Forging the Links" which provides the framework and philosophy of customer service excellence at EPA, and clearly connects providing excellent service to achieving the Agency's mission of protecting public health and safeguarding the natural environment, as it underscores the ties between EPA employees and their customers -- both external and internal. In addition, six other customer service skills units are available through EPA trainers across the Agency. These courses will provide helpful, hands-on tools for improving customer service. Further, customer service video programs are available on loan from the CSP, and several organizations are holding brown bag lunch sessions to share the videos with interested staff.

Surveys will continue to be used to obtain customer feedback, and their results will be widely shared with employees so they can better meet customer needs. Offices and Regions plan to conduct over three hundred surveys of external customers annually during the next three years. The responses should be very useful to managers in their reinvention work. In addition, internal surveys will continue to gather staff opinions and suggestions on how best to improve service to employees. Survey software will assist more organizations to do surveys and analyze and report results to managers so positive, customer

driven changes can be made. A work group was formed late in 1997 and charged with the development of Customer Satisfaction Feedback and Measurement Guidelines for Agency wide use once approved by the CSSC.

Valuable feedback is also provided in customer complaints. Complaints handling procedures across the Agency will be documented during FY 1998. Best practices will be shared and recommendations for improvements will be provided to the CSSC and managers across the Agency.

In addition, through a network of other Federal agencies and outstanding customer service organizations in the private sector, the CSP will use benchmarking to identify, adopt and adapt customer service best practices to EPA's processes. Benchmarking has already proven to be useful to EPA in the areas of training, survey development, telephone service and standards.

The CSP will periodically report progress in achieving customer service standards to Agency senior managers. Representatives of all eight processes and coordinators for each Region and Headquarters Office may provide information for use in the reports.

Expected Results

Through the CSP, EPA expects to increase customer satisfaction with the Agency's overall performance, build staff capacity to meet and exceed customer service standards and customers' expectations, build stronger partnerships, and better achieve our mission. When they understand the needs of customers, EPA employees will provide better services to the general public and their specific customers, including each other. Service delivery improvements will translate into a higher degree of public trust in EPA.

Performance Measures

The Agency is committed to meeting the Six Customer Service Standards and the standards for the different core process within the agency. Performance measures are being established, and Guidelines for Customer Satisfaction Feedback and Measurement should help those planning surveys to improve their ability to obtain comparable and actionable results. Over 40 customer service surveys have been performed throughout the Agency and many more are planned. These surveys provide those offices involved with the feedback on what is important to customers and how work processes can be improved. The customer service staff, with contractual support and cross-Agency groups, will establish a system to effectively measure progress as the standards become an integral part of the daily habits and activities of EPA staff.

GOAL 1: CLEAN AIR

NSPS: Nitrogen Oxide Emissions From Fossil-Fuel Fired Steam Generating Units--Revision

Anticipated Costs and Benefits: We have not yet completed a cost/benefit analysis; we have estimated costs at $81 million with the benefits only qualitatively addressed. These benefit categories include acute and chronic morbidity, mortality, ecosystem damage, reductions in agricultural and forestry yields, visibility degradation, and materials damage.

The current NSPS for electric utility and non-utility steam generating units were promulgated in 1979 and 1986, respectively. A major feature of the NSPS is NOx control through the use of low NOx burners or overfired air. Section 407 of the Clean Air Act requires the EPA to revise existing NSPS for NOx emissions from fossil-fuel fired steam generating units, including both electric utility and non-utility units. These revised standards are to reflect improvements in methods for the reduction of NOx emissions.

EPA proposed revisions to the NSPS on July 9, 1997. The revision was based on the performance of selective catalytic reduction for NOx control. For the proposed rulemaking, the Agency estimated total annual costs of $81 million (1995 dollars).

Integrated NESHAP and Effluent Guidelines: Pulp and Paper

Anticipated Costs and Benefits: The capital investment costs of complying with the integrated rules are estimated to be approximately $1.8 billion, with total annualized costs of approximately $277 million (including operation and maintenance and capital costs). While EPA is not able to monetize all the benefits of the regulations, the categories that are monetized result in benefits ranging from -$727 million due to an increase in emissions of some pollutants to +$1,496 million per year. In addition, the non-monetized benefits include reductions in hazardous air pollutants, total reduced sulfates, carbon monoxide, and nitrogen oxides.

