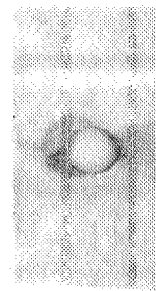
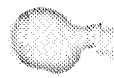


ENVIRONMENTAL PROTECTION AGENCY



**JUSTIFICATION OF APPROPRIATION ESTIMATES
FOR COMMITTEE ON APPROPRIATIONS,
FISCAL YEAR 1984**



ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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Summary

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

Budget Summary

The President's request for the Environmental Protection Agency's 1984 budget totals \$1,258,591,000 supported by 8,669.1 permanent workyears, including \$948,591,000 and 8,049.8 permanent workyears for the Agency's operating programs, and \$310,000,000 and 619.3 permanent workyears for the Superfund program. New budget authority in the amount of \$2,400,000,000 is requested for the municipal waste treatment facilities construction program. Including Superfund and Construction Grants, these totals constitute a decrease of \$21,097,200 and 455.9 permanent workyears for the Agency as a whole in 1984.

Major emphasis continues on the Superfund and Hazardous Waste programs. Funding for the Superfund program increases by \$100,000,000, to \$310,000,000 supported by 619.3 permanent workyears in 1984. EPA will continue its efforts to increase the role of States in managing response actions and in working with other Federal agencies in the implementation of Superfund. In the Hazardous Waste program, emphasis will be placed on increasing the direct role of States in the management and operations of their own program; increasing permitting efforts of hazardous waste disposal facilities; and continuing to establish a sound regulatory base.

EPA will continue to improve its enforcement effort supported by a 13 percent increase in enforcement resources. Hazardous Waste enforcement will emphasize inspection of waste handlers which pose severe threats to public health and the environment. Superfund will add emphasis on its efforts to recover Federal response costs and encourage privately financed cleanup of hazardous waste sites. The Agency will continue to focus the criminal investigations on instances where criminal violations are suspected.

The research and development program will focus its 1984 program toward strengthening EPA's commitment to improving the scientific basis upon which regulatory policies are formulated and implemented. Resources in 1984 will be directed to those activities which are necessary to meet our legislative mandates and which provide the scientific basis of our regulatory program. Our request for research activities in 1984 includes \$205,509,000 supported by 1,211.6 permanent workyears, a reduction of 23,335,700.

Grants to State and local governments are at a level of \$172,771,300 a reduction of \$60,359,000 from 1983. This reduction was possible because of; the Agency's efforts over the last two years to eliminate program duplication in its grant process, simplified administrative requirements, reduced regulatory demands, and alternative funding sources.

A summary of budget authority for EPA's six appropriation accounts is as follows:

EPA's Request by Appropriation Account

	1983 Current Estimate	1984 Budget Authority
Salaries & Expenses.....	\$548,613,200	\$540,389,000
Abatement, Control & Compliance..	369,075,000	293,933,000
Research & Development.....	119,000,000	111,669,000
Buildings & Facilities.....	3,000,000	2,600,000
Operating Programs Subtotal..	\$1,039,688,200	\$948,591,000
Construction Grants.....	\$2,430,000,000	\$2,400,000,000
Hazardous Substance Response Trust Fund.....	210,000,000	310,000,000
Total.....	\$3,679,688,200	\$3,658,591,000

The following briefly describes the content of each appropriation and the changes requested within each from the Agency's current 1983 estimates.

Salaries and Expenses

EPA requests a decrease of \$8,224,200 for its Salaries and Expenses appropriation which finances salaries and related costs associated with administering the programs within the Environmental Protection Agency. It incorporates all costs exclusive of grant programs and program-specific contractual agreements. The decrease reflects the reduced workyear levels. Additional workyears in 1984 will support States in developing a water quality-based approach to pollution control, improve toxic substances compliance monitoring, and increase support for enforcement policy and operations.

Abatement, Control and Compliance

The Abatement, Control and Compliance appropriation finances contracts, grants, and cooperative agreements for pollution abatement, control and compliance activities. EPA requests a decrease of \$75,142,000 in 1984 for this appropriation which primarily reflects our reductions to State grants brought about by streamlining our State grant programs.

Research and Development

The 1984 budget decreases the Research and Development appropriation by \$7,331,000 to \$111,669,000. Although the research budget decreases, program increases to improve the scientific validity of our regulatory decisions will support programs for hazardous air pollutants, the water quality-based regulatory approach, acid rain, quality assurance, and toxics health effects.

Buildings and Facilities

EPA requests \$2,600,000, a decrease of \$400,000 for the Building and Facilities appropriation which finances the construction, repair, improvement, extension, alteration, and purchase of fixed equipment of facilities owned, as well as existing facilities occupied by the Environmental Protection Agency. The funds in 1984 will help correct health and safety deficiencies in EPA laboratories and prevent serious deterioration of our owned and leased facilities.

Construction Grants

The Construction Grants appropriation is for grants to local public agencies for construction of municipal wastewater treatment facilities to assist States and localities in attaining water quality standards.

In 1981 Congress enacted significant reforms proposed by the Administration. These reforms provide for a more cost-effective program and reduce the long-term requirements for Federal assistance. Under the reforms, Congress provided a four year authorization at \$2,400,000,000 with an additional amount of \$200,000,000, beginning in 1983 for combined sewer overflow. The 1983 appropriation provided \$2,430,000,000, which included \$30,000,000 for combined sewer overflow. In 1984, the Agency is requesting \$2,400,000,000 to obligate funds to award a total of 597 grants resulting in 4,764 active projects. In addition, approximately 1,200 projects are expected to have construction completed during 1984.

Hazardous Substance Response Trust Fund

The 1984 budget requests \$310,000,000, an increase of \$100,000, and a decrease of 4.5 permanent workyears to support the Hazardous Substance Response Trust Fund. In 1984 these funds will be dedicated to responding to the most serious hazardous waste sites and spills; encouraging States to assume a larger role in managing response actions; adapting existing research and development data and technology to support field response activities; continuing effective enforcement activity; and, supporting on-going activities of other Federal agencies.

ENVIRONMENTAL PROTECTION AGENCY

Summary of Budget Authority
Obligations, Outlays, and Workyears
By Appropriation
(dollars in thousands)

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984
<u>Research and Development</u>				
Budget Authority.....	✓ \$154,315.6	\$108,703.8	\$119,000.0	\$111,669.0
Obligations.....	200,637.9	130,260.0	126,014.0	112,434.0
Outlays.....	197,339.0	165,648.0	153,709.0	140,764.0
<u>Abatement, Control and Compliance</u>				
Budget Authority.....	✓ 372,969.7	311,575.0	369,075.0	293,933.0
Obligations.....	393,328.0	320,408.0	375,000.0	294,871.0
Outlays.....	523,722.0	387,165.0	423,538.0	366,359.0
<u>Salaries and Expenses</u>				
Budget Authority.....	✓ 555,105.7	538,113.2	548,613.2	540,389.0
Obligations.....	540,773.2	538,113.2	548,613.2	540,389.0 ✓
Outlays.....	520,363.0	548,869.0	518,904.0	518,533.0
Permanent Workyears.....	9,112.4	8,069.8	8,442.4	7,996.8
Total Workyears.....	10,853.5	9,821.0	10,157.6	9,678.7
<u>Buildings and Facilities</u>				
Budget Authority.....	✓ 3,621.0	3,000.0	3,000.0	2,600.0
Obligations.....	3,384.7	3,864.0	5,033.0	2,965.0
Outlays.....	3,325.0	3,559.0	2,825.0	4,689.0
<u>Construction Grants</u>				
Budget Authority.....	2,400,000.0	2,400,000.0	2,430,000.0	2,400,000.0
Obligations.....	2,116,802.7	2,400,000.0	3,000,000.0	2,400,000.0
Outlays.....	3,756,152.1	3,350,000.0	3,100,000.0	2,800,000.0
<u>Scientific Activities Overseas</u>				
Obligations.....	19.3	700.0	700.0	950.0
Outlays.....	677.0	1,200.0	1,000.0	600.0
<u>Operations, Research and Facilities</u>				
Obligations.....	814.4	...	1,432.7	...
Outlays.....	289.0	500.0	1,633.0	1,439.0
<u>Revolving Fund</u>				
Obligations.....	750.0	700.0	800.0	800.0
Outlays.....	21.0	100.0	100.0	100.0
<u>Enforcement</u>				
Outlays.....	1,598.0	...	1,002.0	...
<u>U.S. Regulatory Council</u>				
Outlays.....	245.0	...	319.0	...

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
<u>Misc. Contributed Funds</u>				
Obligations.....	22.7	25.0	30.0	20.0
Outlays.....	12.0	20.0	20.0	20.0
<u>Reimbursements</u>				
Obligations.....	15,480.9	30,000.0	20,000.0	20,000.0
Permanent Workyears.....	54.4	58.8	58.8	53.0
Total Workyears.....	60.5	67.8	67.8	62.0
<u>Hazardous Substance Response</u>				
<u>Trust Fund</u>				
Budget Authority.....	190,000.0	230,000.0	210,000.0	310,000.0
Obligations.....	180,743.6	230,000.0	240,476.0	319,870.0
Outlays.....	79,576.0	188,000.0	177,000.0	269,000.0
Permanent Workyears.....	465.6	516.4	623.8	619.3
Total Workyears.....	527.7	592.2	699.6	707.1
<u>Payment to Hazardous Substance</u>				
<u>Response Trust Fund</u>				
Budget Authority.....	(26,000.0)	(44,000.0)	(40,000.0)	(44,000.0)
Obligations.....	(26,000.0)	(44,000.0)	(40,000.0)	(44,000.0)
Outlays.....	(26,000.0)	(44,000.0)	(40,000.0)	(44,000.0)
<u>TOTAL ENVIRONMENTAL PROTECTION</u>				
<u>AGENCY</u>				
Budget Authority.....	\$3,676,012.0	\$3,591,392.0	\$3,679,688.2	\$3,658,591.0
Obligations.....	3,452,757.4	3,654,070.2	4,318,098.9	3,692,299.0
Outlays.....	5,083,319.1	4,645,061.0	4,380,050.0	4,101,504.0
Permanent Workyears.....	9,632.4	8,645.0	9,125.0	8,669.1
Total Workyears.....	11,441.7	10,481.0	10,925.0	10,447.8

ENVIRONMENTAL PROTECTION AGENCY

Summary of Budget Authority Obligations, Outlays, and Workyears By Media (dollars in thousands)

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984
<u>Air</u>				
Budget Authority.....	\$217,548.5	\$184,053.3	\$212,245.3	\$190,991.6
Obligations.....	229,703.1	188,611.0	214,902.3	191,337.6
Outlays.....	245,652.0	218,492.5	195,753.0	199,621.0
Permanent Workyears.....	1,576.0	1,333.2	1,374.4	1,350.3
Total Workyears.....	1,821.8	1,549.4	1,603.2	1,577.1
<u>Water Quality</u>				
Budget Authority.....	234,720.4	185,965.7	215,998.9	151,369.3
Obligations.....	250,946.2	192,294.0	219,138.9	151,818.3
Outlays.....	314,122.0	212,285.5	255,108.0	205,682.0
Permanent Workyears.....	2,271.9	1,849.5	1,950.6	1,662.9
Total Workyears.....	2,671.1	2,292.0	2,379.3	2,065.5
<u>Drinking Water</u>				
Budget Authority.....	82,281.7	69,750.1	77,958.5	66,355.9
Obligations.....	85,898.7	71,783.0	78,820.5	66,467.9
Outlays.....	80,715.0	83,882.7	76,760.0	73,568.0
Permanent Workyears.....	474.3	455.5	471.2	465.1
Total Workyears.....	566.4	550.8	562.4	560.8
<u>Hazardous Waste</u>				
Budget Authority.....	106,777.7	103,343.7	116,551.5	110,112.7
Obligations.....	110,578.4	106,408.0	117,244.5	110,194.7
Outlays.....	123,514.0	124,857.6	115,722.0	114,192.0
Permanent Workyears.....	586.1	557.0	643.1	625.8
Total Workyears.....	737.9	740.1	821.9	830.0
<u>Pesticides</u>				
Budget Authority.....	54,083.0	50,782.0	52,928.1	52,742.6
Obligations.....	57,813.6	52,271.0	52,978.1	52,750.6
Outlays.....	61,435.0	57,244.4	53,074.0	53,430.0
Permanent Workyears.....	765.3	660.9	662.2	652.7
Total Workyears.....	828.3	744.5	745.8	736.9
<u>Radiation</u>				
Budget Authority.....	10,663.3	10,351.1	10,923.3	10,854.8
Obligations.....	12,335.4	10,588.0	11,059.3	10,872.8
Outlays.....	12,349.0	11,147.0	12,483.0	11,419.0
Permanent Workyears.....	150.3	135.1	148.1	126.9
Total Workyears.....	169.6	159.9	172.2	146.4
<u>Noise</u>				
Budget Authority.....	1,922.6	...	...	...
Obligations.....	1,621.3	40.0	...	...
Outlays.....	6,616.0	350.0	1,707.0	663.0
Permanent Workyears.....	21.2	...	...	...
Total Workyears.....	27.4	...	...	...
<u>Interdisciplinary</u>				
Budget Authority.....	18,850.0	20,738.1	23,935.9	41,335.6
Obligations.....	16,928.9	20,865.0	25,606.9	41,595.6
Outlays.....	14,425.0	22,853.0	22,979.0	29,098.0
Permanent Workyears.....	200.2	310.3	325.6	353.4
Total Workyears.....	243.9	363.7	388.8	396.5

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984
<u>Toxic Substances</u>				
Budget Authority.....	74,855.8	68,604.0	69,661.8	66,675.7
Obligations.....	82,712.8	73,155.0	71,451.8	66,891.7
Outlays.....	82,211.0	80,130.3	79,915.0	71,368.0
Permanent Workyears.....	634.4	607.7	626.7	606.2
Total Workyears.....	729.5	687.7	706.9	683.2
<u>Energy</u>				
Budget Authority.....	51,650.9	34,530.2	25,000.9	23,530.1
Obligations.....	65,662.9	42,492.4	26,940.9	23,742.1
Outlays.....	90,638.0	55,501.0	56,424.0	42,153.0
Permanent Workyears.....	138.9	61.8	36.4	36.8
Total Workyears.....	196.9	100.1	53.5	54.9
<u>Management and Support</u>				
Budget Authority.....	229,037.1	230,273.8	231,484.0	232,022.7
Obligations.....	221,352.2	230,273.8	232,916.7	232,022.7
Outlays.....	211,634.0	235,438.0	228,861.0	225,901.0
Permanent Workyears.....	2,293.8	2,098.8	2,204.1	2,116.7
Total Workyears.....	2,860.7	2,632.8	2,723.6	2,627.4
<u>Buildings and Facilities</u>				
Budget Authority.....	3,621.0	3,000.0	3,000.0	2,600.0
Obligations.....	3,384.7	3,864.0	5,033.0	2,965.0
Outlays.....	3,325.0	3,559.0	2,825.0	4,689.0
<u>Construction Grants</u>				
Budget Authority.....	2,400,000.0	2,400,000.0	2,430,000.0	2,400,000.0
Obligations.....	2,116,802.7	2,400,000.0	3,000,000.0	2,400,000.0
Outlays.....	3,756,152.1	3,350,000.0	3,100,000.0	2,800,000.0
<u>Scientific Activities Overseas</u>				
Obligations.....	19.3	700.0	700.0	950.0
Outlays.....	677.0	1,200.0	1,000.0	600.0
<u>Revolving Fund</u>				
Obligations.....	750.0	700.0	800.0	800.0
Outlays.....	21.0	100.0	100.0	100.0
<u>Misc. Contributed Funds</u>				
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Outlays.....	12.0	20.0	20.0	20.0
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<u>U.S. Regulatory Council</u>				
Outlays.....	245.0	...	319.0	...
<u>Hazardous Substance Response</u>				
<u>Trust Fund</u>				
Budget Authority.....	190,000.0	230,000.0	210,000.0	310,000.0
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Total Workyears.....	527.7	592.2	699.6	707.1

	<u>Actual</u> <u>1982</u>	<u>Budget</u> <u>Estimate</u> <u>1983</u>	<u>Current</u> <u>Estimate</u> <u>1983</u>	<u>Estimate</u> <u>1984</u>
<u>Payment to Hazardous Substance</u>				
<u>Response Trust Fund</u>				
Budget Authority.....	(26,600.0)	(44,000.0)	(40,000.0)	(44,000.0)
Obligations.....	(26,600.0)	(44,000.0)	(40,000.0)	(44,000.0)
Outlays.....	(26,600.0)	(44,000.0)	(40,000.0)	(44,000.0)
<u>TOTAL ENVIRONMENTAL PROTECTION</u>				
<u>AGENCY</u>				
Budget Authority.....	\$3,676,012.0	\$3,591,392.0	\$3,679,688.2	\$3,658,591.0
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Outlays.....	5,083,319.1	4,645,061.0	4,380,050.0	4,101,504.0
Permanent Workyears.....	9,632.4	8,645.0	9,125.0	8,669.1
Total Workyears.....	11,441.7	10,481.0	10,925.0	10,447.8



Air

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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AIR

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
APPROPRIATION					

Salaries & Expenses	\$74,412.8	\$67,171.9	\$70,480.0	\$71,028.1	\$548.1
Abatement Control & Compliance	\$116,290.3	\$92,800.8	\$107,855.1	\$92,815.4	-\$15,039.7
Research & Development	\$39,000.0	\$24,080.6	\$33,910.2	\$27,148.1	-\$6,762.1
TOTAL, Air	\$229,703.1	\$184,053.3	\$212,245.3	\$190,991.6	-\$21,253.7
PERMANENT WORKYEARS	1,576.0	1,333.2	1,374.4	1,350.3	-24.1
TOTAL WORKYEARS	1,821.8	1,549.4	1,603.2	1,577.1	-26.1
OUTLAYS	\$245,652.0	\$218,492.5	\$195,753.0	\$199,621.0	+\$3,868.0
AUTHORIZATION LEVELS					

AIR

OVERVIEW AND STRATEGY

The Clean Air Act authorizes a national program of air pollution research, regulation, and enforcement activities designed to achieve the environmental goals prescribed by the health-related National Ambient Air Quality Standards (NAAQS). The Act also authorizes methods to control emissions of air pollutants which are deemed to be "hazardous" and for which no ambient standard is appropriate.

Specific limitations on pollutant emissions necessary to meet NAAQS are adopted in State Implementation Plans (SIP). These controls are supplemented by Federally prescribed national emission standards for selected new stationary sources (called new source performance standards) and new mobile sources of air pollution. In addition, hazardous pollutants from new or existing sources may be controlled by National Emission Standards for Hazardous Air Pollutants (NESHAP). Overall the Agency's efforts focus on four broad program areas in order to achieve environmental results. These programs include: setting appropriate ambient standards, maintaining a Federal and State partnership including adequate enforcement of environmental regulations, promulgating emission standards, and assuring adequate mobile source controls.

Ambient Standards

The Clean Air Act requires the Administrator of EPA to set NAAQS for the ambient concentrations of air pollutants (criteria pollutants) necessary to protect public health and welfare. These standards must be reviewed and if necessary revised, every five years. EPA promulgated a revised ozone (O₃) standard in 1979. A revised carbon monoxide (CO) standard is scheduled to be promulgated in 1983. Changes to the standard for hydrocarbons are also scheduled for promulgation in 1983. Revisions to the particulate matter (PM), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂) standards are expected to be proposed in 1983. Those three standards will then be promulgated in 1984.

Review and revision of the NAAQS is based on the most accurate and up-to-date scientific data on the health and welfare effects of the various criteria pollutants. This scientific support, as well as the development and provision of reliable monitoring methods, evaluation of cost-effective control technologies, and the development of models which permit States, Regions, and the regulated community to comply with the national standards, are provided by EPA's research program. In 1984, EPA will publish an updated criteria document on lead and complete one on ozone in support of the NAAQS reviews. Research will also continue to support the future updating of criteria documents for the subsequent review and revision cycle of other NAAQS. In health research, both human and animal studies of responses from exposure to O₃ and NO₂ will continue. Changes in resistance to infection will be emphasized in the human studies. The animal studies will concentrate on the respiratory effects from long-term exposures and the development of improved models for extrapolation to human responses. The National Crop Loss Assessment Network program will focus on the crop loss impacts associated with ozone.

The gases and particles research program will focus on providing the information needed to support the implementation of a new particulate standard. Monitoring stations will be modified for the new standard. Health studies will compare human and animal responses to exposures of particles of various sizes. Urban and regional dispersion models for particles will be improved to account for particle size. Research will continue on the development and validation of air quality dispersion models required for use in complex terrain. Also, information on low-cost, highly reliable emission reduction technology design and performance criteria will be developed.

Federal/State Partnership

In view of the Clean Air Act requirement that States take a lead role in air pollution control programs, the maintenance of an adequate Federal and State partnership is important in achieving environmental goals. The current statute requires each State to adopt and to submit to the Administrator a plan which provides for the implementation, maintenance, and enforcement of each ambient air quality standard. These State Implementation Plans (SIPs) are approved by the Administrator if it is determined that they meet the requirements specified in the Act.

EPA will maintain a relationship with the States which stresses the elimination of unnecessary processes and a streamlining of necessary processes so that both the States and EPA can concentrate on environmental results. Programs and support reflecting regulatory reform, broader State discretion in carrying out regulatory programs, and postponement of lower priority activities having less environmental pay-off should result in a reduced need for financial assistance and an increase of technical assistance on the complex problems of the 1980's.

During 1984, EPA will provide both technical and financial assistance to the States for: SIP revision and implementation; analysis of controls necessary due to the potential revision of the ambient air quality standards; and technical review of new sources when the new source review program is delegated. Urban and regional scale models for the formation and transport of photochemical oxidants will continue to be developed and validated for use by the States for the revision of State Implementation Plans. Research to develop data on demonstrated cost-effective and energy efficient emission reduction technologies for volatile organic compounds with nitrogen oxides will also continue. Twenty-nine States have submitted SIP revisions for the control of ozone and carbon monoxide by 1987. Approved portions of these plans will be implemented in 1984. In addition, some States cannot demonstrate attainment by 1987 and additional measures will need to be developed and incorporated in the SIPs.

EPA will work with State and local agencies to assure that intergovernmental enforcement effort brings about full compliance with the laws and standards. EPA Regional Offices will provide the majority of this assistance directly to the State and local air pollution control authorities.

In cooperation with the States, EPA has been developing a prioritized list of the most significant violating sources to focus resources where the greatest environmental gains can be made. EPA, in 1984, will continue to look to the States to assume the primary role in bringing enforcement actions against these sources and will provide technical support as needed. Where the State efforts are not successful, EPA will ensure compliance by taking Federal administrative or judicial action.

The Act directs the Administrator to take enforcement actions when certain violations of the State Implementation Plans or emissions limits are found. Recently, EPA has been working more closely with State and local agencies to provide technical support to aid the assumption of increased enforcement responsibility by these units of government.

The research program will continue to contribute to the information required by States and local control programs, and by the Regional Offices in assisting these programs. Primary attention will be devoted to refining and updating the pollutant transport and transformation models on which these decision-makers, as well as those in the regulated community, depend to make decisions on siting, permitting, and control strategies. The engineering research program will focus on evaluating and assessing the effectiveness of selected control technologies, with an emphasis on volatile organic emission controls, sulfur dioxide, nitrogen oxides and particulates. In 1984, the program also will be increasingly involved in providing quality assurance guidelines and support.

During 1984, the impact of any reductions in Federal financial assistance must be evaluated to ascertain whether additional Federal support can be replaced by the States in 1985. State and local agencies will be evaluating the potential for increasing their share of the financial burden through increased use of fee systems.

Emission Standards

The Act directs the Administrator to publish and enforce Federal standards of performance for construction of new sources of air pollution. In 1979, the Administrator published a list of the categories of stationary sources that could be expected to contribute significantly to air pollution. The Act directs EPA to establish new source performance standards (NSPS) for all categories on the list within four years.

While progress has been made, promulgation of NSPS for all major stationary sources was not completed by 1982. Consequently, a sustained level of resources will be necessary to ensure continued progress towards the completion of all categories on the NSPS list.

In addition to establishing mechanisms to control pollutants that are covered by the national ambient air quality standards, the Act also prescribes procedures for controlling pollutants that are deemed to be "hazardous". The Act directs the Administrator to publish a list which includes each hazardous air pollutant for which an emission standard should be established. These emission standards apply to both new and existing pollutant sources.

Seven substances have been listed as hazardous air pollutants. These are: asbestos, beryllium, mercury, vinyl chloride, benzene, inorganic arsenic, and radionuclides. Emission standards have been promulgated for the first four pollutants. Standards are being developed for benzene and radionuclides, and standards for arsenic are under study.

During 1983 and 1984, work will continue on screening chemicals to determine which ones to list as hazardous. The program will provide detailed assessments of health impacts, current emissions, public exposure, public risk (where possible), feasible emission reductions and associated costs, and regulatory options. This will lead to regulatory decisions for approximately nine pollutants in 1983.

EPA will develop a comprehensive strategy for controlling toxic air pollutants using both Section 112 and other sections of the Act. This strategy will take into account the considerable degree of control already achieved through regulation of particulates and volatile organic compounds under other sections of the Act.

In support of the Hazardous Air Pollutants regulatory program, emphasis will be placed on research to develop comprehensive health assessment documents for a substantial number of suspect chemicals. Specifically, 16 assessments begun in prior years will be completed in 1984 and 14 new assessments will be initiated. Research will continue to determine the presence, source concentration and fate of potentially hazardous air pollutants, and to assess the human health effects and risks associated with exposure to these pollutants. Also, in 1984, emphasis will be placed on improving the sampling and analysis of potentially hazardous air pollutants; to expand knowledge of the transport, transformation, and fate, of these pollutants; and to enhance the understanding of dose-response relationships.

Mobile Source Controls

The Act directs the Administrator to insure that certain prescribed standards for motor vehicles are being met. Several Federal requirements were established to meet this mandate. Recently, the mobile source air pollution control program initiated efforts to simplify the motor vehicle preproduction and presale requirements. These efforts will continue in 1984 and should result in the reduc-

tion of paperwork, reports, and tests currently performed by the automobile manufacturers -- without sacrificing environmental protection. The move toward increased emphasis on the compliance of vehicles in-use will continue in 1984. For example, additional emphasis will be placed on encouraging States to develop enforcement programs to curtail fuel switching and tampering.

Although most of the Auto Task Force relief measures will be completed in 1983, one item, the assessment of an alternative compliance program, will continue in 1984. If a replacement program is feasible, the appropriate legislation will be proposed and an appropriate program developed.

Statutory mandates for setting emission standards for particulates and nitrogen oxides from heavy duty engines will be initially completed in 1984. Revisions of these standards, if warranted, may take place before 1986. In addition, the revised hydrocarbon and carbon monoxide standards for heavy duty engines for 1988 and later model years would be developed in the 1983-85 period. Likewise, the light duty diesel particulate standard will be reassessed, if needed, during this period.

Research support to the mobile sources regulatory program will continue to focus on assessing human exposure to motor vehicle pollutants (especially CO), using personal monitors, and in comparing these population exposure profiles with readings from fixed monitoring stations.

Environmental Results

Air program activities have been directed toward the attainment and maintenance of NAAQS. The combined Federal-State-local effort at controlling air pollution has achieved a noticeable degree of success in improving ambient air quality across the Nation, with some areas attaining all standards. The Clean Air Act, as amended in 1977, requires specific results in those areas where air quality standards are exceeded. The Act requires that the standards be attained by the end of calendar year 1982. However, for ozone and carbon monoxide, attainment of these standards is to be as expeditious as possible, but in no case later than 1987. Extensions of the ambient air quality standard attainment dates for ozone and carbon monoxide beyond 1982 were granted to 29 States. In 1983, all necessary measures for control of ozone should be adopted by State and local governments. Their implementation will begin in 1983 in most States with intensive implementation expected during 1984.

Both NSPS and NESHAP sources currently exhibit low violation rates; the percentage of sources in violation and not meeting an acceptable compliance schedule is 3.1 percent and 1.4 percent respectively. EPA and the States will need to concentrate on ensuring these rates remain low. Compliance with these standards remains a high priority of the air enforcement program. EPA will continue to encourage delegation of existing and newly promulgated NSPS and NESHAP; however, a residual level of EPA enforcement activity will be required.

The potential problems associated with acid deposition continue to be of great national and international concern. Before any regulatory action can be taken, the major sources of acid rain precursors need to be identified; the magnitude, extent, and severity of acid deposition effects need to be assessed; and possible measures for mitigating these effects need to be evaluated. Research to respond to these gaps in the data base are included in the multi-media energy program.

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Program Activities	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase+ Decrease- 1984 vs. 1983
Number of pollutants covered by hazardous pollutants standards...	4	6	5	6	+1
Number of source categories covered by New Source * Performance Standards...	40	66	52	67	+15
NSPS Proposal.....	7	--	26	12	-14
NSPS Promulgation.....	4	--	19	18	-1
Number of automobile engine families awarded certificates for conformity with emission standards.....	302	250	250	250	--
Number of emission tests carried out for motor vehicles certification purposes.....	444	300	300	300	--
Number of fuel economy tests carried out.....	281	700	700	700	--
Assembly line testing test orders.....	25	17	17	17	--
Combined fuels/vapor recovery inspections...	14,000	25,000	15,000	15,000	--
Recall investigations...	42	35	38	44	+6
Numbers of compliance monitoring inspections conducted by EPA.....	2,093	1,835	1,835	1,694	-141
Number of compliance workshops presented to State and local agencies.....	52	40	50	60	+10
Number of training courses provided for State and local agencies.....	27	17	17	15	-2
National Ambient Air Quality Standards Proposal.....	--	--	PM, SO ₂ NO ₂	Pb	--
Promulgation.....	--	--	CO HC**	PM, NO ₂ SO ₂	--

* Standards for 33 source categories were developed prior to the August 1979 priority listing. Subsequently, promulgations were made for 7 source categories from the priority list between August 1979 and September 30, 1982; and 4 additional source categories were covered during the first quarter of 1983.

** Rescission



Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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Oxidants

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Scientific Assessment					
Salaries & Expenses	\$192.3	\$425.8	\$457.1	\$467.5	\$10.4
Research & Development	\$355.1	\$300.8	\$300.8	\$600.8	\$300.0
TOTAL	\$547.4	\$726.6	\$757.9	\$1,068.3	\$310.4
Technical Information & Liaison					
Salaries & Expenses	\$186.8	\$185.5			
Research & Development	\$6.9				
TOTAL	\$193.7	\$185.5			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$985.6	\$693.9	\$693.9	\$752.7	\$58.8
Research & Development	\$369.2	\$390.1	\$390.1	\$290.0	-\$100.1
TOTAL	\$1,354.8	\$1,084.0	\$1,084.0	\$1,042.7	-\$41.3
Health Effects					
Salaries & Expenses	\$1,085.2	\$1,138.7	\$1,138.7	\$1,177.1	\$38.4
Research & Development	\$4,130.9	\$1,952.2	\$1,952.2	\$1,910.9	-\$41.3
TOTAL	\$5,216.1	\$3,090.9	\$3,090.9	\$3,088.0	-\$2.9
Environmental Engineering & Technology					
Salaries & Expenses	\$565.2	\$761.7	\$1,172.6	\$1,138.9	-\$33.7
Research & Development	\$1,575.0	\$1,602.7	\$2,569.6	\$1,511.0	-\$1,058.6
TOTAL	\$2,140.2	\$2,364.4	\$3,742.2	\$2,649.9	-\$1,092.3
Environmental Processes & Effects					
Salaries & Expenses	\$1,509.7	\$1,375.4	\$1,441.8	\$1,763.1	\$321.3
Research & Development	\$5,898.0	\$2,632.0	\$2,982.0	\$2,180.2	-\$801.8
TOTAL	\$7,407.7	\$4,007.4	\$4,423.8	\$3,943.3	-\$480.5
TOTAL:					
Salaries & Expenses	\$4,524.8	\$4,581.0	\$4,904.1	\$5,299.3	\$395.2
Research & Development	\$12,335.1	\$6,877.8	\$8,194.7	\$6,492.9	-\$1,701.8
Oxidants TOTAL	\$16,859.9	\$11,458.8	\$13,098.8	\$11,792.2	-\$1,306.6

PERMANENT WORK YEARS

Scientific Assessment	3.8	5.5	6.5	6.5
Technical Information & Liaison	3.6	1.9		

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Oxidants

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Monitoring Systems & Quality Assurance	15.1	10.3	10.3	10.3	
Health Effects	13.8	16.6	16.6	16.6	
Environmental Engineering & Technology	9.3	6.7	11.8	11.5	-.3
Environmental Processes & Effects	22.1	18.9	20.9	19.3	-1.6
TOTAL PERMANENT WORKYEARS	67.7	59.9	66.1	64.2	-1.9
TOTAL WORKYEARS					

Scientific Assessment	5.7	8.0	9.0	9.0	
Technical Information & Liaison	5.1	3.6			
Monitoring Systems & Quality Assurance	18.9	14.8	14.8	14.8	
Health Effects	15.9	17.6	17.6	17.6	
Environmental Engineering & Technology	13.1	14.4	22.6	21.8	-.8
Environmental Processes & Effects	27.2	26.1	28.1	34.4	6.3
TOTAL WORKYEARS	85.9	84.5	92.1	97.6	5.5

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Oxidants

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop and Validate Air Quality Models.			
- Develop improved chemistry mechanisms for urban scale ozone model. (Env. Processes)	12/84	12/84	12/84
- Develop and validate the final regional scale ozone model. (Env. Processes)	12/86	12/86	12/86
Develop Health and Welfare Effects Information.			
- Assess ozone impacts on crops representing 90% of U.S. Acreage. (Env. Processes)	9/84	9/84	9/84
- Provide journal article on the effects of chronic NO ₂ exposure on host lung defenses, pulmonary function and structure in mice. (Health)	8/83	8/83	
- Provide journal article describing the response to O ₃ on otherwise normal individuals who have sensitive (responsive) airways. (Health)	12/83	12/83	12/83
- Provide journal article on regional dosimetry and species sensitivity to ozone. (Health)	12/84	12/84	12/84
Develop and Validate Measurement and Monitoring Methods.			
- Provide quality assurance support for Oxidant programs. (Monitoring)	12/82	12/82	12/84
- Provide final report from National Atmospheric Pollutant Background Network. (Monitoring)	6/84	6/84	6/84
Research and Assess Emission Reduction Technologies.			
- Report on design and construction of a flare testing facility (Env. Technology)	3/83		
- Report on the results of joint demonstration with a major truck manufacturing Company to evaluate micro-processor control device for VOC. (Env. Technology)	6/83		

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Oxidants

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Provide guidance on how to apply advanced heavy-oil, low NO _x burner to oil field steam generator. (Env. Technology)	12/83		
- Report on the cost and efficiency of improved VOC reduction technologies. (Env. Technology)	12/85	12/85	12/85
- Provide report on pilot-scale tests of reburning techniques on stationary combustors. (Env. Technology)		6/84	6/84
- Provide report on technical requirements for pellet fuel for NO _x and SO _x control from stoker boilers. (Env. Technology)		12/84	12/84
- Provide report on bench-scale tests of potential for NO _x reduction in industrial glass furnaces. (Env. Technology)			6/84

AIR

Oxidants

Budget Request

The Agency requests a total of \$11,792,200 and 64.2 permanent workyears for 1984, a decrease of \$1,306,600 and 1.9 permanent workyears from 1983. Included in this total is \$5,299,300 for Salaries and Expenses and \$6,492,900 for Research and Development, with an increase of \$395,200 and a decrease of \$1,701,800 respectively. This net decrease occurs primarily in the environmental engineering and technology program element. In addition, the decrease reflects the transfer of \$1,113,000 in exploratory research funds to the Intermedia program.

Program Description

The Clean Air Act, as amended in 1977 (the Act), requires the Environmental Protection Agency (EPA) to periodically re-evaluate the adequacy of National Ambient Air Quality Standards (NAAQS) based upon the most scientifically credible data base available at the time of review. Research is also needed to help the regulatory decision-makers, the regulated community and the Regional, State and local officials develop cost-effective control strategies and implementation procedures for the control of oxidants which include ozone, volatile organic compounds (VOCs), and nitrogen oxides (NO_x). The following objectives support these goals:

Objective 1. Develop and Validate Air Quality Models to Support Implementation, Maintenance and Enforcement of National Ambient Air Quality Standards (NAAQS). Research under this objective provides the air quality models, emissions data, monitoring tools, and technical strategies required by the Act. The results of this work are disseminated to the Regions, States, local governments and industry for use in the development of State Implementation Plans (SIPs) for the control of photochemical oxidants.

Objective 2. Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. A criteria document for health and welfare effects provides the primary documentation of scientific data for use in the review of existing ambient air quality standards. The entire process of updating a criteria document and proposing and finalizing changes to the existing standard is done at five-year intervals as specified in Sections 108 and 109 of the Act. This criteria document incorporates the data produced by the health program relating to the observable health effects from ozone and pollutant mixtures, and the crop loss information resulting from environmental effects research.

Objective 3. Develop and Validate Measurement and Monitoring Methods in Support of the Oxidants Program Requirements. New and improved air pollution methodologies and monitoring techniques are being developed and evaluated to determine air quality trends, compliance, and enforcement actions. Ambient, source, and exposure measurement methods are needed for criteria pollutants and important related pollutants.

Objective 4. Research and Assess Emission Reduction Technologies to Support Permitting, New Source Performance Standards (NSPS), and Compliance Activities. In order to promulgate cost-effective NSPS and provide assistance to EPA Regions, State and local officials in their permitting, enforcement and compliance activities, research must be conducted to identify design criteria for developing more reliable and less costly NO_x and VOC emission reduction technologies.

Objective 5. Provide Quality Assurance Support for the Oxidants Program Requirements. This is a long-term, continuing task in support of title 40, Part 58, which specifies mandatory quality assurance for State and local air monitoring stations. All measurements must be traceable to National Bureau of Standards standard reference methods (SRMs) for the purpose of providing good procedures, wherever possible, thereby ensuring that Agency decisions are backed by technical data that are accurate and precise.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$1,068,300 and 6.5 permanent workyears for this program, of which \$467,500 is for Salaries and Expenses and \$600,800 is for Research and Development. This reflects an increase of \$10,400 and \$300,000 respectively, which supports the need to apply increased resources to the intensive final stages of the ozone (photochemical oxidants) criteria document development.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The current Agency schedule for reviewing and updating the ozone NAAQS calls for final standard promulgation in January 1986. Thus, the final review draft of the ozone criteria document will be completed in July 1984 and published in 1985. This document provides the primary documentation of key scientific data needed for reviewing the existing standard.

1983 Program

In 1983, the Agency is allocating a total of \$757,900 and 6.5 permanent workyears to this program, of which \$457,100 is under the Salaries and Expenses appropriation and \$300,800 is for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The first external review draft of the revised criteria document for photochemical oxidants is being prepared for release to the public for comment by February 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$31,300 results from the following action:

-Reprogrammings. (+\$31,300) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$31,300 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$547,400 for this program, of which \$192,300 was under the Salaries and Expenses appropriation and \$355,100 was for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The second update of the criteria document for photochemical oxidants was initiated. In addition, technical support was provided to assist the Office of Air Quality Planning and Standards (OAQPS) in the regulatory proposal development, public comment review and final promulgation of a revised NO_x standard.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$193,700 for this program, of which \$186,800 was under the Salaries and Expenses appropriation and \$6,900 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$1,042,700 and 10.3 permanent workyears for this program, of which \$752,700 is for Salaries and Expenses and \$290,000 is for Research and Development. This reflects an increase of \$58,800 and a decrease of \$100,100 respectively. This net decrease results from the transfer of resources for the exploratory research program to the Intermedia program.

Develop and Validate Measurement and Monitoring Methods in Support of the Oxidants Program Requirements. Ten standard ultraviolet photometers, developed for use in monitoring ozone concentrations during field operations, will be delivered during the 1983-1986 time frame and distributed to the Regions for use as standard reference instruments for ozone measurements. Emphasis will be placed on evaluating existing, commercial VOC measuring instruments and preparing guidelines and operation manuals for use by EPA, State and local authorities.

Provide Quality Assurance Support for the Oxidants Program Requirements. The National Standards Laboratory and the National Audit Program will be maintained, and the repository of standard reference materials operated. Reference samples, gas samples, permeation devices and flow rates traceable to NBS standards will be supplied to the user community. The audit program will ensure that the data base used for regulatory decision-making is accurate, precise and reliable. The National Atmospheric Pollution Background Network will be completed in 1984. The data gathered from this network will be reduced, validated and entered into the National Aerometric Data Bank for use by the scientific and regulatory community. Short-term monitoring support will be provided to the OAQPS and the Regions for use in review of State Implementation Plans for air transport model development.

1983 Program

In 1983, the Agency is allocating a total of \$1,084,000 and 10.3 permanent workyears for this program, of which \$693,900 is under the Salaries and Expenses appropriation and \$390,100 for extramural purposes under the Research and Development appropriation.

Develop and Validate Measurement and Monitoring Methods in Support of the Oxidants Program Requirements. The emphasis of the monitoring program is on evaluating existing VOC monitoring instruments and preparing user guidelines and manuals for the use of these existing instruments. Two of the standard ultraviolet photometers are being delivered to selected Regions for use as standard instruments for calibration of field units.

Provide Quality Assurance Support for the Oxidants Program Requirements. The National Standards Laboratory and the National Audit Program are operating and supplying gas samples, permeation devices, reference analyses and flow rates traceable to NBS standards to the user community. The National Atmospheric Pollution Background Network is being operated with five stations as sufficient data have been obtained from the three discontinued stations. Short-term monitoring support is being supplied to OAQPS and the Regions for use in review of State Implementation Plans and for air transport model development.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,354,800 for this program, of which \$985,600 was under the Salaries and Expenses appropriation and \$369,200 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Measurement and Monitoring Methods in Support of the Oxidants Program Requirements. Research on monitoring systems for the measurement of ozone, nitrogen oxides and other oxidant precursors (e.g. VOCs) was conducted. One ultraviolet photometer was delivered to EPA for use in developing guidelines and manuals. Preliminary work was carried out on the development of a portable, low cost VOC monitor.

Provide Quality Assurance Support for the Oxidants Program Requirements. The repository of standard reference materials was maintained. Reference analyses, gas samples, permeation devices and flow rates traceable to the NBS standards were provided to the user community. The National Audit program was continued. In addition, the National Atmospheric Pollution Background Network operated eight stations in National Forests.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$3,088,000 and 16.6 permanent workyears for this program, of which \$1,177,100 is for Salaries and Expenses and \$1,910,900 is for extramural Research and Development activities. This reflects an increase of \$38,400 in Salaries and Expenses and a decrease of \$41,300 in Research and Development. This slight net decrease results from increased emphasis on clinical dose-response work in an effort to obtain more data on the acute effects of oxidant inhalation and to investigate the possible health risks to those persons who may be more sensitive to oxidant exposure which was offset by the transfer of long-term exploratory research funds to the Intermedia program.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The health research program has two major goals: 1) to provide data on a full range of health effects of O₃ and NO₂ exposure from human and animal studies; and 2) to provide better models to extrapolate animal data to humans.

EPA relies on animal test data in setting and revising standards for protecting human health under the Clean Air Act. Present extrapolation techniques do not always provide a reliable and quantitative correlation between animal and predicted human response. Therefore, improvement of these techniques is a priority need. Animal experiments will provide data on the functional, morphological, and biochemical changes occurring in young and adult rodents following six weeks of exposure to ozone and NO₂. Newly developed sophisticated animal tests will be used to measure subtle metabolic and biochemical deviations following oxidant exposure. These test results will provide a refined data base to develop a cost-effective, accurate model to extrapolate animal biochemical and metabolic responses to human effects. Human studies of oxidant removal in the nasal passages will support development of reliable extrapolation models.

1983 Program

In 1983, the Agency is allocating a total of \$3,090,900 and 16.6 permanent workyears to this program, of which \$1,138,700 is under the Salaries and Expenses appropriation and \$1,952,200 is for extramural Research and Development activities.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Mathematical models that can predict respiratory tract dose patterns of ozone and NO₂ are essential for extrapolation of effective pollutant concentrations between animals and man. In 1983, a validated mathematical model for ozone uptake is being completed. In addition, work is progressing to determine the sensitivity of different animal species to ozone at concentrations equivalent to those of interest in primary standard setting. This will improve the use of animal data in predicting human response to ozone.

Human dose-response studies are being conducted to describe changes in pulmonary function, biochemistry and immunology following acute exposure to ozone and NO₂. Emphasis is being placed on evaluating these effects in potentially sensitive persons, such as asthmatics. In vitro and in vivo examinations of biochemical and immunological changes are being initiated. The animal program is emphasizing the assessment of changes in pulmonary structure and function, blood, and host defense mechanisms following chronic exposures, particularly in young animals and those with pre-existing respiratory conditions.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$5,216,100 for this program, of which \$1,085,200 was under the Salaries and Expenses appropriation and \$4,130,900 was for extramural Research and Development activities.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Research focused on providing human and animal dose-response data, especially data on pulmonary function changes in healthy and potentially sensitive populations following oxidant inhalation. Accomplishments during 1982 included results from clinical studies which identified otherwise healthy people who are "hyperresponders" to ozone, and results from animal studies which describe alterations in blood lipid levels following chronic ozone exposure. An increase in the level of circulating blood lipids correlates with increased risk of atherosclerosis.

Research to develop better models to extrapolate animal effects data to humans resulted in the development of a mathematical model which predicts ozone and NO₂ transport patterns in human lungs using rodent dose-response data; and in in vitro and in vivo comparisons between human and animal lung tissue and sensitivity to damage from oxidants.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

In 1984, the Agency requests a total of \$2,649,900 and 11.5 permanent workyears for this program, of which \$1,138,900 is for Salaries and Expenses and \$1,511,000 is for Research and Development. This reflects decreases of \$33,700 and \$1,058,600, respectively. This reduction results from the transfer of resources for long-term exploratory research to the Intermedia program. This reduction also results from the completion of research on capture systems for spray painting and the completion of an evaluation of flares for the petrochemical industry. The research in these areas are at the stage where private industry can pursue further research.

Research and Assess Emission Reduction Technologies to Support Permitting, NSPS and Compliance Activities. VOC's are a major cause of the ozone non-attainment problem in widespread areas of the country. Reliable data on demonstrated, cost-effective and energy-efficient emission reduction technologies for many medium and small sources of VOC's are lacking. Research on optimizing VOC reduction technologies such as carbon adsorption, catalytic oxidation and thermal oxidation will be continued for a broad range of sources to support the development of NSPS and the establishment of SIP's.

Since NO_x is a primary pollutant, the regulations must be periodically updated. Therefore, the research and assessment of NO_x emission reduction technologies are needed. Prior research has proven that combustion modification methods can be effective for controlling NO_x as well as other emissions. Thus, these methods for reducing NO_x emissions and improving the performance of industrial furnaces will be evaluated. Specifically, a method for NO_x control and both NO_x and SO_x control will be evaluated; options of infurnace (post-flame) reburning for NO_x control on gas, oil and coal-fired bench scale combustors will be assessed; and an evaluation of a coal pellet stocker technology for field use with heavy-oil fuels will be completed. Combustion modification methods applicable to industrial glass furnaces will be evaluated for this industry. The evaluation of a heavy oil, low NO_x burners will be completed at pilot-scale. The results will be evaluated against a full-scale evaluation in conjunction with industry (100 x 10⁶ BTU/hr) to determine if cost and efficiency can be improved by using EPA developed technology, thereby making regulatory compliance more reasonably achievable.

Fundamental research to develop a technical basis for estimating achievable NO_x emissions from current and future combustion equipment and fuels and research on the formation and destruction of NO_x will be conducted to support the development of emerging emission reduction technologies. During 1984, research on understanding the controlling chemistry and mixing processes of in-furnace, NO_x reduction (reburning) as applied to oil-fired furnaces will be pursued for process equipment which typically burn heavy residual fuel oil. This research supports the development of an industrial boiler NSPS.

1983 Program

In 1983, the Agency is allocating a total of \$3,742,200 and 11.8 permanent workyears to this program, of which \$1,172,600 is under the Salaries and Expenses appropriation and \$2,569,600 is for extramural purposes under the Research and Development appropriation.

Research and Assess Emission Reduction Technologies to Support Permitting, NSPS and Compliance Activities. VOC emission reduction measures for which evaluations are being conducted include carbon adsorption, thermal oxidation and catalytic oxidation. Research on capture systems (including hoods) is being completed as is the evaluation of flares for the petrochemical industry. Collection of emission data is being continued for metal coating operations and on inhalable particulates from metallurgical sources.

In the NO_x emission reduction areas, combustion modification methods for reducing NO_x and improving the performance of industrial furnaces are being assessed. Research on the heavy oil, low NO_x burner is being conducted. Fundamental combustion research is focusing on elucidating the important intermediates and reaction paths involved in the formation of NO_x in fossil fuel firing.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,377,800 results from the following action:

-Restructuring. (+\$1,377,800) The Congressionally approved restructuring eliminated the Gases and Particles, and Oxidants - Energy program elements and moved them into the Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory program effort and the end products are air regulations. The change to the Salaries and Expenses appropriation was +\$410,900 and the change to the Research and Development appropriation was +\$966,900.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,140,200 for this program, of which \$565,200 was under the Salaries and Expenses appropriation and \$1,575,000 was for extramural purposes under the Research and Development appropriation.