The Clean Air Act (CAA) Amendments of 1990 direct the Environmental Protection Agency (EPA) to set National Emission Standards for Hazardous Air Pollutants (NESHAP) for new and existing sources under section 112 and to base these standards on maximum achievable control technology (MACT). The Clean Water Act (CWA) directs EPA to develop effluent guidelines for certain categories and classes of point sources. These guidelines are used for setting discharge limits for specific facilities that discharge to surface waters or municipal sewage treatment systems. For the pulp and paper industry, EPA is developing an integrated regulation that includes both effluent guidelines and air emission standards to control the release of pollutants to both the water and the air. The regulations are being developed jointly to provide greater protection to human health and the environment, to promote the concept of pollution prevention, and to enable the industry to more effectively plan compliance via a multimedia approach. This Regulatory Plan entry also includes RIN 2040-AB53, Effluent Guidelines and Standards for the Pulp, Paper, and Paperboard Category, reported in full in Part III of this issue of the Federal Register.

The integrated NESHAP and Effluent Guidelines were approved by OMB in October 1997 and signed by the EPA Administrator on November 14, 1997. Promulgation of the integrated rule in the Federal Register is expected to occur in late February 1998.

NAAQS: Sulfur Dioxide (Review and Implementation)
Anticipated Costs and Benefits:

On November 15, 1994, the Environmental Protection Agency (EPA) proposed not to revise the existing 24-hour and annual primary standards. The EPA sought public comment on the need to adopt additional regulatory measures to address the health risk to asthmatic individuals posed by short-term peak sulfur dioxide exposure. On March 7, 1995, EPA proposed implementation strategies for reducing short-term high concentrations of sulfur dioxide emissions in the ambient air. On May 22, 1996, EPA published its final decision not to revise the primary sulfur dioxide NAAQS. The notice stated that EPA would shortly propose a new implementation strategy to assist States in addressing short-term peaks of sulfur dioxide. The new implementation strategy -- the Intervention Level Program -- was proposed on January 2, 1997. Final action on the Intervention Level Program is anticipated in May, 1998.

NESHAP: Integrated Iron and Steel
Anticipated Costs and Benefits: We have not yet done a cost/benefit analysis.

The Clean Air Act, as amended November 1990, requires the EPA to regulate categories of major and area sources of hazardous air pollutants (HAP). The EPA has determined that integrated iron and steel mills emit several of the 189 HAP listed (including compounds of chromium, lead, manganese, toluene, and polycyclic organic matter) in quantities sufficient to designate them as major sources. As a consequence, integrated iron and steel facilities are among the HAP-emitting source categories selected for regulation.

NESHAP for Industrial, Commercial and Institutional Boilers and Process Heaters
Anticipated Costs and Benefits: We have not yet done a cost/benefit analysis.

The Clean Air Act, as amended 1990, requires EPA to develop emission standards for sources of hazardous air pollutants (HAPs). Industrial boilers, institutional/commercial boilers, and process heaters are among the potential source categories to be regulated under Section 112 of the CAA. Emissions of HAPs will be addressed by this rulemaking for both new and existing sources. EPA promulgated an NSPS for these source categories in 1987 and 1990. The standards for the NESHAP are to be technology-based and are to require the maximum achievable control technology (MACT) as described in Section 112 of the CAA. This standard is part of the Industrial Combustion Coordinated Rulemaking.

Industrial Combustion Coordinated Rulemaking -- ICCR Project
Anticipated Costs and Benefits:

The EPA is developing combustion related regulations for five source categories. The source categories are: combustion turbines, internal combustion engines, industrial/ commercial/ institutional boilers, process heaters, and solid waste incinerators burning non-hazardous waste. Some of these projects are listed separately in this section. These regulations are being developed under sections 111, 112, and 129 of the CAA. Sections 111 and 129 require maximum achievable control technology (MACT) floors and MACT levels to be determined. MACT standards apply to both new and existing facilities. Section 111 requires the development of new source performance standards (NSPS). These regulations apply to new, modified and reconstructed sources and do not apply to existing sources. These source categories are wide spread and one or more of these source