Research and Assess Emission Reduction Technologies to Support Permitting, NPS and Compliance Activities. Research focused on collecting emission data on metal coating operations and on inhalable particulates from metallurgical sources. Research also focused on evaluating emission reduction technologies such as carbon adsorption, thermal oxidation, catalytic oxidation, capture systems and flares. A pilot-scale testing facility for flares was constructed.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$3,943,300 and 19.3 permanent workyears for this program, of which \$1,763,100 is for Salaries and Expenses and \$2,180,200 is for Research and Development. This reflects an increase of \$321,300 and a decrease of \$801,800, respectively. The net decrease results from the following: an overall increase in the ozone crop loss assessment program which results primarily from a transfer of resources from the gases and particles crop loss assessment program, the completion of biogenic emissions research and the transfer of long-term exploratory research resources to the Intermedia program.

Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of NAAQS. The primary focus of this program is the development of air models needed by OAQPS, the Regions, and State, local and industry officials. Urban scale air quality simulation models for ozone will be validated and refined for dissemination to the user community. In order to address recently observed inadequacies in the urban modeling predictions, the program will develop a chemical mechanism that quantitatively describes ozone formation in the ambient air. Research to develop a more accurate chemical mechanism that describes the atmospheric chemistries of major VOCs, predicts the effects of organic composition changes on ambient ozone and accurately predicts formation of NO₂ and other non-ozone oxidants will be conducted. Improving the ozone chemistry will result in more accurate urban model predictions and thus will allow for the development of more cost-effective oxidant control strategies.

A second generation regional scale model for ozone will be developed. Major emphasis will be placed on testing the accuracy of the regional ozone model developed from the Northeast Regional Oxidant Study (NEROS). The major deficiencies in the various modular components of the regional model, such as the chemistry, meteorology and emissions submodules, will be identified and corrected. The model will allow decision-makers to evaluate the impact of oxidant control plans on individual cities by determining the contribution of regional pollution to urban areas. In addition, the regional model will be adapted for use in dealing with other regional scale pollution problems such as particulates and visibility.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Through the National Crop Loss Assessment Network (NCLAN), the economic impacts of ozone on the yield of major crop species (covering 90% of the United States crop acreage) will be determined under conditions that are typical of ambient environments. This data will be used to build on the dose-response data collected previously and to conduct a national economic assessment of ozone impacts on crop loss. Since variations in environmental factors such as climate and soil moisture can influence the effect of a given air pollution level on agricultural crops, research will address the interactions of these factors to allow a region-by-region assessment of the economic impacts of oxidants in future years.

1983 Program

In 1983, the Agency is allocating a total of \$4,423,800 and 20.9 permanent workyears to this program, of which \$1,441,800 is under the Salaries and Expenses appropriation and \$2,982,000 is for extramural purposes under the Research and Development appropriation.

Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of NAAQS. A number of urban scale air quality models for ozone are being developed and validated for use in the development and implementation of SIPs. Studies of several existing chemical mechanisms suggest that current chemical mechanisms used in air quality models can result in erroneous ozone predictions and could be introducing errors when used in air quality models. Thus, the major research effort in 1983 will focus on smog chamber studies where mixtures of nitrogen oxides and VOCs (including aromatic compounds) will be irradiated to form ozone.

In addition, air quality data obtained from a major field study in the Northeast is being used to validate a regional scale photochemical model. When validated, the regional photochemical model is expected to play a major role in assessing the overall strategies for oxidant control for large areas of the United States.

Research studying the contribution of biogenic emissions to the total ambient burden of ozone is being completed. A model, laboratory and field program is being conducted to develop emission factors representing major biogenic compounds; to assess the transport and transformation processes; and to calculate the potential amount of ozone that forms as a result of the biogenic emissions. This information on biogenic emissions will be used in assessing the regional inventory of VOC levels that potentially affect major urban areas and in developing more adequate control technologies for urban areas.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Field research on the development of a nationwide data base through the National Crop Loss Assessment Network (NCLAN) is being conducted to assess the impact of ozone on the yield of major agronomic crops. Dose-response data are being developed for a wide variety of crop types and exposure doses.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$416,400 results from the following actions:

-Congressional Actions. (+\$416,400) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$66,400) This increase includes +\$66,400 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(+\$350,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports the National Crop Loss Assessment Network to assess crop loss from ozone exposure for two additional crops.

1982 Accomplishments

In 1982, the Agency obligated a total of \$7,407,700 for this program, of which \$1,509,700 was under the Salaries and Expenses appropriation and \$5,898,000 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Air Quality Models to Support the Implementation, Maintenance, and Enforcement of NAAQS. The research program to develop a regional scale model for ozone continued. A regional model was formulated and tested against portions of the Northeast Regional Oxidant Study (NEROS) air data base and improved for accuracy where necessary. The regional model, when fully developed and validated, can be used by State and Regional officials to calculate the extent of ozone transport from one area to another. While the regional model was formulated to predict regional ozone levels, it was designed to be used for modeling regional scale fine particles, sulfate concentration, and transport as well.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Field and laboratory research addressed the role of environmental factors (including soil moisture) on the growth and yield responses of crops to ozone, since these factors greatly influence the effects of air pollution. The data from previous field research was organized into dose-response functions. Using these data, technical information and assistance was provided to the Agency's program and Regional Offices, and to State and local governments, on damages associated with the effects of oxidants on economically important agricultural crops. An economic modeling approach was initiated to assess the costs associated with ozone pollution.

AIR

Hazardous Air Pollutants

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

Scientific Assessment						
Salaries & Expenses	\$888.2	\$1,333.2	\$1,359.9	\$1,481.1	\$121.2	
Research & Development	\$501.8	\$675.0	\$675.0	\$1,775.0	\$1,100.0	
TOTAL	\$1,390.0	\$2,008.2	\$2,034.9	\$3,256.1	\$1,221.2	
Technical Information & Liaison						
Salaries & Expenses	\$91.5	\$85.9				
Research & Development	\$1.8					
TOTAL	\$93.3	\$85.9				
Monitoring Systems & Quality Assurance						
Salaries & Expenses	\$2,021.4	\$1,729.9	\$1,729.9	\$1,847.2	\$117.3	
Research & Development	\$1,666.4	\$1,013.9	\$1,513.9	\$1,355.0	-\$158.9	
TOTAL	\$3,687.8	\$2,743.8	\$3,243.8	\$3,202.2	-\$41.6	
Health Effects						
Salaries & Expenses	\$1,179.9	\$1,476.1	\$1,609.0	\$1,804.0	\$195.0	
Research & Development	\$1,391.8	\$865.8	\$865.8	\$753.5	-\$112.3	
TOTAL	\$2,571.7	\$2,341.9	\$2,474.8	\$2,557.5	\$82.7	
Environmental Engineering & Technology						
Salaries & Expenses	\$197.8					
Research & Development	\$524.7					
TOTAL	\$722.5					
Environmental Processes & Effects						
Salaries & Expenses	\$291.6	\$316.6	\$316.6	\$321.2	\$4.6	
Research & Development	\$1,200.1	\$498.0	\$498.0	\$542.3	\$44.3	
TOTAL	\$1,491.7	\$814.6	\$814.6	\$863.5	\$48.9	
TOTAL:						
Salaries & Expenses	\$4,670.4	\$4,941.7	\$5,015.4	\$5,453.5	\$438.1	
Research & Development	\$5,286.6	\$3,052.7	\$3,552.7	\$4,425.8	\$873.1	
Hazardous Air Pollutants	TOTAL	\$9,957.0	\$7,994.4	\$8,568.1	\$9,879.3	\$1,311.2

PERMANENT WORKYEARS

Scientific Assessment	18.6	21.0	24.0	24.0	
Technical Information & Liaison	1.4	1.2			

AIR

Hazardous Air Pollutants

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Monitoring Systems & Quality Assurance	32.6	30.1	29.6	29.6	
Health Effects	20.6	21.1	25.1	25.1	
Environmental Engineering & Technology	2.3				
Environmental Processes & Effects	6.9	3.9	3.9	3.9	
TOTAL PERMANENT WORKYEARS	82.4	77.3	82.6	82.6	
TOTAL WORKYEARS	-----				
Scientific Assessment	23.7	29.6	32.2	32.6	.4
Technical Information & Liaison	1.9	2.1			
Monitoring Systems & Quality Assurance	37.3	34.0	33.5	33.5	
Health Effects	22.3	23.7	27.7	27.7	
Environmental Engineering & Technology	5.3				
Environmental Processes & Effects	6.9	3.9	3.9	3.9	
TOTAL WORKYEARS	97.4	93.3	97.3	97.7	.4

AIR

Hazardous Air Pollutants

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Prepare Health and Risk Assessments			
- Complete 9 screening assessments. (Sci. Assess.)	3/83	3/83	
- Complete 7 full assessments for use in listing decisions (Sci. Assess.)	6/83	6/83	
- Complete sixteen full assessments for use in listing decisions (Sci. Assess.)		3/84	3/84
- Complete fourteen full assessments for use in listing decisions (Sci. Assess.)			9/85
Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate			
- Report on intercomparison of methods at Non-Criteria Pollution Center (Monitoring)		9/83	9/84
- Report on organic compounds in indoor air (Monitoring)	9/83	9/83	
- Journal article on the comparative mutagenic and carcinogenic activity of sources (Health)	8/83	8/83	
- Journal article on the effects of thirteen HAPs on host defense and metabolism in animals (Health)	1/84	1/84	1/84
- Determine wet and dry removal of HAPs (Env. Processes)	4/84	4/84	4/84
- Determine decomposition rates for HAPs (Env. Processes)	6/85	6/85	6/85
- Report on field tests for catalytic oxidation (Env. Technology)	12/83		
- Report on measurements of emissions from a ferroalloy production facility (Env. Technology)	12/83		
Provide Quality Assurance Support			
- Issue Standard Reference Materials for 2 HAPs per year from OAQPS priority list (Monitoring)	9/82	9/83	9/84

AIR

Hazardous Air Pollutants

Budget Request

The Agency requests a total of \$9,879,300 and 82.6 permanent workyears for 1984, an increase of \$1,311,200 from 1983. Included in this total is \$5,453,500 for Salaries and Expenses and \$4,425,800 for Research and Development, with an increase of \$438,100 and \$873,100 respectively. This increase is in the scientific assessment program element. In addition, this increase is partially offset by the transfer of \$297,100 in exploratory research funds to the Intermedia program.

Program Description

The Hazardous Air Pollutants (HAP) research program responds to the regulatory needs of the Clean Air Act under Sections 111(d) and 112. The program addresses: (a) an assessment of the human health risks associated with exposure to certain potentially hazardous chemicals in the ambient air; (b) the sources, concentrations, and transport and fate of these chemicals; and (c) the technical feasibility and costs of reducing human exposure to those chemicals. Chemicals are identified and screened to determine if they warrant prioritization for health assessment consideration. The HAP program also includes resources to provide quality assurance support to assure that the collection of data is of acceptable accuracy and precision. The following objectives support these goals:

Objective 1. Prepare Health and Risk Assessments to Support Regulation of Hazardous Air Pollutants. The Office of Research and Development (ORD) responds to the needs of the Office of Air Quality Planning and Standards (OAQPS) to conduct chemical-specific risk assessments. These assessments provide the health and environmental basis from which a determination can be made if the exposure to a pollutant can reasonably be expected to result in irreversible or incapacitating reversible illness. The assessments are then combined with OAQPS preliminary exposure analyses to provide quantitative estimates of the degree of population risk and disease incidence.

Objective 2. Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. Under this objective, ORD provides the scientific information to OAQPS on what contaminants are present in the air; their chemical concentration, transport, transformation, and persistence in the atmosphere; and the nature of their adverse health effects. This information provides the basis for decisions made during the preliminary exposure analysis as to whether or not risk assessments need to be conducted. Research is conducted in response to information needs that have become apparent during the production of the exposure analysis and health assessment documents.

Objective 3. Provide Quality Assurance Support of Hazardous Air Pollutants Program Requirements. The Quality Assurance activity provides standard reference materials that permit decisions to be made with confidence that the research results are not spurious and that chemical and physical determinations of pollutant fate, transport, and transformation are not in error.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$3,256,100 and 24.0 permanent workyears for this program, of which \$1,481,100 is for Salaries and Expenses and \$1,775,000 is for Research and Development. This reflects an increase of \$121,200 and \$1,100,000 respectively, to intensify efforts to prepare health assessments for use by OAQPS in hazardous air pollutant (HAP) listing decisions.

Prepare Health and Risk Assessments to Support Regulation of Hazardous Air Pollutants. The current Agency strategy for evaluating hazardous air pollutants calls for assessing the toxicity of thirty-seven chemical substances, and for reviewing the health basis for existing regulations for three other substances. The length of time to complete an assessment, from eighteen to twenty-four months, depends on several factors: the severity of toxicity, quality and amounts of scientific data available, and the diversity of scientific opinions on how to assess the compound's potential risk. By accelerating the assessment program we expect to have complete assessments for the entire list of chemicals referenced above ready for Science Advisory Board review, and OAQPS use, by the end of 1985. Specifically, sixteen comprehensive assessments begun in prior years will be completed in 1984 and fourteen new assessments initiated in 1984 will be completed in 1985. Also, a re-evaluation of the health basis for one regulated chemical (beryllium) will be completed.

1983 Program

In 1983, the Agency is allocating a total of \$2,034,900 and 24.0 permanent workyears to this program, of which \$1,359,900 is under the Salaries and Expenses appropriation and \$675,000 is for extramural purposes under the Research and Development appropriation.

Prepare Health and Risk Assessments to Support Regulation of Hazardous Air Pollutants. Seven assessments begun in prior years are being completed, while six new ones are being initiated. A review of the health basis for one previously regulated pollutant (mercury) is being started. Refinements to the assessment methodologies, especially for carcinogenicity are being completed.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$26,700 results from the following actions:

-Congressional Action. (+\$265,700) This increase includes +\$265,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$239,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$239,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,390,000 for this program, of which \$888,200 was under the Salaries and Expenses appropriation and \$501,800 was for extramural purposes under the Research and Development appropriation.

Prepare Health and Risk Assessments to Support Regulation of Hazardous Air Pollutants. Out of twelve health assessments begun in prior years nine were submitted for public comment via Federal Register notice and SAB review. One of the nine was cleared by the SAB. In addition, eight new assessments were initiated. An effort to refine existing health assessment methods (specifically for carcinogenicity) were initiated.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$93,300 for this program, of which \$91,500 was under the Salaries and Expenses appropriation and \$1,800 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$3,202,700 and 29.6 permanent workyears for this program of which \$1,847,200 is for Salaries and Expenses, and \$1,355,000 is for Research and Development. This reflects an increase of \$117,300 and a decrease of \$158,900 respectively. This net decrease reflects an increased emphasis on developing new monitoring methods, which was offset by the completion of indoor air characterization studies and the transfer of resources for exploratory research to the Intermedia program.

Develop Information on Health, Emission Reduction Technologies, Monitoring and Transport and Fate to Support HAP Regulatory Activities. In response to the need for a more coordinated effort to monitor non-criteria contaminants at the Regional, State, and local level, ORD will maintain a non-criteria monitoring station in Philadelphia and plans to expand the program to establish three other stations. These stations will function as a focal point for the development and evaluation of field and laboratory methodology to permit the characterization of urban and non-urban atmospheres and will provide the mechanism for any trend analysis required. Also, these stations will allow Regional, State and local agencies to evaluate their existing methods and will provide a training center for personnel. Methods selected for study will include direct gas chromatographic analysis and the concentration of contaminants using selective polymer adsorbents (e.g., Tenax) and cryogenic trapping.

Stationary source methodology will be evaluated and validated to support the regulatory activity. This will involve measurement of instrument drift, establishing control limits, defining out of control limits and specifying corrective action and alternate methods to minimize down time.

In ambient air, the focus will be on developing and assessing sampling/concentration methods and developing advanced methods of analysis. The advanced methods to be evaluated for specific HAPs are Mass Spectrometry/Mass Spectrometry (MS/MS), Tuneable Atomic Line Molecular Spectrometry (TALMS) and gas chromatography/Fourier Transfer Infrared Spectrometry (GC/FTIR).

Provide Quality Assurance Support for HAP Program Requirements. A repository for reference samples will be expanded and maintained. Quality Assurance guidelines will be developed detailing the procedures and how to apply these procedures to specific hazardous air pollutant problems for use by Region, and State, and local laboratories. Audits of Regional, State, and local government laboratories will be performed. Standard Reference Materials (SRM's) traceable to the National Bureau of Standards (NBS) will be developed.

1983 Program

In 1983, the Agency is allocating a total of \$3,243,800 and 29.6 permanent workyears for this program, of which \$1,729,900 is under the Salaries and Expenses appropriation, and \$1,513,900 is under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. As a cooperative effort, the first non-criteria monitoring station is being established in Philadelphia to provide for the characterization of an urban, industrial pollutant atmosphere. In 1983, we are conducting a study to characterize the types and concentrations of indoor air pollution, especially outgassing of building materials in buildings that the public has access to (e.g., office buildings, hospitals, schools). The results of this study are being compared to previous studies.

Provide Quality Assurance Support for HAP Program Requirements. SRM's are being validated and issued for the methods mentioned above (formaldehyde, acrylonitrile). The sample repository is being maintained and quality assurance performance audits are being conducted for Regions and local governments as requested. SRM's for asbestos will be issued in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$500,000 results from the following action:

-Congressional Action. (+\$500,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports characterizing indoor air which was targeted as a high priority action by Congress in the Conference Report on our 1983 Appropriation's Bill.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,687,800, of which \$2,021,400 was under the Salaries and Expenses appropriation, and \$1,666,400 was for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. In support of the stationary source methodology, a strategy document describing sampling and analysis techniques for specific industries was prepared for OAQPS. The laboratory study report on formaldehyde completed final peer review.

ORD conducted a pilot study in the Washington D.C. area to characterize the types and concentrations of indoor air pollution. In the selection of the types of buildings used in this study we were assisted by the National Institute of Building Sciences (NIBS). NIBS also helped determine the types of building materials used in the buildings selected.

A cryogenic sampler was developed to enhance our ability to analyze ambient air samples. This instrument, which permits trapping of volatile organics at different temperatures, allows much greater precision than that obtained using fixed temperature trapping.

Provide Quality Assurance Support for HAP Program Requirements. Benzene and perchloroethylene SRM's were issued. Four audits were conducted on EPA source test contractors. A report on the joint NBS/EPA Asbestos Standard Meeting was issued. A report was issued in the Laboratory Intercomparison Program for air pollution measurements. The results indicated acceptable levels on precision and accuracy for the audited laboratories.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$2,557,500 and 25.1 permanent workyears for this program, of which \$1,804,000 is for Salaries and Expenses, and \$753,500 is for Research and Development. This reflects an increase of \$195,000 and a decrease of \$112,300 respectively. This net increase results from increased intramural emphasis on dose-response studies of the respiratory toxicity of organic vapors and on the development of better animal models to predict respiratory and neurologic toxic effects of HAPs, and a decrease in extramural resources due to a transfer of exploratory research funds to the Intermedia program.

Develop Information on Health, Emission Reduction Technologies, Monitoring and Transport and Fate to Support HAP Regulatory Activities. The health research program for this objective has three goals: (1) to develop and validate methods to produce dose-response data on the toxic effects of HAPs; (2) to produce dose-response data on the toxic effects of HAPs; and (3) to develop models which improve our ability to use dose-response data in risk assessments.

Methods to be developed will be designed to provide dose-response data on the genetic, developmental, and neurotoxic effects of HAPs. Emphasis will be placed on the toxic components of gaseous-aerosol complex mixtures. Chemicals will be identified which adversely affect reproduction and/or development, or which have toxic effects upon the nervous system. Studies will provide information on the toxicity of airborne chemicals presumed to be HAPs. This information will contribute to risk assessments needed by OAQPS to identify and regulate HAPs.

In dose-response toxicological research, chemicals selected by OAQPS will be studied to determine their toxicity to respiratory mechanisms. The mutagenic and carcinogenic activity of five potential HAPs will be determined. The effects of chemicals suspected as being hazardous to the nervous system will be studied because, due to their chemical structures, many potential HAPs evidence early nervous system effects which may become progressively worse with increasing dosages and which are likely to be chronic effects.

Animal models of respiratory physiology and function will be developed to provide more reliable methods for estimating doses to critical lung tissues. Models of neurologic toxicity will be developed involving physical, chemical and behavioral tests to predict human responses to insult from potential HAPs. Dose-response data are needed for use in risk assessments of HAPs, and better extrapolation models will improve the use of such data in the risk assessment process.

1983 Program

In 1983, the Agency is allocating a total of \$2,474,800 and 25.1 permanent workyears to this program, of which \$1,609,000 is under the Salaries and Expenses appropriation, and \$865,800 is for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. Prior emphasis on the carcinogenic potential of HAPs has been broadened to include other health endpoints such as mutagenic, reproductive, and neurologic effects. Reports of dose-response data are forthcoming on the mutagenic potential of ambient air, of organic gases and vapors in urban ambient air, and of ambient air near stationary sources. Bioassay techniques are also being developed which will provide dose-response data more rapidly, reliably, and inexpensively. The genetic, respiratory, and neurologic toxicity of chemicals selected by OAQPS are being studied. Biological models are being developed which will provide better methods for extrapolating data on genetic toxicology from animal tests to predict human effects as well as better methods for extrapolating from observed effects at high doses to those at low doses.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$132,900 results from the following action:

-Congressional Action. (+\$132,900) This increase includes +\$132,900 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,571,700 for this program, of which \$1,179,900 was under the Salaries and Expenses appropriation, and \$1,391,800 was for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support the HAP Regulatory Activities. Emphasis was placed on development of bioassays for identification and screening of HAPs, primarily with carcinogenesis and mutagenesis as endpoints. Studies were performed to obtain dose-response data on HAP review for support of regulation development and review, and the development of models was begun to improve the Agency's capability to perform risk assessments based on data obtained from animal studies.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1983 Program

The research in this program has been transferred to the Air Oxidants program for 1983.

1982 Accomplishments

In 1982, the Agency obligated a total of \$722,500 to this program, of which \$197,800 was under the Salaries and Expenses appropriation, and \$524,700 was for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reductions Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. In 1982, emphasis was placed on collecting emission data and evaluating emission reduction technologies to assist OAQPS in the review and development of NESHAPS. An evaluation of the effectiveness of catalytic oxidation in controlling volatile organic compound (VOC) emissions was conducted. Field tests for catalytic incinerators were performed. The results indicated that the technology has significant potential for reducing VOCs, but consistent performance was difficult to achieve. Measurements of emissions from a ferroalloy production facility were taken, and a demonstration and evaluation of a technology to reduce emissions was conducted and shown to be highly effective and reliable.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$863,500 and 3.9 permanent workyears, of which \$321,200 is for Salaries and Expenses and \$542,300 is for Research and Development. This request represents an increase of \$4,600 and \$44,300 respectively. This reflects increased emphasis on characterizing HAPs in the ambient air.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. Research on the atmospheric transport, transformation, and fate of hazardous pollutants will support the needs of the Office of Air Quality Planning and Standards. Studies using predictive transport models will identify innocuous chemicals which, after being emitted, are chemically transformed into more hazardous air pollutants. The resultant chemicals will be identified and the transformation process determined through simulated photochemical reactions in smog chambers. Research will be conducted to determine the rates of physical loss of HAPs from the atmosphere through dry deposition and wet removal. The ambient air characterization study in ten urban areas will continue in an effort to describe the daily, weekly, and seasonal concentration variations and the movement of HAP from source to receptor. A preliminary study in this area will provide information to enable researchers to determine periods when peak concentrations of HAPs occur.

Information from these studies will enhance our understanding of selected HAPs relative to: determining trends for ambient volatile organic HAPs; determining if additional transport, transformation, and fate studies are warranted; and providing important input into developing exposure/risk assessments.

1983 Program

In fiscal year 1983, the Agency is allocating a total of \$814,600 and 3.9 permanent workyears for this program, of which \$316,600 is under the Salaries and Expenses appropriation, and \$498,000 is for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. Research to determine photolytic decomposition rates and their rate of physical loss from the atmosphere is being conducted. This research stresses dry and wet deposition removal for additional HAPs to meet the needs of the Office of Air Quality Planning and Standards. Atmospheric studies to characterize the distribution and concentration of trace volatile organic compounds are scheduled in ten major urban areas to explain the daily, weekly, and seasonal concentration variations and to describe the movement of HAPs from source to receptor. A project is being initiated using predictive structure activity models to identify and screen those pollutants which, after being emitted into the atmosphere, are chemically transformed into hazardous secondary products.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In fiscal year 1982, the Agency obligated \$1,491,700 for this program of which \$291,600 was under the Salaries and Expenses appropriation, and \$1,200,100 was for extramural purposes under the Research and Development appropriation.

Develop Information on Health, Emission Reduction Technologies, Monitoring, and Transport and Fate to Support HAP Regulatory Activities. A data base was compiled summarizing the current state of knowledge of volatile organic compounds in the ambient air and photolytic decomposition rates were determined for a selected number of HAPs. Research was conducted on some HAPs having long atmospheric residence times to determine their rates of physical loss from the atmosphere through dry and wet deposition. Preliminary ambient air characterization studies were concluded in ten urban areas for a selected number of potentially hazardous volatile organic compounds as an initial step towards mapping their natural, spatial, and temporal variabilities. Reaction rate and product formation studies were expanded to include additional HAPs in accordance with the needs of OAQPS.

AIR

Mobile Sources

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Scientific Assessment					
Salaries & Expenses	\$24.7	\$50.2	\$50.2	\$51.7	\$1.5
Research & Development		\$25.0	\$25.0	\$425.0	\$400.0
TOTAL	\$24.7	\$75.2	\$75.2	\$476.7	\$401.5
Technical Information & Liaison					
Salaries & Expenses	\$34.3	\$21.0			
TOTAL	\$34.3	\$21.0			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$704.8	\$664.4	\$664.4	\$545.5	-\$118.9
Research & Development	\$572.2	\$1,039.7	\$1,039.7	\$338.4	-\$701.3
TOTAL	\$1,277.0	\$1,704.1	\$1,704.1	\$883.9	-\$820.2
Health Effects					
Salaries & Expenses	\$1,602.8	\$816.4	\$816.4	\$565.3	-\$251.1
Research & Development	\$3,492.6	\$552.0	\$1,552.0	\$256.7	-\$1,295.3
TOTAL	\$5,095.4	\$1,368.4	\$2,368.4	\$822.0	-\$1,546.4
Environmental Processes & Effects					
Salaries & Expenses	\$791.7	\$482.6	\$482.6	\$496.9	\$14.3
Research & Development	\$965.5	\$825.2	\$1,175.2	\$403.9	-\$771.3
TOTAL	\$1,757.2	\$1,307.8	\$1,657.8	\$900.8	-\$757.0
TOTAL:					
Salaries & Expenses	\$3,158.3	\$2,034.6	\$2,013.6	\$1,659.4	-\$354.2
Research & Development	\$5,030.3	\$2,441.9	\$3,791.9	\$1,424.0	-\$2,367.9
Mobile Sources TOTAL	\$8,188.6	\$4,476.5	\$5,805.5	\$3,083.4	-\$2,722.1
PERMANENT WORKYEARS					

Scientific Assessment	.5	1.0	1.0	1.0	
Technical Information & Liaison	.7				
Monitoring Systems & Quality Assurance	10.9	7.0	7.0	5.3	-1.7
Health Effects	10.7	7.7	6.1	3.7	-2.4
Environmental Processes & Effects	12.5	6.2	6.2	6.2	
TOTAL PERMANENT WORKYEARS	35.3	21.9	20.3	16.2	-4.1

AIR

Mobile Sources

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

TOTAL WORKYEARS					
Scientific Assessment	.5	1.0	1.0	1.0	
Technical Information & Liaison	1.9	.1			
Monitoring Systems & Quality Assurance	14.1	11.0	11.0	8.0	-3.0
Health Effects	14.3	11.4	8.8	7.4	-1.4
Environmental Processes & Effects	18.3	12.2	12.2	12.2	
TOTAL WORKYEARS	49.1	35.7	33.0	28.6	-4.4



AIR

Mobile Sources

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Assess the Health Risks and Exposure to Carbon Monoxide			
- Complete CO criteria document (Scientific Assessment)			12/86
- Provide journal article on validated equations predicting COHb formation during CO inhalation at rest and exercise (Health)	6/85	6/85	6/85
- Provide journal article on pre-anginal events of left ventricular function in patients with ischemic heart disease exposed to CO (Health)	6/85	6/85	6/85
- Development of hybrid personal exposure monitor combining data logger and CO sensing cell (Monitoring)	8/82		
- Measure personal air and breath CO of residents of Washington, D.C. and Denver (Monitoring)	9/84	9/84	
Assess Health Risks and Exposure to Unregulated Mobile Pollutants			
- Provide final report on intratracheal cancer studies using diesel exhaust materials (Health)	12/83	12/83	12/83
- Provide journal article on target organ metabolism/genotoxicity of nitro-PAHs found in diesel particles (Health)	10/84	10/84	10/84
- Provide journal article on dermal exposure to diesel extracts (Health)	10/84	10/84	10/84
- Determination of volatile organic compounds in gasoline fueled vehicle emissions (Env. Processes)	10/83	10/83	10/83

AIR

Mobile Sources

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Determination of pollutant emission factors for in-use tractor-trailers, buses, and heavy duty delivery trucks (Env. Processes)	9/84	9/84	9/84
- Evaluation of criteria pollutant emissions from vehicles as a function of temperature (Env. Processes)		9/84	9/84
- Analyze activity pattern data base for use in general models of exposure (Monitoring)		6/84	
- Complete risk assessment for diesel particulates (Scientific Assessment)		12/84	
Collect and Maintain Data in Support of the Fuel and Fuel Additives Program			
- Provide report to OMSAPC on the use of tier genetic bioassays in evaluating unregulated emissions (Health)	10/83	10/83	10/83
- Provide journal article on the mutagenicity of volatile and gaseous organic emissions from mobile sources (Health)	10/84	10/84	10/84
- Provide journal article on new methods for short-term genotoxic bioassay of mobile source emissions (Health)	12/84	12/84	12/84
- Issue annual fuel usage report and updated list of fuels and fuel additives (Monitoring)	8/83	8/84	8/85
Provide QA Support for Mobile Sources			
- Evaluate accuracy and precision of CO personal exposure monitors (Monitoring)	8/83		

AIR

Mobile Sources

Budget Request

The Agency requests a total of \$3,083,400 and 16.2 permanent workyears for 1984, a decrease of \$2,722,100 and 4.1 permanent workyears from 1983. Included in this total is \$1,659,400 for Salaries and Expenses and \$1,424,000 for Research and Development, a decrease of \$354,200 and \$2,367,900, respectively. This net decrease occurs primarily in the health effects program element. In addition, the decrease reflects the transfer of \$480,500 in exploratory research funds to the Intermedia program.

Program Description

Title II of the Clean Air Act, as amended in 1977, requires the Agency to prescribe emission standards for carbon monoxide, (CO) hydrocarbons, and oxides of nitrogen for heavy-duty and light-duty vehicles. In order to set justifiable and cost-effective standards, the Agency requires information on the chemical composition of fuels, fuel additives, and diesel and gasoline exhausts. Also required is information on the exposure of drivers, passengers and the population at large to motor vehicle pollutants, the effects of that exposure, and the risks of sustaining continued exposure. The Clean Air Act also requires the Agency to periodically reevaluate the adequacy of the National Ambient Air Quality Standards (NAAQS) for CO based upon the most scientifically credible data available.

Objective 1. Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. Work in this objective includes determining population exposure profiles to carbon monoxide (CO) using personal monitors and developing a data base for evaluating the impact of CO on cardiovascular performance and neurobehavior in normal and susceptible humans. The Administrator must evaluate the NAAQS for CO every five years as provided by Section 109 of the Clean Air Act.

Objective 2. Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. Research in this area seeks to determine population exposure distribution to pollutants other than CO such as polynuclear aromatic (PNA) organics and particulates; characterize the gaseous and particulate emissions from in-use light and heavy duty diesel and gasoline powered vehicles; refine existing air quality models; and provide short-term testing guidelines to evaluate potential acute health risks from unregulated emissions. The information from these studies is needed to assess risk, if any, and is used by the Office of Mobile Source Air Pollution Control (OMSAPC) to carry out its mandate to protect public health from vehicle pollutants and emissions as provided under Section 202(a)(1) and 202(a)(4) of the Clean Air Act.

Objective 3. Collect and Maintain Data in Support of the Fuel and Fuel Additives Program. Sections 211 and 301(d) of the Clean Air Act require the Environmental Protection Agency (EPA) to provide a data base to determine whether the use of any motor vehicle fuel or fuel additive poses an unreasonable risk to human health.

Objective 4. Provide Quality Assurance Support for Mobile Sources Program Requirements. The Office of Research and Development is required to ensure that all measurement data related to mobile source pollutants are reliable and accurate.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$476,700 and 1.0 permanent workyear for this program, of which \$51,700 is for Salaries and Expenses and \$425,000 is for Research and Development. This reflects an increase of \$1,500 and \$400,000 respectively, which will support the development of a revised Carbon Monoxide Criteria Document.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. The Carbon Monoxide Criteria Document will be updated and revised. This revision and update to the Carbon Monoxide Criteria Document is mandated every five years by the Clean Air Act. Work will begin in 1984 and continue into 1986.

Assess the Health Risks and Exposure to Unregulated Mobile Pollutants. A final carcinogen risk assessment on diesel emissions will be issued utilizing the latest data from the health research program on diesel exhaust.

Collect and Maintain Data in Support of the Fuel and Fuel Additives Program. Guidelines for a battery of short-term tests to make evaluations of fuel and fuel additives will be proposed.

1983 Program

In 1983, the Agency is allocating a total of \$75,200 and 1.0 permanent work-year to this program of which \$50,200 is under the Salaries and Expenses appropriation, and \$25,000 is for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Unregulated Mobile Pollutants. The latest data developed by the health research program in its Diesel Comparative Potency Program is being used to develop an interim diesel risk assessment.

Collect and Maintain Data in Support of the Fuel and Fuel Additives. Tier bioassay data on fuels and fuel additives developed by the health research program is being reviewed and analyzed with a final report due in 1984.

1983 Explanation of Changes from Budget Estimate

There are no changes from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$24,700 for this program, all of which was under the Salaries and Expenses appropriation.

Assess the Health Risks and Exposure to Unregulated Mobile Pollutants. The initial data developed under the Diesel Comparative Potency Program was evaluated by participants in workshops and meetings. Preliminary estimates of the carcinogen risk from diesel exhaust were made.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$34,300 for this program, all of which was under the Salaries and Expenses appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

In 1984, the Agency requests a total of \$883,900 and 5.3 permanent work-years for this program, of which \$545,500 is for Salaries and Expenses and \$338,400 is for Research and Development. This reflects decreases of \$118,900 and \$701,300 respectively, due to the transfer of funding for exploratory research to the Inter-media program and a reduced emphasis on measuring population exposure to unregulated pollutant emissions. Measurements of population exposures will instead focus largely on carbon monoxide, the mobile source pollutant of priority concern for exposure analysis.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. To support the NAAQS for CO, analyses and reports based on the human exposure data bases collected in the Washington, D.C. and Denver studies will be completed. The existing NAAQS is designed to assure that 99% of the population has blood levels below 2.5% carboxyhemoglobin, and the data from these urban-scale studies will be evaluated to assess the proportion of the population below this level for various candidate NAAQS values. An evaluation will be completed of the validity of existing activity pattern exposure models for predicting frequency distributions of human CO exposure profiles in actual urban settings. The methodology for the Denver and Washington, D.C. field studies will be evaluated for its applicability to other criteria air pollutants for which NAAQS must be reviewed and revised.

Assess the Health Risks and Exposure to Unregulated Mobile Pollutants. The results from the field studies will be evaluated for their applicability to unregulated mobile source air pollutants, including organics and respirable particulates. The activity pattern data base obtained in these two urban-scale studies will be evaluated for potential use with human activity pattern exposure models that may be applicable to unregulated emissions from mobile sources. Testing and evaluation will be undertaken of personal monitoring techniques for polynuclear aromatic (PNA) hydrocarbon compounds.

Collect and Maintain Data in Support of the Fuel and Fuel Additive Program. The registration of fuels and fuel additives program, as mandated by Congress, will be maintained.

Provide Quality Assurance Support for Mobile Source Program Requirements. The quality assurance program will support the State and Local Air Monitoring System (SLAMS). The nationwide audit program will obtain, test, verify, and distribute carefully specified quality assurance samples. The quality assurance and standards laboratory will function in assisting State and local agencies in generating precise and accurate air monitoring data used to judge compliance with the NAAQS.

1983 Program

In 1983, the Agency is allocating a total of \$1,704,100 and 7.0 permanent workyears for this program, of which \$664,400 is under the Salaries and Expenses appropriation and \$1,039,700 is for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. Work is being conducted on field studies in Denver, Colorado, and Washington, D.C., to develop an accurate methodology for measuring CO exposure profiles of a representative statistical sample of the population of an urban area. Field sampling of 1000 persons in Washington, D.C. and 500 person days in Denver using the new computerized hybrid CO personal monitors is being completed during the 1982-1983 winter months in both cities. Interpretive analyses of the field data are being undertaken to evaluate the accuracy and representativeness of existing air monitoring networks in the region.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. The methodology in the Denver and Washington, D.C. population exposure studies is being evaluated for use with unregulated mobile source pollutants, including organics and respirable particles. The activity pattern data base obtained in these two field surveys is being analyzed for use with exposure models.

Collect and Maintain Data in Support of the Fuel and Fuel Additive Program. The registration of fuels and fuel additives program, as mandated by Congress, is being maintained.

Provide Quality Assurance Support for Mobile Sources Program Requirements. The quality assurance program supports the State and Local Air Monitoring System (SLAMS). The nationwide audit program obtains, verifies, and distributes carefully specified quality assurance samples. Quality assurance audits are being conducted on the CO exposure field studies in Denver and Washington, D.C.

1983 Explanation of Changes from Budget Estimate

There are no changes from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,277,000 for this program, of which \$704,800 was under the Salaries and Expenses appropriation and \$572,200 was for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. Exposure studies of CO were undertaken comparing the levels people come into contact with during their daily lives with actual readings at fixed air monitoring stations. These studies indicated that actual human exposures to CO differ from readings at fixed stations, primarily because people often conduct activities which bring them very close to the sources of these pollutants.

A report was completed describing CO exposures in selected locations during the winter months in four cities (Los Angeles, CA; Phoenix, AZ; Denver, CO; and Stamford, CT.). A report also was completed on the use of CO personal monitors to sample commercial settings in several California towns and cities. A prototype "hybrid" personal exposure monitor was developed that combines a microprocessor computer data logger with a CO electrochemical sensing cell in one package.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. An evaluation was undertaken to determine if the laboratory measurement technique used to measure PNA hydrocarbon compounds in the workplace setting could be applied to ambient conditions. The methodology was found to be a more cost-effective, efficient approach that could be used by commercial laboratories and may have potential applicability to personal monitoring.

Collect and Maintain Data in Support of the Fuel and Fuel Additives Program. The program to register fuels and fuel additives, as mandated by Congress, registered over 250 fuels and developed an annual report.

Provide Quality Assurance to the Mobile Source Program. The quality assurance program supported the State and Local Air Monitoring System (SLAMS) for those pollutants generated by mobile sources. Carefully specified quality assurance samples for mobile source air pollutants were obtained, verified, and distributed. An evaluation was conducted of several new CO personal monitoring instruments to determine their precision, accuracy, and sensitivity to temperature variation.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$822,000 and 3.7 permanent workyears for this program, of which \$565,300 is for Salaries and Expenses and \$256,700 is for Research and Development. This reflects a decrease of \$251,100 and \$1,295,300 respectively, which result from the completion of studies both on the carcinogenic risk from diesel emissions and on the toxic effects of fuels and fuel additives, and from a transfer of exploratory research funds to the Intermedia program.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. The health research program for this objective has two goals: (1) to develop and validate techniques to produce dose-response data on the toxic effects of carbon monoxide; and (2) to produce dose-response data on the toxic effects of carbon monoxide.

The possibility of toxic effects of exposures to CO concentrations at or near the ambient standard need to be more definitively determined; therefore, clinical and animal studies to produce dose-response data on the toxic effects of low-level exposure to CO will be conducted. Human studies employing both normal volunteers and those with coronary oxygen insufficiencies will evaluate the cardiac and respiratory effects of CO and mixtures of CO and ozone. Human studies will also assess the validity of a method to relate ambient CO levels to blood levels. Animal studies will produce dose-response data on developmental and neurobehavioral effects of CO exposure. Techniques will also be developed to measure non-invasively the cardiac effects of CO exposure, and these techniques will improve our ability to produce dose-response information data in humans. This information will be used in risk assessments, the results of which will improve the data base upon which OAQPS can update the CO standard.

1983 Program

In 1983 the Agency is allocating a total of \$2,368,400 and 6.1 permanent workyears to this program, of which \$816,400 is under the Salaries and Expenses appropriation and \$1,552,000 is for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. Studies are being performed to provide dose-response data on cardiac and respiratory effects in humans and neurobehavioral and developmental effects in animals following exposure to low levels of CO. In the human studies, both healthy volunteers and patients with ischemic heart disease are being studied. The data from these studies will contribute to ongoing risk assessments which will refine the data base for updating the CO standard.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. Animal studies are being completed to evaluate potential carcinogenicity of diesel emissions. The level of risk is being compared to that from cigarette smoke condensate, coke oven emissions, and other substances known to be carcinogenic. These studies are being completed in 1983.

Collect and Maintain Data in Support of the Fuel and Fuel Additives Program. Current studies include development and use of bioassay techniques to assess the mutagenicity of fuels, fuel additives, and mobile source emissions. As a result, reports describing these methods and providing protocols for their use and interpretation are being completed in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,000,000 results from the following action:

-Congressional Action. (+\$1,000,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports the Health Effects Institute.

1982 Accomplishments

In 1982 the Agency obligated a total of \$5,095,400 for this program, of which \$1,602,800 was under the Salaries and Expenses appropriation and \$3,492,600 was for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Carbon Monoxide to Support Review and Revision of NAAQS and Motor Vehicle Emission Standards. Data necessary for improved estimates of risk of exposure to carbon monoxide were obtained through controlled laboratory studies in human volunteers. Cardiopulmonary effects were evaluated in both normal subjects and those who suffer from coronary artery disease when exposed to levels of CO. Animal studies were conducted to ascertain the effects of chronic CO exposure on cardiovascular and central nervous system development in fetuses and newborn offspring.

Assess the Health Risks and Exposure to Unregulated Mobile Pollutants. The carcinogenic potency of particle bound organics from diesel exhaust was evaluated. In addition, the in vivo distribution, metabolism and carcinogenic potential of nitroaromatics has been studied since these agents appear to account for a significant portion of the mutagenic activity observed in diesel particle bound organics.

Collect and Maintain Data in Support of the Fuel and Fuel Additives Program. The biological activity of fractions of unregulated organic emissions (gaseous and particle bound components) resulting from combustion of a variety of fuels was evaluated using in vitro bioassays.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$900,800 and 6.2 permanent workyears for this program, of which \$496,900 is for Salaries and Expenses and \$403,900 is for Research and Development. This request represents an increase of \$14,300 in Salaries and Expenses and a decrease of \$771,300 in Research and Development. This net reduction reflects the completion of a portion of the work conducted on diesel particulates and the transfer of long-term exploratory research resources to the Intermedia program.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. Research on characterizing the gaseous and particulate emissions from in-use light and heavy-duty diesel and gasoline powered trucks and buses will be completed. Research will be conducted to determine the carbon monoxide emissions from vehicles operating under low ambient temperature conditions in localized areas. Also, emissions from vehicles operating at low speeds and vehicles equipped with advanced diesel emissions control devices will be characterized.

The information from these studies will be used to update a comprehensive in-use emissions inventory data base and to support the Agency's mobile source regulatory concern for the implications of in-use motor vehicle emissions on the pre-manufacturing certification program.

1983 Program

In 1983, the Agency is allocating a total of \$1,657,800 and 6.2 permanent workyears for this program, of which \$482,600 is under the Salaries and Expenses appropriation and \$1,175,200 is for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. Research characterizes the gaseous and particulate emissions from in-use diesel and gasoline powered trucks and buses. The volatile organic compound emissions characterization program for aldehydes and hydrocarbon compounds is being completed on consumer-owned, gasoline powered vehicles. The data represent a realistic basis for improving the models utilized in determining the effects of mobile source pollutants. Also, the emissions of vehicles operating under low speed conditions and those having advanced diesel emissions control devices are being characterized.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$350,000 results from the following action:

-Congressional Action. (+\$350,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports the development of measurement methods for unregulated pollutants from gas and diesel engines.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,757,200 for this program, of which \$791,700 was under the Salaries and Expenses appropriation and \$965,500 was for extramural purposes under the Research and Development appropriation.

Assess the Health Risks and Exposure to Unregulated Mobile Source Pollutants. Dynamometer experimental test procedures were developed to enable researchers to characterize emissions under simulated in-use driving conditions, thus improving vehicle emissions model data bases. Emissions from gasoline fueled passenger cars were characterized for volatile organic compounds (VOCs), including aldehydes, using these test procedures. A major study on unregulated pollutants, gas phase toxins, and catalyst synthesized gases was completed and the information provided to the program offices for use in determining the need for regulatory action. An emissions characterization program was initiated to study the gaseous and particulate emissions from in-use heavy-duty diesel and gasoline powered trucks and buses.