categories are located at virtually every manufacturing and chemical plant in the US. Section 112 standards apply to a list of 189 hazardous air pollutants (HAPs); section 129 standards apply to nine pollutants (dioxin and furans, mercury, cadmium, lead, particulate matter and opacity, sulfur dioxide, hydrogen chloride, oxides of nitrogen, and carbon monoxide) which are a combination of HAP's and criteria pollutants; and section 111 applies to criteria pollutants. There is likely to be some regulatory interaction between these source categories since many are located at the same plant site. Therefore EPA considered the option of a coordinated rulemaking where all regulation development proceeded along the same time line. EPA also wanted early and continuing stakeholder input. A coordinated participatory rulemaking offers benefits to all stakeholders including: the opportunity for stakeholders to shape regulatory development, more cost effective regulations, avoidance of duplicative or conflicting regulations, simpler regulations, compliance flexibility, EPA and stakeholder resource savings in rule development, and an improved scientific basis for regulations.

GOAL 2: CLEAN AND SAFE WATER

NPDES Storm Water Phase II Rule
Anticipated Costs and Benefits:

The recently proposed NPDES storm water phase II rule establishes a permitting program to regulate contaminated storm water discharges from small municipal separate storm sewer systems in urbanized areas and small construction sites (between one and five acres). There are some waivers built into the draft rule, reducing or eliminating application requirements where there is little or no environmental impact. For the rulemaking components that have been proposed, the Agency estimated total annual costs ranging from $131 million to $494 million (1997 dollars). The Agency has continued to receive a wide range of comments through various public forums and expects that there will be revisions; however, the magnitude of those revisions has not been determined. The types of benefits associated with the proposed rule include both monetized and non-monetized benefits based on improvements to water quality and reduced human health risks. Estimated annual monetized benefits for positive financial impacts, recreational, and health related benefits ranged from $65 million to $495 million (1997 dollars) annually. This estimate of benefits understates the true benefits, as the Agency is unable to monetize all of the other expected benefits.

Effluent Guidelines - Industrial Laundries
Anticipated Costs and Benefits:

The proposed effluent guidelines rule for the industrial laundries industry would limit the discharges of pollutants into waters of the United States and into publicly owned treatment works (POTWs) by establishing pretreatment standards for existing sources (PSES). The proposed rule would benefit the environment by removing toxic pollutants that have adverse effects on human health and aquatic life. The standards would also reduce potential interference with POTW operations. The proposed PSES limitations would reduce the discharge of pollutants to POTWs by approximately 158 million pounds per year, which would then result in reduced discharges of 27 million pounds of pollutants per year to waters of the U.S. EPA estimates that these pollutant reductions would provide several types of benefits: reduced incidences of cancer, recreational improvements, and avoided sewage sludge disposal costs for POTWs. EPA estimates annual benefits in the range of $2.6 million to $9.6 million (1993 dollars). Other benefits that are expected, but have not been expressed in monetary terms,

include reduced noncancer health effects, reduced administrative costs to develop local limits, improved aesthetic quality of water bodies near laundries, tourism benefits, and biodiversity benefits. The estimated total annual social cost for the standards is $126.1 million (1993 dollars), which incorporates capital costs of $425 million and annual operating and maintenance costs of $78 million.

National Primary Drinking Water Regulations: Radon
Anticipated Costs and Benefits:

In 1991 EPA proposed a maximum contaminant level goal (MCLG) and a maximum contaminant level (MCL) for radon and other radionuclides in drinking water. The proposed rule included a total annual cost estimate of $272 million per year to treat radon in drinking water. The regulated industry estimated higher costs than EPA, e.g., the American Water Works Association estimated a national cost of $2.5 billion per year. As a result of this major difference in costs as well as other radon-related issues, Congress, through appropriations language, prohibited EPA from issuing a final regulation on radon in drinking water.

The 1996 Amendments to the Safe Drinking Water Act require EPA to withdraw the Agency's 1991 proposed radon standards (MCLG and MCL) and to issue a proposed rule by August, 1999. Consequently, the Agency is currently developing standards for radon in drinking water that will incorporate the best available science, treatment technologies, occurrence data, cost/benefit analysis, and stakeholder input. In addition, the National Academy of Sciences (NAS) is undertaking a radon risk assessment that is scheduled to be completed by the summer of 1998. The NAS study will provide significant data for the anticipated costs and benefits of the proposed rule.