AIR

Gases and Particles

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					
Scientific Assessment					
Salaries & Expenses	\$468.6	\$368.3	\$576.0	\$536.6	-\$39.4
Research & Development	\$388.7	\$250.0	\$250.0	\$500.0	\$250.0
TOTAL	\$857.3	\$618.3	\$826.0	\$1,036.6	\$210.6
Technical Information & Liaison					
Salaries & Expenses	\$366.1	\$270.3			
Research & Development	\$30.9	\$220.0			
TOTAL	\$397.0	\$490.3			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$3,922.6	\$3,354.4	\$3,354.4	\$3,376.9	\$22.5
Research & Development	\$4,298.8	\$3,015.0	\$3,115.0	\$2,472.7	-\$642.3
TOTAL	\$8,221.4	\$6,369.4	\$6,469.4	\$5,849.6	-\$619.8
Health Effects					
Salaries & Expenses	\$4,054.6	\$4,993.9	\$4,993.9	\$3,734.8	-\$1,259.1
Research & Development	\$4,015.3	\$2,990.1	\$3,240.1	\$4,159.1	\$919.0
TOTAL	\$8,069.9	\$7,984.0	\$8,234.0	\$7,893.9	-\$340.1
Environmental Engineering & Technology					
Salaries & Expenses	\$199.2		\$1,803.7	\$1,473.4	-\$330.3
Research & Development	\$530.2		\$3,282.2	\$900.3	-\$2,381.9
TOTAL	\$729.4		\$5,085.9	\$2,373.7	-\$2,712.2
Environmental Processes & Effects					
Salaries & Expenses	\$2,708.3	\$2,560.2	\$2,808.2	\$2,509.3	-\$298.9
Research & Development	\$7,084.1	\$5,233.1	\$8,483.6	\$6,773.3	-\$1,710.3
TOTAL	\$9,792.4	\$7,793.3	\$11,291.8	\$9,282.6	-\$2,009.2
TOTAL:					
Salaries & Expenses	\$11,719.4	\$11,547.1	\$13,536.2	\$11,631.0	-\$1,905.2
Research & Development	\$16,348.0	\$11,708.2	\$18,370.9	\$14,805.4	-\$3,565.5
Gases and Particles TOTAL	\$28,067.4	\$23,255.3	\$31,907.1	\$26,436.4	-\$5,470.7

PERMANENT WORKYEARS

Scientific Assessment	8.3	4.5	8.5	7.5	-1.0
Technical Information & Liaison	5.1	2.7			
Monitoring Systems & Quality Assurance	64.9	54.9	54.9	54.9	

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Gases and Particles

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
Health Effects	51.6	54.9	54.9	54.9	
Environmental Engineering & Technology	3.8		18.7	15.2	-3.5
Environmental Processes & Effects	37.8	32.5	32.5	30.5	-2.0
TOTAL PERMANENT WORKYEARS	171.5	149.5	169.5	163.0	-6.5
TOTAL WORKYEARS					
Scientific Assessment	12.3	7.0	11.0	10.0	-1.0
Technical Information & Liaison	7.5	4.2			
Monitoring Systems & Quality Assurance	73.0	64.1	64.1	64.1	
Health Effects	56.0	65.5	65.1	65.5	.4
Environmental Engineering & Technology	6.0		30.6	25.3	-5.3
Environmental Processes & Effects	46.6	46.3	50.9	40.5	-10.4
TOTAL WORKYEARS	201.4	187.1	221.7	205.4	-16.3

AIR

Gases and Particles

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop and Validate Air Quality Models.			
- Development of an evaluated, documented, computer code and users guide for an interim regional particulate model. (Env. Processes)	9/85	9/85	9/85
- Development of new air quality dispersion parameters for elevated releases. (Env. Processes)	8/84	8/84	8/84
- Receptor modeling results and data base for comparison with dispersion modeling results for Philadelphia. (Env. Processes)	9/84	9/84	9/84
- Improved urban and mesoscale aerosol model delivered to UNAMAP. (Env. Processes)	8/85	8/85	8/85
- Evaluated moderately complex terrain dispersion model for stable plume impaction. (Env. Processes)		10/85	10/85
Develop Health and Welfare Effects Information.			
- Publication on the response of an atmospheric corrosion monitor as a proxy for damage to materials. (Env. Processes)	9/84	9/84	9/84
- Evaluation report on dispersion models and air quality data for assessment of crop yield impacts of air pollutants. (Env. Processes)	4/84	4/84	4/84
- Provide journal articles: physiological, immunological and biochemical responses of normal subjects exposed to gases and particles. (Health)	2/84	2/84	2/84
- Provide journal articles: response of asthmatics to SO ₂ exposure. (Health)	3/84	3/84	3/84
- Publication of criteria document for SO _x /PM. (Scientific Assessment)		12/84	
- Publication of criteria document for lead. (Scientific Assessment)			6/84

AIR

Gases and Particles

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop and Validate GAP Measurement and Monitoring Methods.			
- Analyze filters and summarize data from IP Network. (Monitoring)	6/82	6/83	6/84
- Review and process reference and equivalent methods applications. (Monitoring)	9/82	9/83	9/84
- Apply Airborne Lidar to plume particulate transport. (Monitoring)	9/82	9/83	9/84
Provide QA Support for the GAP Program Requirements.			
- Provide QA for IP, SLAMS/NAMS ambient monitoring networks and for continuous emission and other source monitors. (Monitoring)	9/82	9/83	9/84
Research and Assess Emissions Reduction Technologies.			
- Determine inhalable particulate emission factors for five major industrial groups and for paved/unpaved roads and combustion sources. (Env. Technology)	3/83		
- Report on prospective costs of integrated air pollutants emissions reduction options for power utilities. (Env. Technology)		12/83	
- Issue design report for first generation two-stage electrostatic precipitators. (Env. Technology)	12/84	12/84	12/84
- Issue report on field evaluation of first generation full-scale utility spray dryer FGD system. (Env. Technology)			8/84
- Complete two-stage ESP field pilot evaluations with transfer of results to users for subsequent implementation. (Env. Technology)		10/83	
- Issue assessment of fugitive emissions particle control methods for Agency guides to States for PSD/SIP's. (Env. Technology)		9/83	

AIR

Gases and Particles

Budget Request

The Agency requests a total of \$26,436,400 and 163.0 permanent workyears for 1984, a decrease of \$5,470,700 and 6.5 permanent workyears from 1983. Included in this total is \$11,631,000 for Salaries and Expense and \$14,805,400 for Research and Development, with a decrease of \$1,905,200 and \$3,565,500, respectively. This decrease occurs primarily in the environmental engineering and technology and environmental processes program elements. In addition, the decrease reflects the transfer of \$2,656,600 in exploratory research funds to the Intermedia program.

Program Description

The Gases and Particles (GAP) research and development program provides regulatory decision-makers, the regulated community and enforcement officials in Regional, State and local offices with the scientifically credible data bases, methodologies, relationships, models and assessments, and emission reduction technologies that they require to regulate atmospheric particle matter (PM) and its major components, lead, and gaseous sulfur dioxide (SO₂) under the Clean Air Act as amended in 1977 (the Act). The following objectives support these goals:

Objective 1. Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of the National Ambient Air Quality Standards (NAAQS). Research under this objective provides the air quality models, emissions data, monitoring tools, and technical support needed by States to develop, adopt and enforce cost-effective control strategies required by the Act. The results of this work are disseminated for use in State Implementation Plans (SIPs), Prevention of Significant Deterioration (PSD) determinations, and for protection from visibility degradation in Class I pristine areas.

Objective 2. Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. A criteria document for health and welfare effects provides the primary documentation of scientific data for use in the review of existing ambient air quality standards. The entire process of updating a criteria document, and proposing and finalizing changes to the existing standard, is done at five-year intervals as specified in Sections 108 and 109 of the Act.

Objective 3. Develop and Validate Measurement and Monitoring Methods in Support of the Gases and Particles (GAP) Program Requirements. In order to determine air quality trends, compliance, and enforcement actions, new and improved air pollution methodologies and monitoring techniques are being developed and evaluated. Ambient, source, and exposure measurement methods are needed for criteria pollutants and important related pollutants. In particular, the anticipated size resolved particulate standard (for particulate matter less than 10 micron, or PM₁₀) requires continued methods development and evaluation efforts.

Objective 4: Research and Assess Emission Reduction Technologies to Support Permitting Compliance Activities. This effort disseminates to the regulating and regulated communities data on the performance, cost and reliability of existing, new and emerging emissions reduction technologies. This information helps to establish New Source Performance Standards (NSPS) and is used for SIPs, PSD determinations, and for the protection from visibility degradation in Class I pristine areas.

Objective 5. Provide Quality Assurance Support for the Gases and Particles (GAP) Program Requirements. This is a long-term, continuing task in support of Title 40, Part 58, which specifies mandatory quality assurance for State and local air monitoring stations.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$1,036,600 and 7.5 permanent workyears for this program, of which \$536,600 is for Salaries and Expenses and \$500,000 is for Research and Development. This reflects a net increase of \$210,600 to provide additional contractual support for the intensive final stages of the development of the Lead Criteria Document.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The revision of the Lead Criteria Document will be completed on schedule during 1984. This document serves as the scientific data base upon which the ambient air quality standard rests, and the standard is scheduled for review under the Clean Air Act's mandatory 5-year review cycle.

1983 Program

In 1983, the Agency is allocating a total of \$826,000 and 8.5 permanent workyears to this program, of which \$576,000 is under the Salaries and Expenses appropriation and \$250,000 is for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The first external review draft of the revised criteria document for Lead is scheduled for release to the public for comment in March 1983. In addition, technical support is being provided to assist the Office of Air Quality Planning and Standards (OAQPS) in the regulatory proposal development in conjunction with the final release of a revised SO_x/particulate matter Criteria Document.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$207,700 results from the following action:

-Reprogrammings. (+\$207,700) During the development of the operating plan several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$207,700 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$857,300 for this program of which \$468,600 was under the Salaries and Expenses appropriation and \$388,700 was for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support and Review and Revision of NAAQS. Preparation of a Science Advisory Board (SAB) reviewed final draft of the criteria document for SO_x and particulate matter was accomplished. Technical support was provided to assist OAQPS in the regulatory proposal development of the revised SO_x and PM standards. In addition, the update of the criteria document for lead was initiated in March 1982.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$397,000 for this program, of which \$366,100 was under the Salaries and Expenses appropriation and \$30,900 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$5,849,600 and 54.9 permanent workyears for this program, of which \$3,376,900 is for Salaries and Expenses and \$2,472,700 is for Research and Development. This reflects an increase of \$22,500 and a decrease of \$642,300 respectively. The net decrease of \$619,800 results from the planned transfer of operational responsibilities for the Inhalable Particle (IP) Network to the States and the transfer of long-term exploratory research resources to the Intermedia program.

Develop and Validate Measurement and Monitoring Methods in Support of the GAP Program Requirements. Although we are transferring operational responsibilities to the States in 1983, the Agency will perform the analysis of mass and chemical composition from 7000 filters collected annually by the IP Network. Study of the operating characteristics of the new 10-micron samplers will be completed. Glass-fiber filters from the National, State and Local Air Monitoring Stations (SLAMS/NAMS) will be analyzed for mass and trace metals. Reference and equivalent methods for GAP pollutants will be evaluated. Continuous emission monitoring methods for stationary sources will be evaluated. Data support will be provided for international monitoring programs. Regional plume transport will be studied using airborne lidar.

Provide Quality Assurance Support for the GAP Program Requirements. Quality assurance (QA) support will be provided to the 130-station IP Network, the NAMS/SLAMS Network, and other air monitoring efforts. A standards laboratory and a repository of QA materials will be maintained for use on request by universities, companies, agencies, and all other organizations making air measurements. Routine and special audits will be conducted on laboratories making ambient and source measurements and on compressed gas vendors. The QA Guidelines, Handbook, Data Handling System, and Precision and Accuracy Reporting System will be maintained and updated. An audit program for continuous emission monitors for stationary sources will be carried out. Statistical techniques for investigating spatial and temporal distributions of pollutants and corresponding human exposures will be investigated.

1983 Program

In 1983, the Agency is allocating a total of \$6,469,400 and 54.9 permanent workyears for this program, of which \$3,354,400 is for Salaries and Expenses and \$3,115,000 is for extramural research under the Research and Development appropriation. The primary focus is the IP Network which supports the review and possible revision of the existing particulate matter standard. Additionally, the need for improved monitoring accuracy is being emphasized through the quality assurance and systems development work.

Develop and Validate Measurement and Monitoring Methods in Support of the GAP Program Requirements. The 130-station IP Network is being operated and 37 stations upgraded with the new 10-micron samplers. This IP Network will be transferred to the States by the end of 1983. Mass and chemical composition is being determined for samples collected periodically from 130 sites; over 7,000 filters per year. Monitoring systems for pollutants in ambient air and in source emissions are being developed and improved. Selected systems are subjected to single and multi-laboratory evaluation to identify and correct sources of errors.

Provide Quality Assurance Support for the GAP Program Requirements. Quality control samples are obtained and used in audits. The system for receiving, analyzing and reporting precision and accuracy is being developed. Technical support is being provided to State and local agencies required to implement the quality assurance requirements for air monitoring contained in 40 CFR 58. Workshops, training programs, and performance audits are provided.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$100,000 results from the following action:

-Congressional Action. (+\$100,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports the Agency's quality assurance initiative in relation to the data audit system.

1982 Accomplishments

In 1982, the Agency obligated a total of \$8,221,400 for this program, of which \$3,922,600 was for Salaries and Expenses and \$4,298,800 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Measurement and Monitoring Methods in Support of the GAP Program Requirements. Ten stations in the IP Network were fitted with the new 10-micron samplers at the request of the Agency's Office of Air Quality Planning and Standards (OAQPS). Methods for continuously monitoring selected emissions sources were evaluated in response to the requests of enforcement officials for testing compliance with standards. Chemical analyses of trace metals and statistical analyses of trends were performed as a means of determining the effect of Agency actions on national air quality. A system for receiving, analyzing, and reporting the precision and accuracy of all air monitoring data was developed.

Provide Quality Assurance Support for the GAP Program Requirements. Quality Assurance (QA) procedures, including performance audits of SLAMS/NAMS stations, maintenance of a repository of reference samples and standards, publication of new and revised QA guidelines, and the Agency Mandatory QA Program, continued in response to Regional, State, and local needs.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$7,893,900 and 54.9 permanent workyears for this program, of which \$3,734,800 is for Salaries and Expenses and \$4,159,100 is for extramural Research and Development activities. This reflects a decrease of \$1,259,100 in Salaries and Expenses and an increase of \$919,000 in Research and Development which is primarily due to an accounting change. Formerly, many of the on-site research support contracts were funded out of the Salaries and Expenses appropriation. This transfer will allow the Agency to fund the contracts from a more appropriate source, the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The research program has three major goals: 1) to provide data on a full range of health effects of exposure to gases, SO₂, particles, and lead from human and animal studies, 2) to provide better models to extrapolate animal data to humans, and 3) to develop improved test methods for use by the Environmental Protection Agency (EPA) and others to conduct improved research into the physiologic response of humans to gaseous air pollutants and particles.

Because of the evidence regarding the potential for health damage from particles, the Agency is considering a size-resolved particle standard in lieu of the current one for Total Suspended Particulates (TSP). Much of the health effects work in 1984 is designed to refine and improve the data which supports a size-resolved particle standard. Fine-mode particles, mostly in the 1-2 um range, will be studied in normal and susceptible human and animal populations. In response to program office priorities, additional clinical studies of normal and susceptible populations will be conducted; the effects of acute and chronic exposure to large inhalable particles (10-15 um) will be more closely examined and both human and animal dose-response studies will devote special attention to determining the deposition, clearance, and pulmonary effects of particles, alone and in combination with ozone, NO₂, and SO₂.

The neurological consequences of high lead body burdens are well known. Epidemiological evidence links severe developmental disorders, such as mental retardation, speech and language difficulties, and cognitive and perceptual learning disabilities, with lead body burdens previously considered to be low to moderate. Since the developing nervous system is known to be more vulnerable to lead toxicity than the mature system, it is necessary to obtain quantitative data on the neurological effects of lead at lower levels, especially at levels previously considered to be safe in children. Volunteers from age six to adult with lead body burdens considered to be low to moderate will be studied using electrophysiological assessments to several behavioral and central nervous system responses. The significance of the effects noted will then be evaluated for use in assessing health risks from lead at these levels.

Animal test data is critical in setting and revising standards to protect human health under the Clean Air Act. Present bioassay and extrapolation techniques are expensive and time-consuming and do not always provide reliable, quantitative correlation between animal and predictive human effects, or accurate extrapolation from high to low dose. In 1984, work will provide faster, more reliable models to predict human pulmonary and morphological responses to gas and particle exposure based on data gathered in animal experiments. Research will also provide data on biochemical, pulmonary, and cardiovascular disease and impairment in susceptible populations following SO₂ exposure.

1983 Program

In 1983, the Agency is allocating a total of \$8,234,000 and 54.9 permanent workyears to this program, of which \$4,993,900 is under the Salaries and Expenses appropriation and \$3,240,100 is for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Animal toxicology studies will describe effects of chronic exposure to coarse and fine-mode particles on lung structure and function and host defense mechanisms in rodents. The major accomplishment expected from human dose response studies in 1983 will be a report on acute physiological responses on normal people in inhalation of gases, particles, and mixtures of both. A workshop will be held in 1983 to develop a long term research strategy for extrapolation modeling. New software is being prepared and installed in the physiological data acquisition system computer which will enable scientists to collect more data, display different systems, and collect and analyze data simultaneously.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$250,000 results from the following action:

-Congressional Action. (+\$250,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports epidemiology studies conducted by other agencies.

1982 Accomplishments

In 1982, the Agency obligated a total of \$8,069,900 for this program, of which \$4,054,600 was for Salaries and Expenses and \$4,015,300 was for extramural purposes under the Research and Development appropriation.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Major accomplishments included the discovery that pulmonary infection, caused or exacerbated by particle inhalation, may result in lung fibrosis and the development of an extrapolation model using lung branchings to determine particle deposition in the lungs of different animal species and humans.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$2,373,700 and 15.2 permanent workyears for this program, of which \$1,473,400 is for Salaries and Expenses and \$900,300 is for Research and Development, with a decrease of \$330,300 and \$2,381,900, respectively. This decrease results from completion of technology development tests on two-stage electrostatic precipitators (ESP's), reductions in fundamental/applied research on two-stage ESP's and electrostatically enhanced fabric filters (ESFF), and decreased need for wet flue gas desulfurization (FGD) research due to the commercial status of the technology. These reductions reflect EPA's reduced involvement in the development of control technologies, a function more appropriately handled by the private sector, and a desire to focus on assessing those technologies needed to support the regulatory mandates. Also, resources for long-term exploratory research are transferred to the Intermedia program.

Research and Assess Emissions Reduction Technologies to Support Permitting and Compliance Activities. In order for the Agency and the regulated community to fully implement the regulatory agenda for gases and particles, low cost, highly reliable emission reduction technology design and performance criteria need to be disseminated to the user and permitting communities. These needs will be addressed by the following research activities.

Fundamentals of combined SO_x and particle emissions capture by new (two-stage ESP's, spray dryers, and ESFF baghouses) and conventional technology will be evaluated. Emphasis will be on assessing the potential for dry sorbents as means to capture SO_x .

The potential for optimizing the combination of air pollution reduction technologies for coal-fired power plants will be assessed and will include the beneficial role of coal cleaning to increase plant reliability as well as a supplemental method to other technologies for complying with SO_x emission regulations. An effort to assess the impacts resulting from different compositions of coal on power plant operation and emission reduction potential will be initiated.

The ninth FGD Symposium and Fifth Particle Collection Symposia will be held jointly with appropriate institutions as a primary vehicle to transfer the latest technology in these areas. Workshops in SO_x and particle emissions reduction technology will be held periodically to assist the Regions, local and State personnel in their permitting determinations. An effort to assist Regions and States on the selection of means of reducing fugitive emissions will begin, and operation and maintenance guides for fabric filter baghouses issued.

1983 Program

In 1983, the Agency is allocating a total of \$5,085,900 and 18.7 permanent workyears to this program, of which \$1,803,700 is under the Salaries and Expenses appropriation and \$3,282,200 is for extramural purposes under the Research and Development appropriation. This work was formerly contained in the GAP-Energy program.

Research and Assess Emissions Reduction Technologies to Support Permitting and Compliance Activities. Research on the fundamental mechanisms applicable to two-stage ESP's and enhanced fabric filters (ESFF) is conducted as a means to provide the scientific/ engineering underpinnings of these new particle collection technologies and ease their transition and acceptance by the regulating and regulated communities. The engineering pilot testing of the two-stage ESP system will conclude as will pilot tests of full sized bags using the ESFF principle in a reverse air mode (the mode used by electric utilities).

Fabric filter baghouses are being accepted as an option for utility and certain industrial particle emissions reduction applications and are known to have potential for SO_x reductions. Therefore, our evaluations of conventional baghouses for particle control will be completed and data made available to support the 1985

NSPS review for utility boilers, along with field assessments of the performance of baghouses in conjunction with spray dryers for combined SO_x-particle capture to ascertain reliability and time in compliance of this technology.

A state-of-the-art FGD technology assessment for fossil fuel fired boilers will be completed for the 1985 NSPS review and for regional and enforcement permitting purposes. Evaluations of two methods for fugitive particles emissions reduction will be completed and a technology assessment made. Operation and maintenance guides for electrostatic precipitators will be completed and will include flue gas conditioning methods as stop-gap techniques to improve existing ESP performance in low sulfur coal applications.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$5,085,900 results from the following action:

-Restructuring. (+\$5,085,900) The Congressionally approved restructuring eliminated the Gases and Particles, and Oxidants - Energy program elements and moved them into Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory program effort and the end products are air regulations. The change to the Salaries and Expenses appropriation was +\$1,803,700 and the change to the Research and Development appropriation was +\$3,282,200.

1982 Accomplishments

In 1982, the Agency obligated a total of \$729,400 for this program of which \$199,200 was under the Salaries and Expenses appropriation and \$530,200 was for extramural purposes under the Research and Development appropriation.

Research and Assess Emissions Reduction Technologies to Support Permitting and Compliance Activities. In 1982 this program operated in concert with the Oxidants and Hazardous Air Pollutant industrial emissions control and characterization programs and thereafter was consolidated into the Oxidants program in 1983. During the year determinations of inhalable particle emissions factors were made for iron and steel, cement and lime, non-ferrous metals, pulp and paper, ferroalloys, paved and unpaved roads, and combustion sources to provide the Agency a base to formulate guidelines to States in developing their SIPs.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$9,282,600 and 30.5 permanent workyears for this program, of which \$2,509,300 is for Salaries and Expenses and \$6,773,300 is for Research and Development. This reflects a decrease of \$298,900 and \$1,710,300, respectively. This is a result of the transfer of long-term exploratory research resources to the Intermedia program; a reduced level of effort associated with the development of a regional scale particulate matter air quality model (resulting in no delay in regulatory applications); and the completion of field research on the effects of gases and particles on crop loss in the National Crop Loss Assessment Network (NCLAN) and the transfer of most of the remaining resources associated with the NCLAN effort to the Oxidants research program. A project will be initiated to determine the sources that contribute to visibility degradation in the Great Smokies, the largest pristine area in the East.

Develop Air Quality Models to Support Implementation, Maintenance, and Enforcement of NAAQS. Research will focus on the development and validation of improved atmospheric dispersion parameters in air quality models, the development and validation of SO₂ air quality dispersion models for use in complex terrain, and the development and validation of particulate air quality dispersion models for use on urban, meso-, and regional scales. Source apportionment methods (SAM)

will be developed and used in combination with air quality dispersion models in order to provide the best possible information to Regional, State, and local officials and industry for use in developing the most cost effective control strategies needed for the assessment of new sources, revision of SIPs, protection of visibility in Class I areas, and prevention of significant deterioration.

The ability of current air quality models to predict dispersion from elevated releases has been criticized because of a failure to account for changes in the dispersion properties of the atmosphere with height. Therefore, in 1984, procedures for computing dispersion from evaluated sources will be improved. A project report will be published recommending procedures for extrapolating turbulence properties with height.

Present air quality dispersion models for sources in complex terrain are inadequate to meet the needs of Regions, States, local governments and industry in the developing energy industries in the mountainous West. Conclusions from small ridge and Fluid Modeling Facility dispersion studies will be incorporated into improved near-source dispersion models for use in complex terrain. A full-scale plume study will take place in less idealized terrain than the previous studies; thus, it should prove to be a good test for any complex terrain model that would evolve from the hill and ridge experiments. A project report on interim conclusions from the full scale plume study will be produced in late 1984. Analysis of the study will be completed in the following year with a user's guide available by 1988.

Improved urban and regional scale particulate models are needed to support anticipated revisions of SIPs for particulate matter. The newly proposed standard will discriminate between fine ($<2.5 \mu\text{m}$) and inhalable ($<10 \mu\text{m}$) particles. Future particulate matter standard revisions may distinguish between various chemical classifications (e.g., sulfates, nitrates, and organic/carbonaceous particles). Current air quality models were developed for total suspended particles (TSP) and are incapable of dealing with chemical transformation and particle deposition. 1985 will see publication and evaluation of sulfate and nitrate production modules, and the transfer to the User's Network for Applied Modeling of Air Pollution (UNAMAP) of improved urban and mesoscale aerosol models.

Full-scale efforts to develop a regional scale particulate matter air quality model will begin in 1984. The objective is to develop models that can be used by EPA in policy-type studies to demonstrate the occurrence of long-range transport of particles and to demonstrate the effectiveness of alternative control strategies for meeting acceptable ambient levels. Completion of these models is expected by the end of 1986. Tracer experiments in conjunction with the National Oceanographic and Atmospheric Administration and the Department of Energy will be conducted to provide atmospheric dispersion data for verification of regional scale model estimates.

The air quality and visibility in the Great Smokey Mountains region will be documented and the sources influencing the air quality will be determined. Periodic progress reports will be produced on the results of the air quality monitoring and the analysis of the monitoring data. Mass trajectory computations will be compared with the results of receptor modeling applied to the chemical analyses of particulate samples in order to perform source apportionment. A project report will be prepared by mid-1985.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The National Crop Loss Assessment Network (NCLAN) will utilize data obtained in field studies for integration of dose-response functions involving pollutant mixtures and evaluate gaseous pollutant dispersion models and rural air quality data for assessing the impacts of SO_2 , O_3 , and NO_2 mixtures on the growth and yield of agronomic crops. This will allow for an economic assessment of crop impact to be accomplished in the future.

Studies on materials damage will continue which are needed to make reliable, defensible estimates of the cost of air pollution in terms of dollars spent to replace damaged materials or goods or to accelerate maintenance schedules for exposed materials. Field studies to determine the corrosion rates of common exterior materials as a function of air pollution levels will be implemented. These studies will employ the atmospheric corrosion monitor currently under development, and the data base they generate will refine estimates of the materials damage caused nationwide by air pollution and the cost associated with this damage.

1983 Program

In 1983, the Agency is allocating a total of \$11,291,800 and 32.5 permanent workyears to this program, of which \$2,808,200 is under the Salaries and Expenses appropriation and \$8,483,600 is for extramural purposes under the Research and Development appropriation.

Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of NAAQS. Existing knowledge of the behavior of turbulence vs. height is being examined, and improved procedures for treating dispersion parameters from elevated sources are being developed. These procedures will be introduced into new or existing air quality models and the revised models, with appropriate users' guides, will be introduced into UNAMAP. An updated version of UNAMAP (version 5) will be available late in 1983.

Work in the complex terrain modeling area, formerly funded in the Energy program, emphasizes development of improved dispersion models on three scales: local (0-50 km), mesoscale (up to 300 km), and regional. The Green River Ambient Model Assessment study attempts to develop an air quality model for use in analyzing the environmental impacts of energy development in a mesoscale region of highly complex terrain. This modeling effort focuses on the completion, by April 1983, of a site-specific mesoscale Lagrangian air quality model for use in evaluating PSD permit applications in western Colorado and eastern Utah.

Current efforts in urban particulate modeling concentrate on the development and evaluation of transport, dispersion, chemical transformation, aerosol dynamics, optical effects, and removal modules for use in a comprehensive urban particulate model. Current research in regional particulate model development continues to improve understanding of the meteorological conditions that lead to prolonged, elevated pollutant episodes.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. The 1983 Crop Loss Assessment Network focuses on the impacts of pollutant mixtures (SO₂ and SO₂/ozone, SO₂/NO₂ combinations) on the yield of major agronomic crops. The current program completes field research initiated in prior years which shows pollutant mixtures to affect crop response differently from single pollutants.

Research on materials damage is concentrating on the development of an atmospheric corrosion monitor. This monitor will be used in future field studies to determine the increment in corrosion rate of common exterior metals resulting from exposures to sulfur dioxide and particles. An integrated damage model is being exercised with regional air pollution data and improved damage functions for a variety of exposed materials to produce a refined national assessment of materials damage and associated costs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$3,498,500 results from the following actions:

-Restructuring. (+\$3,483,500) The Congressionally approved restructuring eliminated the Gases and Particles, and Oxidants - Energy program elements and moved them into the Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory

program effort and the end products are air regulations. The change to the Salaries and Expenses appropriation was +\$233,000 and the change to the Research and Development appropriation was +\$3,250,500.

-Reprogrammings. (+\$15,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of +\$15,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$9,792,400 for this program, of which \$2,708,300 was under the Salaries and Expenses appropriation and \$7,084,100 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of National Ambient Air Quality Standards (NAAQS). Interim urban and mesoscale models that address the 1-hour and 24-hour average SIP revisions were developed. Research on the regional scale model development concentrated on improving the understanding of the meteorological conditions that lead to prolonged elevated pollutant episodes.

A second receptor modeling workshop was held to determine the reliability of currently available source apportionment methods. An intensive field study was conducted in Philadelphia to provide source and ambient data for developing and evaluating both urban particulate dispersion models and receptor models. A field study was conducted in Denver to determine the sources of visibility-reducing particulates.

Develop Health and Welfare Effects Information to Support Review and Revision of NAAQS. Laboratory research addressed the role of environmental factors (including soil moisture and solar radiation) on the growth and yield responses of crops to pollutant mixtures (SO₂ and SO₂/ozone, SO₂/NO₂ combinations) since these factors greatly influence the effects of air pollution.

Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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AIR

Air Quality & Stationary Source Planning & Standards

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					

Emission Standards & Technology Assessment					
Salaries & Expenses	\$4,183.5	\$3,550.4	\$3,550.4	\$3,848.2	\$297.8
Abatement Control & Compliance	\$10,320.4	\$9,693.2	\$9,693.2	\$8,793.2	-\$900.0
TOTAL	\$14,503.9	\$13,243.6	\$13,243.6	\$12,641.4	-\$602.2
Pollutant Strategies & Air Standards Development					
Salaries & Expenses	\$2,080.0	\$1,991.6	\$2,274.6	\$2,316.7	\$42.1
Abatement Control & Compliance	\$1,134.9	\$1,128.4	\$1,128.4	\$1,593.0	\$464.6
TOTAL	\$3,214.9	\$3,120.0	\$3,403.0	\$3,909.7	\$506.7
State Program Guidelines & Regulations Development					
Salaries & Expenses	\$3,739.2	\$2,465.8	\$2,465.8	\$2,626.2	\$160.4
Abatement Control & Compliance	\$1,367.7	\$960.0	\$960.0	\$1,235.0	\$275.0
TOTAL	\$5,106.9	\$3,425.8	\$3,425.8	\$3,861.2	\$435.4
TOTAL:					
Salaries & Expenses	\$10,002.7	\$8,007.8	\$8,290.8	\$8,791.1	\$500.3
Abatement Control & Compliance	\$12,823.0	\$11,781.6	\$11,781.6	\$11,621.2	-\$160.4
TOTAL	\$22,825.7	\$19,789.4	\$20,072.4	\$20,412.3	\$339.9
Air Quality & Stationary Source Planning & Standards					
PERMANENT WORKYEARS					

Emission Standards & Technology Assessment	94.5	87.8	87.3	84.8	-2.5
Pollutant Strategies & Air Standards Development	44.4	39.8	47.8	47.8	
State Program Guidelines & Regulations Development	88.0	64.3	63.9	60.3	-3.6
TOTAL PERMANENT WORKYEARS	226.9	191.9	199.0	192.9	-6.1

AIR

Air Quality & Stationary Source Planning & Standards

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
TOTAL WORKYEARS					

Emission Standards & Technology Assessment	100.2	93.6	93.1	90.6	-2.5
Pollutant Strategies & Air Standards Development	51.6	44.4	52.4	54.4	2.0
State Program Guidelines & Regulations Development	95.5	68.3	67.9	63.9	-4.0
TOTAL WORKYEARS	247.3	206.3	213.4	208.9	-4.5

AIR

Air Quality and Stationary Source Planning and Standards

Budget Request

The Agency requests a total of \$20,412,300 and 192.9 permanent workyears for 1984, an increase of \$339,900 and a decrease of 6.1 permanent workyears from 1983. Included in this total is \$8,791,100 for Salaries and Expenses and \$11,621,200 for Abatement, Control, and Compliance, which represents an increase of \$500,300 and a decrease of \$160,400, respectively. The intramural increase reflects increased payroll and operating costs primarily associated with the transfer of Public Health Service employee costs to EPA in 1984. The decrease primarily reflects a fewer number of NSPS in resource intensive development phases in Emissions Standards and Technology Assessment program.

Program Description

The activities under this program are: establishment of emission standards for stationary sources; review and revision of ambient air quality standards; pollutant assessments; development of pollutant control analytical tools and guidelines; translation of control strategies into regulatory actions; and assessment of the energy implications of regulatory actions.

Emission Standards and Technology Assessment -- National emission standards for stationary sources are set under Section 111 and 112 of the Clean Air Act. Section 111 mandates the Environmental Protection Agency to establish New Source Performance Standards (NSPS). Section 112 authorizes National Emission Standards for Hazardous Air Pollutants (NESHAP).

New Source Performance Standards reflect the performance of the best control systems for reducing emissions, considering cost and energy impact for specific processes or facilities. The analysis supporting the NSPS considers technical feasibility, cost, and economic, energy and environmental impacts. The background information published as part of the NSPS setting process provides useful data to State agencies in defining best available control technology, lowest achievable emission rates, and reasonably available control technology, when such determinations must be made under other sections of the Clean Air Act.

National Emission Standards for Hazardous Air Pollutants regulations development provides comprehensive national surveys of well controlled sources, evaluation and verification of test methods and identification of design and operation factors which affect the release of air pollutants. It also provides indepth technical analysis to support decisions which limit the release of hazardous pollutants in the air.

Pollutant Strategies and Air Standards Development -- The major activities of this program element are: (1) review and revision, as appropriate, of all existing National Ambient Air Quality Standards as mandated by the Clean Air Act; (2) identification and assessment of potential hazardous air pollutants, including the determination as to the appropriateness of their listing under Section 112 of the Clean Air Act; and, (3) analytic support to Agency regulatory efforts to set emission standards for pollutants regulated under Sections 111(d) and 112.

State Program Guidelines and Regulations Development -- The objectives of this program element are the development of guidelines and regulations that set forth requirements for air pollution control programs implemented by the States under the Clean Air Act (principally State Implementation Plans (SIPs)); development of technical guidance for modeling; emission inventory development and air quality standard attainment demonstrations; and maintaining an overview of the development

and implementation of air pollution control programs to assure national consistency at the regional, State, and local levels. The State Implementation Plans (SIPs) provide for the attainment and maintenance of National Ambient Air Quality Standards, and establishment of programs for the prevention of significant deterioration (PSD) of air quality in clean areas, and for the protection of visibility in national parks and wilderness areas.

EMISSION STANDARDS AND TECHNOLOGY ASSESSMENT

1984 Program Request

The Agency requests a total of \$12,641,400 and 84.8 permanent workyears for this program, of which \$3,848,200 is for Salaries and Expenses and \$8,793,200 is for Abatement, Control, and Compliance. This is an increase of \$297,800 and a decrease of \$900,000, respectively. Although there is a decrease of 2.5 permanent workyears, the increase in Salaries and Expenses reflects higher personnel costs. The reduction in contract expenditures reflects a transfer of support to other program areas to strengthen regulatory impact and data analysis required in NSPS and NESHAP promulgation. Efforts will continue on NSPS projects as mandated by the Clean Air Act. Twelve proposals (include three proposals as a result of litigations and reviews of standards completed in 1982 and 1983) and 18 promulgations covering 15 additional source categories are planned. Reviews will be completed for six existing NSPS. In addition, six NESHAP proposals and three promulgations are also scheduled for 1984.

1983 Program

In 1983, the Agency is allocating a total of \$13,243,600 and 87.3 permanent workyears to this program, of which \$3,550,400 is for Salaries and Expenses and \$9,693,200 is for Abatement, Control, and Compliance. Efforts are continuing to complete the Clean Air Act mandated NSPS. Twenty-six NSPS proposals (21 new standards; 5 revisions) and 19 promulgations (12 new standards; 7 revisions) covering 12 new source categories are scheduled for 1983. In addition, nine reviews of existing standards are to be completed and Control Technique Guidelines (CTGs) for six sources of volatile organic compounds and one for the sources for nitrogen dioxide will be published. Four NESHAP covering benzene sources are scheduled for promulgation and two proposals are anticipated (coke oven by products-benzene and coke ovens-charging and topside leaks). In addition, the asbestos revision is to be proposed and reviews for beryllium and mercury are to be completed.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$14,503,900 for this program, of which \$4,183,500 was for Salaries and Expenses and \$10,320,400 for Abatement, Control and Compliance. The contract resources were used to continue work related to setting NSPS and NESHAP. Work continued on setting performance standards for all listed source categories. Twelve source categories, however, were deleted from the list because their growth was projected to be insignificant.

NSPS activity included: proposal of one new standard and six revisions; promulgation of three new standards and one revision; and completion of three reviews of existing standards. Three control technique guidelines (nonmetallic minerals, plywood manufacturing, and stationary sources of particulate matter) were prepared and CTGs for four volatile organic compounds sources were drafted and published for public comment. Work continued toward promulgation of four NESHAP benzene standards, proposal of a fifth benzene NESHAP, and proposal of NESHAP for coke ovens - charging and topside leaks.

POLLUTANT STRATEGIES AND AIR STANDARDS DEVELOPMENT

1984 Program Request

The Agency requests a total of \$3,909,700 and 47.8 permanent workyears for this program, of which \$2,316,700 is for Salaries and Expenses, and \$1,593,000 is for Abatement, Control and Compliance. This is an increase of \$42,100 and \$464,600, respectively, and reflects increased payroll costs and increased extramural support for additional regulatory impact analysis. Revisions to particulate matter (PM), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) standards will be promulgated. For the upcoming ozone (O₃) revision, risk assessment will be applied and regulatory impact analysis will be developed. Hazardous pollutants regulatory decisions will be made for nine compounds evaluated in 1983. Also, in 1984, the Science Advisory Board will complete review of six additional potential air toxic pollutants.

1983 Program

In 1983, the Agency is allocating a total of \$3,403,000 and 47.8 permanent workyears to this program, of which \$2,274,600 is for Salaries and Expenses and \$1,128,400 is for Abatement, Control, and Compliance. Reviews of the hydrocarbon standard and the carbon monoxide (CO) standard have been completed and changes will be promulgated in 1983. Revisions to the particulate matter, nitrogen dioxide, and sulfur dioxide standards are being proposed, and staff work on the lead and ozone NAAQS is in process. Application of a risk assessment methodology on standards is planned in 1983. Pollutant assessment activities are to result in the development of regulatory strategy for 12 pollutants: coke oven emissions; acrylonitrile; perchloroethylene; trichloroethylene; methyl chloroform; methylene chloride; Freon 113; carbon tetrachloride; toluene; nickel; vinylidene chloride; and manganese. Work will continue on six other pollutants. In addition, a final determination will be made concerning the regulation of cadmium.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$283,000 results from the following action:

-Congressional Action. (+\$283,000) This increase includes +\$283,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated \$3,214,900 for this program of which \$2,080,000 was for Salaries and Expenses and \$1,134,900 was for Abatement, Control, and Compliance. Contract funds provided support for evaluation of NAAQS, analysis of the environmental, economic, and regulatory impacts of the possible standards revision, and development of an improved risk assessment methodology.

Work was underway to analyze comments and to promulgate a decision concerning the hydrocarbon standard in early 1983. In addition, work was also underway to promulgate revisions to the carbon monoxide standards and to propose appropriate changes to the nitrogen oxides, sulfur oxides, and particulate matter standards. In the pollutant assessment area, detailed health and source assessments were underway for 12 pollutants. Other activities included work on a preliminary determination for the listing decision of cadmium, with a final decision to be published in 1983; the completion of population exposure estimates for 43 chemicals; and the completion of a source study on arsenic.

STATE PROGRAM GUIDELINES AND REGULATIONS DEVELOPMENT

1984 Program Request

The Agency requests a total of \$3,861,200 and 60.3 permanent workyears for this program, of which \$2,626,200 is for Salaries and Expenses and \$1,235,000 is for Abatement, Control, and Compliance. This is an increase of \$160,400 and \$275,000, respectively. Although there is a decrease of 3.6 permanent workyears, the increase in Salaries and Expenses reflects higher personnel costs. The increase of \$275,000 in Abatement, Control and Compliance is necessary to fund development of technical information on toxic pollutants that will be required by the State and local government control programs. The Agency will maintain its management and overview of the SIP process. Assistance will be provided to States in New Source Review (NSR) and Prevention of Significant Deterioration (PSD) programs development. Program guidance and policy papers will be provided for these and other standards implementation. Procedures will be implemented for oversight of State programs. Emission factors and related information on toxic chemicals will be developed and issued. Technical assistance and guidance on data bases and modeling techniques for cities not attaining in 1982 will be provided, and a revised version of EPA's Air Quality Modeling Guideline will be issued. If the operating permit program is proposed in 1983, it will result in promulgation in 1984. Also, guidance will be provided to Regional offices and the modeling clearinghouse will continue to promote and ensure Regional consistency.

1983 Program

In 1983, the Agency is allocating a total of \$3,425,800 and 63.9 permanent workyears to this program, of which \$2,465,800 is for Salaries and Expenses and \$960,000 is for Abatement, Control, and Compliance. Contract funds are being used to support continuation of the Best Available Control Technology and Lowest Achievable Emission Rate (BACT/LAER) Clearinghouse, development of emission factors modeling evaluations, and to refine guidance for revised particulate matter and SO₂ standards. National management and oversight of major SIP programs is continuing to ensure that backlogs do not reoccur. Emphasis is being placed on program guidance for SIP revisions for implementing revised ambient standards, including technical guidance for revision of Particulate Plans and preparation of guidance for revision of NO₂, SO₂, and lead SIPs. Guidance is also being provided for areas with a December 1982 attainment deadline (for existing ambient standards), as well as guidance for areas with deficient 1979 SIPs. Policy clarification and guidance is being provided on O₃ control strategies, and the BACT/LAER Clearinghouse is being maintained. Regulations for PM and SO₂ are being proposed and inventory guidance issued. Efforts to develop alternative approaches to regulations are continuing and the operating permit program will be proposed if current investigative efforts prove the program to be beneficial. The multi-year program for evaluation and validation of air quality models and development of emission factors for SIP revisions is being continued.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$5,106,900 for this program, of which \$3,739,200 was for Salaries and Expenses and \$1,367,700 was for Abatement, Control, and Compliance. Contract efforts supported SIP development and modeling. The emphasis in 1982 continued to be national management and evaluation of all major SIP programs which were initiated in previous years. Policy guidance and technical assistance were continued for the CO/O₃ areas that had been granted attainment date extensions to 1987.

Policy and guidance to expedite SIP processing was developed and published as Agency policy. As a result of the improved processing techniques, the Agency achieved substantial success in eliminating the SIP backlog in 1982. Management of the NSR and PSD programs continued with major efforts to encourage additional States to take over the permitting program and to audit State implementation. The Best Available Control Technology and Lowest Achievable Emission Rate Clearinghouse was expanded and updated. Technical assistance was furnished to States and Regional offices in the development and adoption of emission regulations for the control of VOC. Stack height regulations were proposed and promulgated. Additional modeling guidance was disseminated and emission factors updated for criteria pollutants. The multi-year program to evaluate dispersion model performance was continued with substantial progress completed for the initial two model categories (urban and rural) of seven to be evaluated.

AIR

Mobile Source Air Pollution Control & Fuel Economy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					

Emission Standards, Technical Assessment & Characterization					
Salaries & Expenses	\$4,099.0	\$3,348.6	\$3,404.6	\$3,188.3	-\$216.3
Abatement Control & Compliance	\$1,402.3	\$2,080.0	\$2,080.0	\$2,563.3	\$483.3
TOTAL	\$5,501.3	\$5,428.6	\$5,484.6	\$5,751.6	\$267.0
Testing, Technical & Administrative Support					
Salaries & Expenses	\$3,926.3	\$4,201.9	\$4,113.4	\$4,262.1	\$148.7
Abatement Control & Compliance	\$245.0	\$958.3	\$958.3	\$900.0	-\$58.3
TOTAL	\$4,171.3	\$5,160.2	\$5,071.7	\$5,162.1	\$90.4
Emissions & Fuel Economy Compliance					
Salaries & Expenses	\$1,327.4	\$1,430.2	\$1,462.7	\$1,332.7	-\$130.0
Abatement Control & Compliance	\$76.0			\$35.0	\$35.0
TOTAL	\$1,403.4	\$1,430.2	\$1,462.7	\$1,367.7	-\$95.0
Mobile Source Standards & Guidelines					
Abatement Control & Compliance	\$887.7				
TOTAL	\$887.7				
TOTAL:					
Salaries & Expenses	\$9,352.7	\$8,980.7	\$8,980.7	\$8,783.1	-\$197.6
Abatement Control & Compliance	\$2,611.0	\$3,038.3	\$3,038.3	\$3,498.3	\$460.0
Mobile Source Air Pollution Control & Fuel Economy	TOTAL \$11,963.7	\$12,019.0	\$12,019.0	\$12,281.4	\$262.4
PERMANENT WORKYEARS					

Emission Standards, Technical Assessment & Characterization	83.6	61.9	61.5	60.7	-.8
Testing, Technical & Administrative Support	49.0	50.2	50.1	50.1	
Emissions & Fuel Economy Compliance	33.3	28.3	28.1	25.9	-2.2
TOTAL PERMANENT WORKYEARS	165.9	140.4	139.7	136.7	-3.0

AIR

Mobile Source Air Pollution Control & Fuel Economy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

TOTAL WORKYEARS					
Emission Standards, Technical Assessment & Characterization	106.7	75.0	74.6	71.9	-2.7
Testing, Technical & Administrative Support	76.9	73.9	73.8	75.1	1.3
Emissions & Fuel Economy Compliance	38.0	36.6	36.4	33.3	-3.1
TOTAL WORKYEARS	221.6	185.5	184.8	180.3	-4.5

AIR

Mobile Source Air Pollution Control and Fuel Economy

Budget Request

The Agency requests a total of \$12,281,400 and 136.7 permanent workyears for 1984, an increase of \$262,400 and a decrease of 3.0 permanent workyears from 1983. Included in this total is \$8,783,100 for Salaries and Expenses and \$3,498,300 for Abatement, Control and Compliance, with a decrease of \$197,600 and an increase of \$460,000, respectively. The decreases primarily reflect completion of certain mandatory rulemaking actions, increased reliance on manufacturers fuel economy calculations, and a more efficient certification program. The increase in extramural funds will be used for in-use vehicle emissions testing and analysis aimed at determining the amount of in-use emissions and their affect on air quality.

Program Description

This subactivity carries out programs for the control of mobile source emissions as required by the Clean Air Act, and generates information and analyses related to motor vehicle fuel economy under the terms of the Motor Vehicle Information and Cost Savings Act.

Emission Standards, Technical Assessment and Characterization -- This program includes: 1) the establishment of emission standards for mobile sources, and associated technical analyses and emission characterization; 2) the development of technical procedures and guidelines applicable to the control of emissions from in-use vehicles; 3) the measurement and assessment of in-use motor vehicle emission levels; and 4) technical analyses related to the development of information on motor vehicle fuel economy.

Testing, Technical and Administrative Support -- This program provides in-house laboratory, data processing, and other support for mobile source air pollution control and fuel economy activities as well as test procedure development and refinement.

Emissions and Fuel Economy Compliance -- This program provides for the engineering review of data to determine the compliance of new motor vehicles with emission standards and other pre-production control requirements, follow-up review of the validity of manufacturers' data, and associated technical activities. Similar procedures for fuel economy determinations are also included.

Mobile Source Standards and Guidelines -- This program provided for the setting of emission standards for mobile sources and the assessment of in-use vehicle emissions. In 1982, this program was restructured and has been distributed among the Mobile Source Air Pollution Control and Fuel Economy program elements.

EMISSION STANDARDS, TECHNICAL ASSESSMENT AND CHARACTERIZATION

1984 Program Request

In 1984, the Agency requests a total of \$5,751,600 and 60.7 permanent workyears for this program, of which \$3,188,300 is for Salaries and Expenses and \$2,563,300 is for Abatement, Control and Compliance. This represents a decrease of .8 permanent workyears and \$216,300 and an increase of \$483,300, respectively from 1983 and reflects completion of certain mandatory rulemaking actions and reduced testing and analysis of fuel economy devices. The increase reflects efforts aimed at determining in-use emissions of new control technology vehicles and additional emission characterization work.

Final Rulemaking for the Heavy Duty Particulate and Heavy Duty Engine/Light Duty Truck nitrogen oxide standards will be developed. If necessary, a Notice of Proposed Rulemaking for revised Heavy Duty hydrocarbon/carbon monoxide standards for 1988 and later model years will be published, and the Light Duty Diesel Particulate standard will be reviewed. The testing procedure for light duty vehicles will be assessed for potential changes.

Acquiring emissions data analyses of air quality impacts from new technology vehicles and implementing a multi-year strategy for updating and improving the environmental data base on vehicle emissions will continue. Testing of in-use vehicles will be increased to determine the emissions effect of new control technology and "tamper-proof" systems at high mileage. We will also increase our ability to analyze available data, provide timely reports, and revise emissions factors and models used by EPA, industry, States, and Congress. Characterization of emissions from alternative fuels will continue, as will coordination with the Office of Research and Development and the Health Effects Institute on mobile source related pollution and health impacts. Fuel economy work will focus on evaluating the difference between in-use fuel economy and EPA fuel economy figures. Testing and evaluation of fuel economy retrofit devices will continue.

1983 Program

In 1983, the Agency is allocating a total of \$5,484,600 and 61.5 permanent workyears for this program, of which \$3,404,600 is for Salaries and Expenses and \$2,080,000 is for extramural purposes under Abatement, Control and Compliance. The Agency is working on the promulgation of revised standards for carbon monoxide and hydrocarbons from heavy duty gasoline engines, high altitude emissions, and light duty diesel averaging.

The Notices of Proposed Rulemaking for Heavy Duty Diesel Particulates, Heavy Duty Engine nitrogen oxide standards, and evaluation of the transient heavy duty test procedure are scheduled for completion. The Agency is proposing postponement of the 1985 implementation of the Light Duty Diesel Particulate standard. Technical assistance and review of State Implementation Plans, particularly as they relate to motor vehicle emissions, continues. Additional work focuses on testing in-use vehicles, including new technology vehicles. Characterization of emissions from methanol fueled vehicles continues. Evaluation of fuel economy retrofit device effectiveness continues. The aircraft standards, the High Altitude Report to Congress, and the Railroad Report to Congress will be completed in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$56,000 results from the following action:

-Reprogrammings. (+\$56,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$56,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$5,501,300 for this program, of which \$4,099,000 was for Salaries and Expenses and \$1,402,300 was for Abatement, Control and Compliance. In 1982, significant progress was made on the Auto Task Force relief items. Standards development focused on diesel particulates and heavy duty engine emissions. A revision was made to the warranty related short test for light duty vehicle emissions. Final changes to the aircraft standards were underway. The High Altitude Report to Congress and the Railroad Report to Congress were under preparation in 1982. Characterization work focused on emission characterization of alternative fuels, particularly methanol.