National Primary Drinking Water Regulations: Ground Water Disinfection (GWD)
Anticipated Costs and Benefits:

The protection of human health from microbial illness attributed to drinking water involves both surface water and ground water sources of drinking water. This proposed regulation focuses exclusively on ground water sources not under the direct influence of surface water. The GWD rule's focus is to reduce microbial contamination risk from public water systems relying on ground water. To determine if treatment is necessary, the rule will establish a framework to identify public water supplies vulnerable to microbial contamination and to develop and implement risk control strategies including, but not limited to, disinfection. The structure of the proposed rule is a series of barriers to microbial contamination. The proposed barriers are source water protection and vulnerability assessment; assessment and maintenance of the well, treatment facility and distribution system; disinfection where necessary, and monitoring. From a public health perspective, the GWD rule will reduce both endemic levels and outbreaks of illness. The economic impact analysis for this rule is taking all these components, as well as the public health consequences, into account. These analyses are still under development and information will not be released until appropriate stakeholder involvement and consensus has been reached.

National Primary Drinking Water Regulations: Stage 1 Disinfectant/Disinfection Byproducts Rule
Anticipated Costs and Benefits:

The proposed regulation for Stage 1 Disinfectant/Disinfection Byproducts is intended to expand existing public health protections and address concerns

regarding risk trade-offs between pathogens and disinfection byproducts. This rule and the Interim Enhanced Surface Water Treatment Rule were proposed in 1994 as a result of formal regulatory negotiations. The Agency estimated total annualized costs of approximately $1.1 billion each year (1992 dollars). Estimates of benefits range from $400,000 to $8.0 billion per year related to the estimated 1-10,000 cancer cases avoided per year.

The Agency has received extensive public comments on the cost estimates as well as other major aspects of the rule. As a result of these comments and the deadlines mandated in the 1996 Amendments to the Safe Drinking Water Act, EPA established a committee under the Federal Advisory Committee Act to assist in revising the proposal. The Microbial/ Disinfection Byproducts Committee met from March through July 1997 to discuss, evaluate and provide advice on data, analysis, and approaches to the Notice of Data Availability (NODA), which the Agency plans to issue in the fall of 1997. Revised cost-benefit data are under development and will be included in the NODA.

National Primary Drinking Water Regulations: Interim Enhanced Surface Water Treatment Rule
Anticipated Costs and Benefits:

The proposed regulation for Interim Enhanced Surface Water Treatment is intended to expand existing public health protections and address concerns regarding risk trade-offs between pathogens and disinfection byproducts. This rule and the Stage 1 Disinfectant/Disinfection Byproducts Rule were proposed in 1994 as a result of formal regulatory negotiations. The Agency estimated total annualized costs of approximately $393 million each year (1992 dollars). Estimates of benefits range from $1.2-$1.5 billion per year related to the estimated 400,000-500,000 cases of infections from micro-organisms (e.g., giardia) avoided per year.

The Agency has received extensive public comments on the cost estimates as well as other major aspects of the rule. As a result of these comments and the deadlines mandated in the 1996 Amendments to the Safe Drinking water Act, EPA established a committee under the Federal Advisory Committee Act to assist in revising the proposal. The Microbial/ Disinfection Byproducts Committee met from March through July 1997 to discuss, evaluate and provide advice on data, analysis, and approaches to the Notice of Data Availability (NODA), which the Agency plans to issue in the fall of 1997. Revised cost-benefit data are under development and will be included in the NODA.

GOAL 4: PREVENTING POLLUTION IN COMMUNITIES, HOMES, WORKPLACES AND ECOSYSTEMS

Selected Rulemakings for Abating Lead Hazards
Anticipated Costs and Benefits:

For rules promulgated under the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X) section 406, cost estimates have been provided with the proposed rule, and will be available with the final rule. For sections 402, 404 and 1018 of Title X, the costs have been provided in the final economic impact analysis that was prepared in conjunction with the final rules. For section 403 of Title X, costs will be estimated in a draft economic impact analysis that will be prepared for the proposed rule. Since benefits depend on private sector implementation of certain lead hazard abatement activities which are not mandated by any of these rules, benefits will be difficult to quantify. The Agency plans to conduct analyses to help quantify the benefits.