TESTING, TECHNICAL AND ADMINISTRATIVE SUPPORT

1984 Program Request

The Agency requests a total of \$5,162,100 and 50.1 permanent workyears for this program, of which \$4,262,100 is for Salaries and Expenses and \$900,000 is for Abatement, Control and Compliance. This represents an increase of \$148,700 and a decrease of \$58,300 respectively from 1983. This reflects increased emphasis on in-house testing in support of in-use vehicle emissions determinations to improve our data bases and to update them with data on those vehicle technologies which will dominate the fleet during 1984 and later periods.

This program will provide basic testing, technical support, and administrative services for operation of the Motor Vehicle Emissions Laboratory (MVEL). Administrative services to be performed include personnel, procurement, safety, facility management, and ADP support for the MVEL.

Testing activities will include tests for preproduction certification; tests for fuel economy labeling and compliance programs; tests of in-use vehicles for determination of emissions from vehicles in actual use; tests for recall surveillance and confirmatory purposes; tests in support of tampering and fuel switching programs, and tests for the in-use compliance feasibility program. In addition to these testing programs, engineering evaluations will be conducted on the feasibility of using electric dynamometers for better simulation of vehicle road load. The program to determine correlation with manufacturers laboratories will be maintained.

1983 Program

In 1983, the Agency is allocating a total of \$5,071,700 and 50.1 permanent workyears for this program, of which \$4,113,400 is for Salaries and Expenses and \$958,300 is for Abatement, Control and Compliance. Testing and technical support activities have been redirected to operate at a level where significant economies of scale can be obtained and to consolidate similar testing activities.

Testing support to the certification and fuel economy labeling and compliance programs continues (1,000 tests); other testing supported at the Motor Vehicle Emissions Laboratory includes: recall, surveillance, and tampering and fuel switching programs; testing in-use vehicles for development of emission factors; and testing for the initiation of a feasibility study for development of an in-use motor vehicle compliance program. Approximately 1,300 tests will be performed for these programs in 1983. Correlation programs to maintain equivalent test procedures between manufacturers and the EPA continue. The adequacy of existing procedures and equipment to test newer technology vehicles is being evaluated. The basic personnel, support services, ADP, and administrative management functions are provided for the MVEL. Safety and facility support services are provided, aimed at maintaining a high level of occupational safety and health.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$88,500 results from the following action:

-Reprogrammings. (-\$88,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$88,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$4,171,300 for this program, of which \$3,926,300 was for Salaries and Expenses and \$245,000 was for Abatement, Control and Compliance. The program focused on increasing efficiency in testing, and technical and administrative support while maintaining or expanding the quality and quantity of outputs. A total of 1,235 tests were performed for in-use emissions assessment, certification, and fuel economy.

EMISSIONS AND FUEL ECONOMY COMPLIANCE

1984 Program Request

The Agency requests a total of \$1,367,700 and 25.9 permanent workyears for this program, of which \$1,332,700 is for Salaries and Expenses and \$35,000 is for Abatement, Control and Compliance. This represents a decrease of 2.2 permanent workyears and \$130,000 and an increase of \$35,000 respectively, from 1983 and reflects increased reliance on manufacturers fuel economy calculations, a more efficient certification program, and a slight increase in resources for the alternative compliance program.

The emissions certification program will continue to issue between 300 and 400 certificates of compliance. The fuel economy information and compliance program will generate information for the Gas Mileage Guide, calculate general and specific fuel economy labels, and calculate each manufacturer's Corporate Average Fuel Economy (CAFE). Sampling of manufacturers label calculations will be made. Efforts to develop fuel economy regulations that provide more accurate consumer information will continue and a rulemaking will be completed. Development of an alternative compliance program will continue and analytical work will be completed in 1985.

1983 Program

In 1983, the Agency is allocating \$1,462,700 and 28.1 permanent workyears for this program, all of which is for Salaries and Expenses. The Agency is continuing to streamline the certification process by revising requirements to reduce the burden on industry without sacrificing environmental results. Programs to assess an in-use compliance approach to emissions control and to test high mileage in-use vehicles to gather data on in-use emissions and emission control system deterioration over time are underway. The fuel economy program continues to generate 1,600 to 1,700 fuel economy labels a year, data for the Gas Mileage Guide, and 150 CAFE calculations. Increased effort is being devoted to revising the fuel economy program to more closely approximate in-use results, improving the labeling data base, and reducing the manufacturers' reporting costs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$32,500 results from the following action:

-Reprogrammings. (+\$32,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$32,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$1,403,400 for this program, of which \$1,327,400 was for Salaries and Expenses and \$76,000 was for extramural projects under the Abatement, Control and Compliance appropriation. Certificates were issued for 302 light duty engine families and the Fuel Economy program produced 1,700 labels and performed 150 CAFE calculations. The Final Rulemaking for changes to improve the certification process was prepared.

MOBILE SOURCE STANDARDS AND GUIDELINES

1982 Accomplishments

In 1982, the Agency obligated \$887,700 for this program, all of which was for extramural projects under the Abatement, Control and Compliance appropriation. These funds were used to test vehicles to determine their emissions in-use. This program was restructured in 1982 and has been distributed among the Mobile Source Air Pollution Control and Fuel Economy program elements.

AIR

State Programs Resource Assistance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Control Agency Resource
Supplementation
(105 Grants)

Abatement Control & Compliance	\$88,145.1	\$69,954.7	\$84,734.9	\$69,954.7	-\$14,780.2
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TOTAL	\$88,145.1	\$69,954.7	\$84,734.9	\$69,954.7	-\$14,780.2
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Training

Salaries & Expenses	\$216.4	\$238.1	\$238.1	\$254.7	\$16.6
Abatement Control & Compliance	\$800.3	\$624.0	\$964.0	\$476.9	-\$487.1

TOTAL	\$1,016.7	\$862.1	\$1,202.1	\$731.6	-\$470.5
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TOTAL:

Salaries & Expenses	\$216.4	\$238.1	\$238.1	\$254.7	\$16.6
Abatement Control & Compliance	\$88,945.4	\$70,578.7	\$85,698.9	\$70,431.6	-\$15,267.3

State Programs
Resource Assistance

TOTAL	\$89,161.8	\$70,816.8	\$85,937.0	\$70,686.3	-\$15,250.7
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PERMANENT WORKYEARS

Training	4.0	4.0	4.0	4.0
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TOTAL PERMANENT WORKYEARS	4.0	4.0	4.0	4.0
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TOTAL WORKYEARS

Training	4.2	4.0	4.0	4.0
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TOTAL WORKYEARS	4.2	4.0	4.0	4.0
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AIR

State Programs Resource Assistance

Budget Request

The Agency requests a total of \$70,686,300 and 4.0 permanent workyears for 1984, a decrease of \$15,250,700 from 1983. Included in this total is \$254,700 for Salaries and Expenses and \$70,431,600 for Abatement, Control, and Compliance, an increase of \$16,600 and a decrease of \$15,267,300, respectively. The increase reflects higher personnel costs. The decrease reflects our projection for a reduction in regulatory planning costs as the result of completion of several major strategies; elimination of certain monitoring sites; management efficiencies; and increased use of fee systems.

Program Description

This subactivity provides financial support to State and local air pollution control agencies, including Indian lands, for the prevention, abatement, and control of air pollution. Its prime objective is to support the development and implementation of effective State and local programs for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS), in accordance with provisions of the Clean Air Act.

Direct grants assistance to control agencies which have major roles for developing and carrying out these programs, constitutes the major form of EPA resource assistance. Direct grants assistance is supplemented by the training of State and local air pollution personnel and the provision of services of contractors for specific tasks identified by the States and localities. Grants support State and local control agencies in carrying out their roles under the Clean Air Act. This includes: the development of State Implementation Plans for the attainment of national air quality standards; enforcement of source emission regulations and requirements; review and permitting of new sources; and the monitoring of ambient air quality. In addition, these funds promote the assumption and implementation of other regulatory responsibilities including the Prevention of Significant Deterioration (PSD), New Source Performance Standards (NSPS); and National Emission Standards for Hazardous Air Pollutants (NESHAPS).

Control Agency Resource Supplementation (105 Grants) -- Under the Clean Air Act, the control of air pollution at its source is primarily the responsibility of State and local governments. States, in cooperation with local agencies, are responsible under the Act for developing and implementing programs to attain and maintain the national ambient air quality standards. EPA grant assistance partially supports the costs for the operation and continued efforts of these State and local agency programs in meeting these responsibilities.

Training -- Resource assistance is further supplemented by the provision of training in specialized areas of air pollution control. Since July 1, 1976, the EPA Air Pollution Training Institute at Research Triangle Park, North Carolina, has been operated under contract. New courses are developed as needed, instruction manuals and materials are revised and updated, and manuals and instructional materials are provided to university training centers. The EPA staff works with university centers to develop State and local self-sufficiency in training by offering courses at area training centers.

CONTROL AGENCY RESOURCE SUPPLEMENTATION (105 GRANTS)

1984 Program Request

The Agency requests a total of \$69,954,700 for Abatement, Control, and Compliance, a decrease of \$14,780,200 from 1983. Although this reduction reflects a 17 percent decrease in Federal funds, it actually represents approximately a 7 percent decrease in total resources for air pollution control programs; since States on the average contribute 60 percent of the total resources.

Several factors operating collectively will permit this reduction in grant funding without impeding effective State and local efforts for the prevention and control of air pollution. There will be substantial reductions in regulatory planning costs now that States have made considerable progress in the development of several major strategies (e.g., post 1982 attainment SIPs; SIPs for lead (Pb); Inspection and Maintenance (I/M) programs). Other savings that States can choose to make include: the elimination of unnecessary or duplicate monitoring sites; management efficiencies including the implementation of procedural and administrative simplifications (e.g., streamlining of SIP requirements, consolidation of grants administrative requirements); and the increased use by control agencies of fee systems for permits required by the Clean Air Act.

With these savings in place, most other State and local air management, enforcement and monitoring programs will not expand but will be maintained at the 1983 levels. State and local air management programs will focus on the commitments for the development and implementation of additional mobile and stationary source controls that were included in the 1982 SIPs for ozone (O₃) and/or carbon monoxide (CO). Other significant efforts will include: (1) continued development and implementation of new or improved regulatory reform measures, particularly the use of emission trading options, development of generic programs for emissions trading and use of operating permit programs for modifying individual source control requirements as enforceable revisions to approved strategies; (2) development by remaining States of programs for the prevention of significant deterioration; and, (3) the assumption of programs to implement recently promulgated New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants.

State and local air enforcement efforts are expected to be maintained at the 1983 program levels. Programs will continue to focus on the surveillance and compliance of major sources impacting nonattainment areas, including volatile organic compound (VOC) sources in attainment areas. Other efforts will include the continued implementation of programs for the review and permitting of new sources and the enforcement of permit requirements. The State and local Air Monitoring System (SLAMS) network will be maintained and will continue to focus on the National Air Monitoring System (NAMS) network including required quality assurance.

The resources provided as a result of the savings in regulatory planning, monitoring and management programs will allow control agencies in 1984 to undertake a limited number of new or expanded efforts to respond to emerging needs and air quality problems. This includes: the completion of appropriate data bases and the development of regulatory strategies for revised National Ambient Air Quality Standards for particulate matter and sulfur dioxide, the analysis of strategy alternatives for major urban extension areas where strategies indicate attainment by 1987 is impossible or highly improbable and enforcement efforts related to additional delegations. Further, the modest assessment effort of air toxics problems will be increasingly focused on populated areas having significant chemical, petroleum, or solvent industries and the employment of good science and consistent techniques in the performance of the assessments.

1983 Program

In 1983, the Agency is allocating a total of \$84,734,900 to this program for Abatement, Control, and Compliance. State and local air management programs are focusing on the commitments included in the post 1982 attainment strategies for ozone and/or carbon monoxide which are to be undertaken or completed during the fiscal year. Examples include State development of additional controls for stationary sources and the completion of motor vehicle inspection and maintenance

programs where required programs have not become operational. Other major efforts include: (1) development of programs by additional States for the prevention of significant deterioration (2) delegation of recently promulgated NSPS and NESHAP; (3) continuing development of regulatory reforms including use of emission trading options and development of generic programs; (4) revision of control requirements for major sulfur dioxide regulations having significant fuel and energy impact; and, (5) the completion by additional States of attainment strategies for lead (Pb). Additional States are undertaking, at their own initiative, programs to assess air toxics problems and programs.

State and local air enforcement programs are focusing on the surveillance and compliance of major sources impacting nonattainment areas, including major sources located in attainment areas emitting volatile organic compounds which through transport may contribute to urban nonattainment problems. Other efforts include the implementation of effective programs for the review and permitting of new sources and the enforcement of delegated NSPS and NESHAP provisions. A limited number of State and local agencies are continuing anti-tampering and fuel surveillance activities. State and local air monitoring programs are focusing on the operation, maintenance, and quality assurance of the National Air Monitoring Systems and completion and quality assurance of an effective State and local Air Monitoring System network.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$14,780,200 results from the following action:

-Congressional Action. (+\$14,780,200) The Congressional add-on to this activity of +\$14,780,200 to the Abatement, Control and Compliance appropriation was for the State Control Agency Resources Supplementation (105 Grants) program.

1982 Accomplishments

In 1982, the Agency obligated \$88,145,100 for this program, all for Abatement, Control and Compliance. Air management efforts included the development of required strategies for the post 1982 attainment of National Ambient Air Quality Standards for ozone and carbon monoxide; the continued development of major mobile and stationary source regulatory programs required for the post 1982 extension areas; and the delegation of new or additional responsibilities for the regulation of new sources. Enforcement efforts focused on major source compliance, review and permitting of new sources, as well as enforcement of delegated responsibility for National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards. Monitoring programs provided for the maintenance of current ambient monitoring activities including the National Air Monitoring System network and for progress toward completion of the State and local Air Monitoring System network. Other efforts included the development by several States of anti-tampering and fuel switching surveillance programs and the incorporation of regulatory reforms including emission trading into current State regulation efforts. A limited number of States, at their own initiative, undertook efforts to assess potential air toxic problems.

TRAINING

1984 Program Request

The Agency requests a total of \$731,600 and 4.0 permanent workyears for this program, of which \$254,700 is for Salaries and Expenses and \$476,900 is for Abatement, Control, and Compliance. This is an increase of \$16,600 and a decrease of \$487,100, respectively; and reflects reduced development of new and revised training courses, as well as, a decrease in the number of area training centers.

Fifteen courses will be offered at the three area training centers for approximately 530 students. Additionally, two self-instructional, including slide/tape presentations and two correspondence courses will be prepared. Also, one self-instructional, including slide/tape presentation will be revised. Implementation of competitive procurement to support State and local agency training will take place.

1983 Program

In 1983, the Agency is allocating \$1,202,100 and 4.0 permanent workyears for this program, of which \$238,100 is for Salaries and Expenses and \$964,000 is for Abatement, Control, and Compliance.

Seventeen training courses are to be conducted in the six area training centers. Also, 10 new and revised courses/course materials, self-instructional and correspondence courses are being prepared. In addition, competitive procurement mechanisms to support State and local agency training activities are being investigated.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$340,000 results from the following action:

-Congressional Action. (+\$340,000) The Congressional add-on to this activity of +\$340,000 to the Abatement, Control and Compliance appropriation was for the academic training program.

1982 Accomplishments

In 1982, the Agency obligated \$1,016,700 for this program, of which \$216,400 was for Salaries and Expenses and \$800,300 was for Abatement, Control, and Compliance. Twenty-seven training courses were conducted covering 13 subject areas for 958 students at seven area training centers and graduate traineeships/fellowships were provided for 26 control agency employees. In addition, 10 new and revised classroom, self-instructional, and correspondence courses were prepared.

AIR

Air Quality Management Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Air Quality Management Implementation					
Salaries & Expenses	\$10,131.9	\$8,791.5	\$9,482.7	\$10,116.9	\$634.2
Abatement Control & Compliance	\$240.6	\$34.3	\$31.2	\$294.6	\$263.4
TOTAL	\$10,372.5	\$8,825.8	\$9,513.9	\$10,411.5	\$897.6
TOTAL:					
Salaries & Expenses	\$10,131.9	\$8,791.5	\$9,482.7	\$10,116.9	\$634.2
Abatement Control & Compliance	\$240.6	\$34.3	\$31.2	\$294.6	\$263.4
Air Quality Management TOTAL Implementation	\$10,372.5	\$8,825.8	\$9,513.9	\$10,411.5	\$897.6
PERMANENT WORKYEARS					

Air Quality Management Implementation	268.1	246.5	246.5	246.5	
TOTAL PERMANENT WORKYEARS	268.1	246.5	246.5	246.5	
TOTAL WORKYEARS					

Air Quality Management Implementation	294.3	266.8	266.8	266.8	
TOTAL WORKYEARS	294.3	266.8	266.8	266.8	

AIR

Air Quality Management Implementation

Budget Request

The Agency requests a total of \$10,411,500 and 246.5 permanent workyears, an increase of \$897,600 from 1983. Included in this total is \$10,116,900 for Salaries and Expenses and \$294,600 for the Abatement, Control and Compliance, an increase of \$634,200 and \$263,400, respectively.

Program Description

This subactivity provides resources for the operation and maintenance of an air management program in each of the Agency's ten Regional Offices. The Regional program, in partnership with State and local air pollution control agencies, serves to meet the regulatory requirements specified in Sections 110, Part C and Part D of the Clean Air Act and EPA implementing regulations. The air management program provides policy guidance and technical consultation to States in the development and implementation of the strategies and regulatory programs for the attainment and maintenance of National Ambient Air Quality Standards (NAAQS). It also conducts the necessary review and coordination for approval of State submitted strategies. The Agency negotiates air program grants to State and local control agencies and provides oversight of their progress in developing and implementing regulatory programs for standards attainment.

Major efforts are necessary to provide timely and effective guidance to States preparing attainment strategies and meeting the commitments for the development and implementation of multiple regulatory programs essential to the attainment of standards. Similar efforts are necessary for State development of strategies for implementing revisions to air quality standards required by the Act and for incorporation of appropriate regulatory reforms into State operating programs.

The 1977 Amendments to the Act also impose new requirements for reviewing and permitting new sources to assure that they will not cause deterioration of air quality in areas attaining the National Ambient Air Quality Standards, or will not delay attainment in areas not yet attaining the NAAQS. Effective guidance to States assuming responsibility for these review and permitting requirements involves Regional efforts. Specific guidance to States is frequently required for: determination of best available emission control technology, analysis of air quality impact, selective source-siting, and emission trade-off analyses.

AIR QUALITY MANAGEMENT IMPLEMENTATION

1984 Program Requests

The Agency requests a total of \$10,411,500 and 246.5 permanent workyears for this program, of which, \$10,116,900 is for Salaries and Expenses and \$294,600 is for Abatement, Control, and Compliance. This is an increase of \$634,200 and \$263,400, respectively. The increase in Salaries and Expenses reflects increased payroll and operating costs primarily associated with the transfer of Public Health Service employee costs to EPA in 1984. The increase in Abatement Control and Compliance reflects funding of National Oceanic and Atmospheric Administration (NOAA) meteorologists.

New thrusts in this program for 1984 will be possible because of the changing nature of the air program in other areas. Consistent with major changes in EPA policies and the streamlining of procedures, traditional review and approval efforts for State strategies and revisions will continue to require lower resources. Also, the number of anticipated actions will be less as rulemaking for a number of

areas, particularly the post 1982 attainment State Implementation Plans (SIPs), are completed. State regulatory reforms including the increasing establishment of generic programs will decrease the number of future required EPA reviews. Further, the direct review of new sources will continue to decline as more States accept and implement delegations for the prevention of significant deterioration. New or expanded guidance and support efforts will be focused on: (1) State development of consistent and appropriate strategies for attainment of newly revised standards for particulate matter and sulfur dioxide; (2) assessment of air toxics focusing on populated areas having major chemical, petroleum, or solvent industries consistent with good science; and, (3) analysis of strategy alternatives within major urban extension areas where attainment of ozone and carbon monoxide standards appears to be impossible or highly improbable.

Continuing air management functions will include: the negotiation of air grants; direct technical review activities in a limited number of States for new sources until such time as programs for the prevention of significant deterioration (PSD) are developed; audit of State and local programs for assessing operational capabilities and consistency with regulatory requirements; and, efforts toward the resolution of air quality issues having interstate or international implications. Guidance and support will be provided to States developing or implementing high priority programs for: (1) attaining ozone and carbon monoxide in the most significant urban areas; (2) undertaking regulatory reforms including use of emission trading options; (3) the use of operating permit programs for modifying source emission limits; and, (4) regulation of new sources. Rulemaking actions for State strategies and revisions will continue to be finalized in a timely manner preventing any SIP review backlog. A number of revisions are expected from States whose SIPs were determined to be inadequate upon the expiration of the December 31, 1982, attainment deadlines.

Extramural resources will assist four Regional offices in supporting inter-agency agreements with National Oceanic and Atmospheric Administration for the detail of meteorologists to the Regional offices. These meteorologists will provide necessary modeling expertise for the review of State submitted strategies for attainment of standards and assist States in implementation of new source programs. In addition, extramural resources will assist Regions in analyzing additional regulatory reform proposals.

1983 Program

In 1983, the Agency is allocating \$9,513,900 and 246.5 permanent workyears for this program, of which \$9,482,700 is for Salaries and Expenses and \$31,200 is for Abatement, Control and Compliance. In 1983, the Regional air management program is focusing on completing all actions required for the review and approval of State submitted strategies for the post 1982 attainment of NAAQS for ozone and/or carbon monoxide within the urban extension areas. These efforts include follow-up with individual States whose strategies included schedules for the development of specific regulatory programs. The program, upon request, is providing specialized guidance and support to States developing key regulatory programs within the extension areas, including the development of additional controls for stationary sources and the completion of motor vehicle inspection and maintenance programs where such programs are not operational. Also in 1983, approval and support efforts for a number of other major strategies and regulatory programs are continuing. Included are: (1) the development of regulatory programs in additional States for the prevention of significant deterioration; (2) delegation of recently promulgated New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants; (3) regulatory reforms including those for emission trading and generic programs; (4) revisions of major sulfur dioxide regulations having significant fuel and energy impacts; and, (5) development of attainment strategies for lead.

Rulemaking actions for State strategies and revisions are being processed in an efficient manner to prevent future recurrence of a major SIP backlog. States recently accepting responsibility for PSD are receiving guidance and support in conducting essential engineering and modeling efforts until they acquire necessary expertise and experience. EPA continues to perform the necessary engineering and air quality reviews for the permitting of new sources for PSD within the States which do not have program responsibility. The Regional offices continue to negotiate air grants and maintain oversight of Agency performance in meeting grant commitments. Finally, efforts are being expanded to periodically assess State environmental problems and their regulatory programs including elements for program consistency.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$688,100 results from the following action:

-Reprogrammings. (+\$688,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$691,200 to the Salaries and Expenses appropriation and a net decrease of -\$3,100 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$10,372,500 for this program, of which \$10,131,900 was for Salaries and Expenses and \$240,600 was for Abatement, Control, and Compliance. Contract resources were provided for modeling support and special analyses for regulatory reform proposals. The Regional air management efforts focused on the implementation of improved procedures for the expeditious review and approval of State strategies and regulations and the elimination of a major backlog of required rulemaking for State Implementation Plans. Rulemaking actions included State regulations for the control of additional sources of volatile organic compound (VOC) emissions; corrections of deficient 1979 State Implementation Plans; State programs for the prevention of significant deterioration; development of SIP strategies for attainment of NAAQS for lead; and State programs for implementing regulatory reforms including those employing emission trading options and the establishment of generic programs.

Guidance was provided to States developing specific stationary source controls for volatile organic compounds; automotive inspection and maintenance programs, and to those States preparing post-1982 attainment strategies for ozone and carbon monoxide. The program continued to foster and guide State development of programs for the prevention of significant deterioration and the delegation to States of New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants, achieving a significant increase in the number of States assuming program responsibility. Direct review of new sources was continued in the non-delegated States. Air grants negotiations were conducted and oversight of State and local agency performance in meeting grant commitments was maintained.