Pesticides and Ground Water State Management Plan (SMP) Regulation
Anticipated Costs and Benefits:

EPA anticipates four categories of costs entailed in requiring SMPs. Federal program costs are those of administering ground-water protection activities, such as the review of state proposals. State program costs entail both capital and annual costs. Registrant and Pesticide-user Impacts are the economic losses ascribed to the reduced use of the classified pesticides, as well as the costs (to the registrants) of complying with Federal and state provisions. Benefits accrue from the reduced levels of pesticide residues in ground water, and a corresponding reduction in: 1) human and ecological risk; and 2) threats to the economic and intrinsic values of the ground-water resource. Enormous uncertainties accompany the quantification of these benefits, however.

GOAL 5: BETTER WASTE MANAGEMENT, RESTORATION OF CONTAMINATED WASTE SITES AND EMERGENCY RESPONSE

Revised Standards for Hazardous Waste Combustion Facilities
Anticipated Costs and Benefits:

The Environmental Protection Agency's (EPA's) strategy for hazardous waste minimization and combustion and a judicial settlement agreement commit EPA to upgrade its standards for burning hazardous waste in incinerators, boilers, and industrial furnaces. These standards would be applicable during the construction and operation of these combustion facilities. Estimates presented below are based on data, methodology, and findings related to the 1996 Proposed Phase I rule. Estimates may change significantly for the Final Phase I rule as well as for the Final Phase II rule.

EPA's analysis of the April 1996 Proposed Rule indicates that some combustion facilities may experience a substantial change in the cost of burning waste, but that this change is likely to have a limited impact on combustion markets. In terms of effects on waste-burning cost structure, cement kilns and lightweight aggregate kilns (LWAKs) are most affected by the regulation. This is primarily a product of their relatively low baseline costs of burning, meaning that incremental compliance costs represent a large increase in their overall cost of burning waste. For incinerators, compliance costs are lower, represent smaller additions to baseline costs, and change little across regulatory options. The analysis concludes that cement kilns have the lowest average waste burning costs even after regulation, and so will continue to have the greatest flexibility in marketing their services for those wastes that can be burned in kilns.

To the extent that compliance costs cannot be passed through to generators and fuel blenders, the profitability of waste burning in kilns will fall. Nonetheless, waste burning kilns are expected to have healthy operating profit margins after the rule. Market exit in all sectors is concentrated among facilities that burn small quantities of hazardous waste. While as many as 98 combustion facilities may stop burning hazardous wastes as a result of the proposed MACT options, the small quantities these facilities burn suggest that market dislocations will be minor.

Overall, EPA believes the social costs of the rule are balanced by a set of potentially substantial benefits. Given the severity of the potential adverse health effects from dioxin and mercury (cancer, adverse developmental effects in children, and bioaccumulation in ecosystems), EPA believes the substantial

reductions of these pollutants from hazardous waste burning sources under the MACT standard justifies moving ahead with the proposed rule beyond the floor (BTF) option. An alternative way of valuing benefits is the potential increase in property values around closed or more stringently regulated combustion facilities. The fact that this approach also suggests potentially substantial benefits strengthens EPA's belief that the costs of moving forward with the proposed BTF option for certain pollutants and/or source categories are justified.

HWIR Contaminated Media Rule
Anticipated Costs and Benefits:

The Hazardous Waste Identification Rule for contaminated media (HWIR Media), as proposed in April 1996, would give EPA and authorized States the authority to remove certain lower-risk contaminated media from regulation as "hazardous waste" under RCRA. Additionally, the rule would establish modified treatment requirements and modified permitting procedures for higher-risk contaminated media that remain subject to hazardous waste regulations. A final HWIR Media rule, with an accompanying assessment of the anticipated costs and benefits, is scheduled for promulgation in June 1998.

The HWIR Media rule would provide relief from current standards. The proposed rule would affect between 8.1 million tons per year of contaminated media (soil and sediment; ground water is included in the rule but not in this volume estimate) and 10.3 million tons per year (adding old waste and debris), and will provide a cost savings to generators of between $1.2 billion per year and $1.5 billion per year over the next five years. These figures are based on the assumptions that all States quickly adopt the rule, that all eligible waste receives relief under the rule, and that sludges are not included in the scope of the rule. Potential cost savings for generators translate into possible revenue losses for the environmental services industry, as a decrease in commercial hazardous waste management is anticipated to result from the rule. Overall, no small entities are anticipated to incur net costs as a result of the rule.

The rule is anticipated to result in a number of benefits such as faster cleanups, incentives for a greater number of cleanups, and lower administrative costs and avoided delays in cleanup; these benefits were not quantified for the proposed rule.

Corrective Action for Solid Waste Management Units
Anticipated Costs and Benefits:

The Corrective Action Rule for Solid Waste Management Units would provide a broad procedural and protectiveness framework for remediation at RCRA treatment, storage, and disposal facilities. As the majority of States are authorized for corrective action, the program is predominantly implemented at the State level; this rule would provide a Federal baseline with which State programs must comply. The corrective action rule was proposed in 1990, and is scheduled for promulgation in late 1998.

In a 1993 regulatory impact analysis performed on the proposed rule requirements, the agency estimated the costs and benefits of the standards for corrective action. EPA estimated that there are 5,800 active hazardous waste management facilities potentially subject to RCRA corrective action requirements. The total cost for those facilities requiring corrective action is estimated at

$16.7 billion. The costs for three additional regulatory options (two options which are less stringent than the proposed rule requirements, and one which is more stringent) were analyzed in 1995. These regulatory options were designed to cover a range of alternatives including increased containment in place of source control, cleanup of groundwater plumes to the facility boundary instead of the unit boundary, varying future land use assumptions for a site, and alternative media cleanup standards. These options yielded total costs ranging from $9.1 billion and $12.6 billion, for the two options less stringent than the proposal, to $57.3 billion for the more stringent option.

The benefits of the corrective action requirements for the proposed rule were examined in the 1993 regulatory impact analysis. Six benefit categories were addressed in the regulatory impact analysis, including human health risk reduction, averted water use costs, nonuse benefits, effects of facilities on residential property values, and increases in facility values. Ecological threats existing under baseline conditions were also examined. While a host of issues surround these benefit measures and how they compare with the compliance costs, the agency believes that there are strong reasons to move forward with a final rule. Further analyses of the social impacts of a final rule, including analyses that will help the Agency monetize benefits, are planned.

GOAL 7: EXPANSION OF AMERICANS' RIGHT TO KNOW ABOUT THEIR ENVIRONMENT

Data Expansion Amendments, Toxic Chemical Release Reporting, and Community Right-to-Know Rules

Anticipated Costs and Benefits:

The anticipated costs related to these actions are unknown at present, but the FY 1998 cost of compliance to industry from the Toxic Release Inventory (TRI) program is estimated at $384 million. EPA is unable to estimate costs since we are unsure about what data elements need to be added to the TRI and whether this data will even need to be collected or is already available. To the extent that additional sources must provide data, there will be reporting costs for those parties. Benefits in general will result from the information reported in TRI increasing our knowledge of the pollutants released to the environment and their exposure pathways, improving the scientific understanding of health and environmental risks from toxic chemicals. This allows the public to make informed decisions on where to work and live, enhances the ability of corporate lenders and purchasers to accurately gauge a facility's potential liability, and assists Federal, state, and local authorities in making better decisions on acceptable levels of toxics in communities.

Reporting Threshold Amendment, Toxic Chemicals Release Reporting, and Community Right-to-Know Rules

Anticipated Costs and Benefits:

The anticipated costs related to these actions are unknown at present. EPA is still unsure how low to set reporting thresholds or for what specific list of chemicals the lower reporting thresholds should apply. To the extent that additional sources must provide data, there will be reporting costs for those parties. Benefits in general will result from the information reported in TRI increasing our knowledge of the pollutants released to the environment and their exposure pathways, improving the scientific understanding of health and environmental risks from toxic chemicals. This allows the public to make informed decisions on where to work and live, enhances the ability of corporate lenders and purchasers to accurately gauge a facility's potential liability, and

assists Federal, state, and local authorities in making better decisions on acceptable levels of toxics in communities.

Addition of Oil and Gas Exploration and Production to the Toxic Release Inventory Rule

Anticipated Costs and Benefits:

Based on the current status of the project, anticipated costs are unknown. Until further evaluations are performed, estimated benefits cannot be accurately calculated. Generally, anticipated benefits include making available more complete information regarding the release and disposition of toxic chemicals in the environment.