AIR

Trends Monitoring & Progress Assessment

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Ambient Air Quality Monitoring						
Salaries & Expenses	\$2,760.7	\$2,997.8	\$3,043.6	\$3,318.2	\$274.6	
Abatement Control & Compliance	\$94.3	\$248.4	\$185.6	\$135.6	-\$50.0	
TOTAL	\$2,855.0	\$3,246.2	\$3,229.2	\$3,453.8	\$224.6	
Air Quality & Emissions Data Analysis & Progress Assessment						
Salaries & Expenses	\$1,466.5	\$1,427.5	\$1,427.5	\$1,631.0	\$203.5	
Abatement Control & Compliance	\$220.4	\$203.9	\$203.9	\$203.9		
TOTAL	\$1,686.9	\$1,631.4	\$1,631.4	\$1,834.9	\$203.5	
TOTAL:						
Salaries & Expenses	\$4,227.2	\$4,425.3	\$4,471.1	\$4,949.2	\$478.1	
Abatement Control & Compliance	\$314.7	\$452.3	\$389.5	\$339.5	-\$50.0	
Trends Monitoring & Progress Assessment	TOTAL	\$4,541.9	\$4,877.6	\$4,860.6	\$5,288.7	\$428.1
PERMANENT WORKYEARS						

Ambient Air Quality Monitoring	77.0	82.1	82.1	82.1		
Air Quality & Emissions Data Analysis & Progress Assessment	31.0	29.9	30.2	30.2		
TOTAL PERMANENT WORKYEARS	108.0	112.0	112.3	112.3		
TOTAL WORKYEARS						

Ambient Air Quality Monitoring	83.3	87.8	87.7	87.8	.1	
Air Quality & Emissions Data Analysis & Progress Assessment	33.9	34.0	32.8	34.0	1.2	
TOTAL WORKYEARS	117.2	121.8	120.5	121.8	1.3	

AIR

Trends Monitoring and Progress Assessment

Budget Request

The Agency requests a total of \$5,288,700 and 112.3 permanent workyears for 1984, an increase of \$428,100 from 1983. Included in this total is \$4,949,200 for Salaries and Expenses and \$339,500 for the Abatement, Control, and Compliance, an increase of \$478,100 and a decrease of \$50,000, respectively. The increase reflects increased payroll and operating costs primarily associated with the transfer of Public Health Service employee costs to EPA in 1984. The decrease reflects a reduction in the Ambient Air Quality Monitoring program.

Program Description

This subactivity covers work related to monitoring ambient air quality, determining source emissions, analyzing their relationships, and assessing the progress made toward the attainment of environmental goals.

Ambient Air Quality Monitoring -- Activity in this program includes: (1) EPA's management overview of State ambient air quality monitoring networks, associated laboratory and field quality assurance activities, and the implementation of air monitoring strategies as delineated in the air monitoring regulations promulgated in 1979 (40 CFR 58); (2) the coordination of Regional and State field investigation activities for collecting ambient air quality samples for subsequent sample analysis and related quality control; (3) reviewing of source emissions data; and (4) the necessary management and coordination to ensure timely storage and validation of data obtained.

Air Quality and Emissions Data Analysis and Progress Assessment -- Major activities include: national coordination of Regional office, State and local ambient monitoring programs; issuance of new and revised regulatory requirements and related technical guidance; active oversight and auditing of the National Air Monitoring Stations (NAMS) to ensure continuing conformance with all regulatory criteria; operation of computer systems for storing, retrieving, and analyzing ambient air quality and emission data; development and implementation of systems to meet user requirements; and preparation of trends analyses and related air quality and emission progress assessments for policy evaluation and development and to meet public information needs.

AMBIENT AIR QUALITY MONITORING

1984 Program Request

The Agency requests a total of \$3,453,800 and 82.1 permanent workyears for this program, of which \$3,318,200 is for Salaries and Expenses and \$135,600 is for Abatement, Control, and Compliance. This is an increase of \$274,600 and a decrease of \$50,000, respectively. The increase reflects increased payroll and operating costs and the decrease represents a reduced need for extramural support for the development of environmental reports.

Overview and management of State air monitoring programs including Section 105 grants review will continue. The Agency will perform quality assurance audits of State monitoring systems and performance audits of selected NAMS monitors. This program will validate and coordinate the timely reporting of air quality and emission data to EPA data banks. In addition, this program will prepare air quality environmental management reports and respond to air emergency episodes or spills. The Agency will conduct reviews of monitoring networks and data involving

highly controversial or technically difficult permits for the prevention of significant deterioration (PSD) program. Annual network review for most States and evaluation of monitoring sites prioritized by population and pollutant levels will be performed. The Agency will assist in 1982 attainment analyses and assessments for the 30 largest urban areas in terms of pollution levels and population.

The program will evaluate State developed particulate matter (PM) monitoring networks in support of new EPA ambient air quality standard as well as coordinate and assist State toxic monitoring programs. This program will provide coordination and technical support for EPA's Office of Research and Development and State field efforts to develop an acid deposition data base.

1983 Program

In 1983, the Agency is allocating \$3,229,200 and 82.1 permanent workyears for this program, of which \$3,043,600 is for Salaries and Expenses and \$185,600 is for Abatement, Control, and Compliance. The five-year program for implementing the air monitoring strategy is being completed in 1983. The State and local air monitoring systems (SLAMS) network is being completely installed and operated by State and local agencies during the fiscal year. The Agency is providing technical assistance in conducting particulate matter and toxics monitoring studies. The Agency is continuing quality assurance audits of State monitoring systems and performance audits of selected NAMS monitors and is continuing to validate and store air quality and emissions data in the EPA data banks.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$17,000 results from the following action:

-Reprogrammings. (-\$17,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$45,800 to the Salaries and Expenses appropriation and a net decrease of -\$62,800 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$2,855,000 for this program, of which \$2,760,700 was for Salaries and Expenses and \$94,300 was for Abatement, Control, and Compliance. Contract funds supported preparation of air quality profiles. The Regions continued to evaluate preparation of air quality profiles and State monitoring networks, perform quality assurance audits, coordinate State particulate matter data activities, and validate and coordinate storage of air data in national emission data systems. Evaluations for conformance of the State and local air monitoring systems (including NAMS) monitoring sites, located primarily in non-attainment areas, and for energy conversion sources were performed. In addition, quality assurance audits were performed of large local agency monitoring systems.

AIR QUALITY AND EMISSIONS DATA ANALYSIS AND PROGRESS ASSESSMENT

1984 Program Request

The Agency requests a total of \$1,834,900 and 30.2 permanent workyears for this program, of which \$1,631,000 is for Salaries and Expenses and \$203,900 is for Abatement, Control, and Compliance. This is an increase of \$203,500 for Salaries and Expenses and reflects increased payroll and operating costs.

The existing air quality and emission data systems will be operated and guidance will be provided to users. Responses to approximately 500 requests for air quality and/or emission data will be provided. Development of an improved air data system will continue through design and development of software, implementation of vendor-supplied data manipulation and analysis software, and conversion of a portion of

the data needed for the new system. Support will be provided to the 35 agencies using EPA developed data systems. This program will analyze ambient and emission trends and assess progress towards attainment and will prepare statistical analyses to support new or revised ambient standards. Software, data files, and EPA's Part 58 regulations on Ambient Monitoring will be modified to accommodate changes to the ambient standards. National oversight of Regional office, State and local air monitoring programs will be provided. The NAMs will be managed through maintenance of a site information base, review of ambient data, and the issuance of status reports on regulatory compliance. To support the non-criteria monitoring programs of State and local agencies, guidance dealing with sampling methods and frequency, network design and siting, quality control, data reduction and reporting, and trends and data analyses will be developed.

1983 Program

In 1983, the Agency is allocating a total of \$1,631,400 and 30.2 permanent workyears for this program, of which \$1,427,500 is for Salaries and Expenses and \$203,900 is for Abatement, Control, and Compliance. All major activities are continuing: including operation of existing air data systems; production of annual report and other statistical analyses; national oversight of State and local monitoring programs; and evaluations of NAMs including on-site audits. Also, the program is evaluating and issuing status reports on compliance of SLAMS networks with regulations. Revised monitoring regulations to reflect revision to particulate matter (PM), sulfur dioxide (SO₂), and nitrogen dioxide (NO₂) ambient standards are being proposed. In addition, with regard to the new air data system, the design and development of conversion software for air quality data is being completed. The strategy for non-criteria (toxic) monitoring will be implemented through establishment of a pilot center in one city and the issuance of guidance on monitoring methods and the design of sampling programs for toxic pollutants.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$1,686,900 for this program, of which \$1,466,500 was for Salaries and Expenses and \$220,400 was for Abatement, Control, and Compliance. Contract funds supported regulation review and revision, guidance development, operation and maintenance of air pollution data storage and retrieval systems, and progress toward the development of a new data system. Emphasis continued on operation and updating of existing air data systems, and training and guidance to system users. This program provided support to 35 State and local agencies using EPA developed data systems. Other major activities included preparation of special air quality and emission analyses, statistics and reports, national oversight of State and local monitoring programs, evaluation of NAMs including on-site audits, and work toward revising monitoring regulations to reflect revisions to the ambient standards for SO₂, PM, and NO₂. In addition, the Agency developed a program plan for implementing a strategy for non-criteria pollutant monitoring (a program to prepare for future monitoring of toxic pollutants by States), and completed the preliminary systems analysis of software for the new air data system.

Enforcement

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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AIR

Stationary Source Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Stationary Source
Enforcement

Salaries & Expenses	\$12,800.2	\$10,101.5	\$9,850.7	\$10,356.7	\$506.0
Abatement Control & Compliance	\$9,092.9	\$5,019.1	\$5,019.1	\$4,808.7	-\$210.4
TOTAL	\$21,893.1	\$15,120.6	\$14,869.8	\$15,165.4	\$295.6

Stationary Source
Enforcement - Legal &
Enforcement Counsel
Abatement Control &
Compliance

	\$599.9				
TOTAL	\$599.9				

TOTAL:

Salaries & Expenses	\$12,800.2	\$10,101.5	\$9,850.7	\$10,356.7	\$506.0
Abatement Control & Compliance	\$9,692.8	\$5,019.1	\$5,019.1	\$4,808.7	-\$210.4

Stationary Source
Enforcement

TOTAL	\$22,493.0	\$15,120.6	\$14,869.8	\$15,165.4	\$295.6
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PERMANENT WORKYEARS

Stationary Source Enforcement	368.8	273.4	273.2	271.9	-1.3
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TOTAL PERMANENT WORKYEARS	368.8	273.4	273.2	271.9	-1.3
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TOTAL WORKYEARS

Stationary Source Enforcement	398.3	289.6	289.3	287.6	-1.7
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TOTAL WORKYEARS	398.3	289.6	289.3	287.6	-1.7
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AIR

Stationary Source Enforcement

Budget Request

The Agency requests a total of \$15,165,400 and 271.9 permanent workyears in 1984, an increase of \$295,600 and a decrease of 1.3 permanent workyears from 1983. Included in this total is \$10,356,700 for Salaries and Expenses and \$4,808,700 for Abatement, Control and Compliance, an increase of \$506,000 and a decrease of \$210,400 respectively. The increase reflects increased payroll and operating costs and the reduction in extramural funds reflects a shift towards greater reliance on EPA personnel for conducting inspections.

Program Description

The stationary source enforcement program provides support to and coordination with State and local air pollution control agencies to ensure that stationary sources achieve and maintain compliance with the requirements of the Clean Air Act, as amended in 1977.

Stationary Source Enforcement - This program focuses primarily on enforcement of the requirements established under State Implementation Plans. The enforcement program also focuses on new source programs such as New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants.

As a result of efforts made by industry in controlling their emissions and the effectiveness of State, local and Federal control programs, approximately ninety-one percent of the more than 18,000 major stationary sources have achieved compliance with all applicable air quality limitations. An additional 2.6% (476 sources) are meeting acceptable compliance schedules. Although this represents a significant achievement, government efforts must continue to ensure that remaining sources come into compliance with present standards or any new or revised standards and, once controls are installed, compliance with standards is maintained. EPA will continue to provide State and local agencies with technical support in their efforts to realize this goal and, where appropriate, initiate their own actions.

Stationary Source Enforcement-Legal and Enforcement Counsel -- This program element provides contract funds to support a portion of the enforcement data system and to assist in case development and training activities related to Air Quality Enforcement.

STATIONARY SOURCE ENFORCEMENT

1984 Program Request

The Agency requests a total of \$15,165,400 and 271.9 permanent workyears for this program, of which \$10,356,700 is for the Salaries and Expenses appropriation and \$4,808,700 is for the Abatement, Compliance and Control appropriation. Extramural funds will be used for enforcement case support; compliance monitoring and field surveillance; Regional data management support; development of technical workshops and manuals to enhance the capabilities of State and local programs; providing limited assistance to specific state cases; and Regional industrial, technical, and economic studies.

In 1984, the stationary source compliance program will carry forward the basic thrust of the 1983 budget. The major focus of the stationary source compliance program for 1984 is to ensure, working in close cooperation with State and local agencies, that noncomplying significant sources in nonattainment areas are

brought into compliance consistent with the constraints of the Clean Air Act. Efforts to address violators of requirements established in Part D SIPs (primarily relative to volatile organic compounds) will continue in 1984, as will efforts to ensure continued high compliance levels with NSPS and NESHAPs requirements. EPA will continue to encourage States to assume the lead role through provision of limited direct case support when requested. The compliance program will continue to provide assistance in selected Federal judicial referrals, consent decrees, and Section 120 actions. Also, EPA will issue administrative orders as necessary in environmentally significant cases where States cannot or will not take appropriate enforcement action.

The 1984 budget reflects a major shift in the way that EPA will conduct inspections. EPA will rely more on its own personnel rather than contractors for most classes of inspections. Contractor inspections will be limited primarily to inspections of non-delegated NSPS and NESHAP sources.

Efforts for building the technical capabilities of State and local programs, began in 1982 and expanded in 1983, will continue in 1984. This effort includes development and presentation of technical workshops, development of compliance manuals, continued development of State pilot programs, and evaluation of State compliance procedures. In addition, to ensure the validity of the compliance data base, EPA will initiate a qualitative audit of State compliance monitoring techniques in 1984.

Other major program accomplishments for 1984 will include: development of three technical workshops to enhance the capabilities of State and local programs (with 60 workshops being presented to Regional, State and local personnel); development of four new compliance manuals for State and local programs; and assistance to five additional State compliance data systems. During 1984, the compliance program will continue to develop civil and criminal referrals in conjunction with the Office of Legal and Enforcement Counsel. There are plans to conduct an estimated 1,694 inspections, and issue approximately 41 administrative orders during 1984.

1983 Program

The Agency is allocating a total of \$14,869,800 and 273.2 permanent workyears for this program in 1983, of which \$9,850,700 is for Salaries and Expenses and \$5,019,100 is for extramural purposes under the Abatement, Compliance and Control appropriation. The extramural funds are being used for enforcement case support; compliance monitoring and field surveillance; Regional data management support; development of technical workshops and manuals to enhance the capabilities of State and local programs; providing limited assistance to specific State case; and Regional industrial, technical, and economic studies.

The major focus of the Stationary Source Compliance program for 1983 as it will be in 1984 is to ensure that noncomplying significant sources in nonattainment areas are brought into compliance consistent with the constraints of the Clean Air Act. Efforts are being intensified to addressing violators of requirements (primarily relative to volatile organic compounds) established in Part D SIPs, many of which have compliance dates in 1983. Emphasis is also being placed on assuring continued high compliance levels with NSPS and NESHAPs requirements, through support of State actions and, as required, independent EPA actions. The stationary source compliance program continues to provide assistance in selected judicial referrals, consent decrees, and Section 120 actions, and to issue notices of violation and administrative orders as necessary. In addition, the program continues to manage the Compliance Data System, and make applicability determinations under NSPS and NESHAPs.

EPA continues to conduct inspections, review performance tests, monitor enforcement actions, issue waivers and permits, make noncompliance penalty determinations, and bring enforcement actions in environmentally significant cases

where States cannot or will not take such actions, despite EPA effort. To encourage States to assume primary responsibility, EPA provides limited direct case assistance to State enforcement efforts when requested.

Efforts for building the technical capabilities of State and local programs are being increased in 1983. This includes development and presentation of technical workshops, development of compliance manuals, further development of the State pilot program efforts begun in 1982, and evaluation of State compliance procedures and follow-up support.

The program continues to provide technical and cost evaluations of applications submitted by steel companies under the provisions of Steel Industry Compliance Extension Act (SICEA). Also, final promulgation of second-round nonferrous smelter orders establishing a regulatory framework for compliance extensions through January 1, 1988, is anticipated during 1983.

Other program accomplishments in 1983 include development of three new technical workshops to enhance the capabilities of State and local programs (with 50 workshops being presented to Regional, State and local personnel), development of four compliance manuals for State and local programs, and assistance to five additional State compliance data systems. During 1983, the compliance program continues to assist the Office of Legal and Enforcement Counsel in the development of civil and criminal referrals. In addition, the program is to conduct 1,835 inspections and issue an estimated 43 administrative orders in 1983.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$250,800 results from the following actions:

-Congressional Action. (+\$6,000) This increase includes +\$6,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$256,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$256,800 to the Salaries and Expenses appropriation.

FY 1982 Accomplishments

In 1982, the Agency obligated \$21,893,100 for this program, of which \$12,800,200 was for Salaries and Expenses and \$9,092,900 was for Abatement Control Compliance. Extramural resources were utilized for enforcement case development activities; compliance monitoring and field surveillance; Regional data management; and Regional industrial, technical, and economic studies.

In 1982, the Agency refocused the direction of this program to ensure that State and local air pollution control programs assumed the primary role in ensuring that significant sources of air pollution are brought into compliance. EPA increased efforts to enhance State and local program technical capabilities through expansion of its inspection workshop programs, assisted the States in development of continuous compliance pilot programs, and through providing limited assistance in specific cases. EPA began to redirect its own enforcement efforts toward the most significant violators, including larger sources in nonattainment areas.

During 1982, the program provided technical and cost evaluations of applications submitted by steel companies under the provisions of the SICEA of 1981. Also, work was begun on development of second-round nonferrous smelter orders establishing a regulatory framework for compliance extensions through January 1, 1988, as provided in the Act.

Program accomplishments during 1982 included development of four new technical workshops to enhance the capabilities of State and local programs (with 52 workshops having been presented to Regional, State and local personnel), implementation of three continuous pilot programs, development of five new compliance manuals for State and local programs, and providing assistance to eight additional State compliance data systems. During 1982, EPA issued 20 administrative orders, and conducted 2,093 inspections.

STATIONARY SOURCE ENFORCEMENT-LEGAL AND ENFORCEMENT COUNSEL

1984 Program Request

The Agency requests no funds for this program.

1983 Program

The Agency is allocating no funds for this program element in 1983. Development of the docket system has been completed and the case development functions will be centralized and carried out by the Office of Legal and Enforcement Counsel.

1982 Accomplishments

In 1982, the Agency obligated \$599,900 in Abatement, Control and Compliance funds to provide support to the enforcement docket system, case development, and training efforts.

AIR

Mobile Source Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Mobile Source Enforcement						
Salaries & Expenses	\$3,608.8	\$3,522.6	\$3,696.6	\$3,733.2	\$36.6	
Abatement Control & Compliance	\$1,662.8	\$1,896.5	\$1,896.5	\$1,821.5	-\$75.0	
TOTAL	\$5,271.6	\$5,419.1	\$5,593.1	\$5,554.7	-\$38.4	
TOTAL:						
Salaries & Expenses	\$3,608.8	\$3,522.6	\$3,696.6	\$3,733.2	\$36.6	
Abatement Control & Compliance	\$1,662.8	\$1,896.5	\$1,896.5	\$1,821.5	-\$75.0	
Mobile Source Enforcement	TOTAL	\$5,271.6	\$5,419.1	\$5,593.1	\$5,554.7	-\$38.4
PERMANENT WORKYEARS						

Mobile Source Enforcement	77.4	56.4	61.2	60.0	-1.2	
TOTAL PERMANENT WORKYEARS	77.4	56.4	61.2	60.0	-1.2	
TOTAL WORKYEARS						

Mobile Source Enforcement	105.1	74.8	80.3	78.4	-1.9	
TOTAL WORKYEARS	105.1	74.8	80.3	78.4	-1.9	

AIR

Mobile Source Enforcement

Budget Request

The agency requests a total of \$5,554,700 and 60.0 permanent workyears for 1984, a decrease of \$38,400 and 1.2 workyears from 1983. Included in this total is \$3,733,200 for Salaries and Expenses and \$1,821,500 for Abatement, Control and Compliance, with an increase of \$36,600 and a decrease of \$75,000, respectively.

Program Description

The Mobile Source enforcement program is directed primarily towards achieving compliance with motor vehicle emission standards and fuel regulations as required by the Clean Air Act. The major goals and objectives are to; (1) assure that new vehicles meet emission standards; (2) assure that vehicles meet emission standards in use; (3) assure that emission control systems are not removed or rendered inoperative; (4) assure that harmful additives are not present in gasoline; and (5) administer the California and statutory emission waivers.

MOBILE SOURCE ENFORCEMENT

1984 Program Request

The Agency requests a total of \$5,554,700 and 60.0 permanent workyears for this program, of which \$3,733,200 is for the Salaries and Expenses appropriation and \$1,821,500 is for the Abatement, Control and Compliance appropriation. This represents an increase of \$36,600 and a decrease of \$75,000, respectively from 1983. The increase in Salaries and Expenses reflects increased personnel costs and the decrease in extramural funds reflects a slight reduction in contractor support for testing. Extramural funds will be used for the recall program, fuel switching observations, fuels inspections, and data management and analysis.

The recall program will be increased to 480 tests to assure compliance of in-use vehicles with emissions standards. Eighty percent of the fleet will be sampled for testing during its useful life.

This program also processes fuel waivers; the Agency expects waiver requests for a number of new additives for gasoline and diesel fuels. Emission warranties and aftermarket parts certification programs will be administered. Warranty claims filed with EPA will be investigated. Seventeen Selective Enforcement Audits (SEA) of manufacturer facilities will be conducted to ensure that new vehicles meet emissions requirements. The imports and waivers programs will continue to provide for analysis of an expected five California waiver requests and any remaining carbon monoxide or nitrogen oxide statutory waivers, and to administer the program for control of the importation of vehicles. An effort will be devoted to the averaging feasibility study and analyses of compliance programs based on assembly line and in-use data.

Anti-tampering and anti-fuel switching activities will continue to focus on development of EPA cases, contractor investigations, support to State programs, and unleaded fuel inspections. Fuel switching surveys will cover 10 areas and focus on the nature of specific problems. The Federal effort will be aimed at providing States with the basis for adopting their own programs and support for program development. EPA field offices will target new car dealerships, fleet facilities, and commercial repair facilities, and provide investigative and case development support to State and local tampering and fuel switching programs to encourage increased State and local activities. The field offices will initiate enforcement actions for violators referred by State and local personnel, and supply personnel to supplement State and local investigations when requested.

1983 Program

In 1983, the Agency is allocating a total of \$5,593,100 and 61.2 permanent workyears for this program, of which \$3,696,600 is for Salaries and Expenses and \$1,896,500 is for Abatement, Control and Compliance. Resources are concentrated in the recall program to assure compliance of in-use vehicles with emission standards. Emphasis is being placed on in-use compliance, with 17 SEA being performed. The tampering and fuel switching programs are continuing at reduced levels with efforts to assist State and local programs receiving increased emphasis.

The activities of the fuels program include conducting combined unleaded gasoline and vapor recovery inspections at service stations and fleet dispensing facilities. The Agency continues to monitor lead usage reports and the status of refiner efforts to achieve compliance with the lead phasedown program and administer the emission and fuel waivers as required.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$174,000 results from the following action:

-Reprogrammings. (+\$174,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$174,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$5,271,600, of which \$3,608,800 was for Salaries and Expenses and \$1,662,800 was for Abatement, Control and Compliance. Review of the lead phasedown rules was initiated and completed in one year. The Agency performed 14,000 field inspections and 1,000 Federal investigations for unleaded fuels and completed 300 Federal enforcement cases. In 1982, the Agency performed 25 SEA, 612 recall tests, and completed 42 recall investigations.



Water Quality

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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WATER QUALITY

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

APPROPRIATION					

Salaries & Expenses	\$101,729.5	\$92,084.7	\$95,940.0	\$83,728.8	-\$12,211.2
Abatement Control & Compliance	\$116,797.7	\$85,029.3	\$108,861.0	\$61,324.0	-\$47,537.0
Research & Development	\$31,719.0	\$8,851.7	\$11,197.9	\$6,316.5	-\$4,881.4
Operations, Research & Facilities	\$700.0				
TOTAL, Water Quality	\$250,946.2	\$185,965.7	\$215,998.9	\$151,369.3	-\$64,629.6
PERMANENT WORKYEARS	2,271.9	1,849.5	1,950.6	1,662.9	-287.7
TOTAL WORKYEARS	2,671.1	2,292.0	2,379.3	2,065.5	-313.8
OUTLAYS	\$314,122.0	\$212,285.5	\$255,108.0	\$205,682.0	-\$49,426.0
AUTHORIZATION LEVELS	\$292,983.0				

WATER QUALITY

OVERVIEW AND STRATEGY

The Agency derives its water quality objectives from two statutes: the Clean Water Act and the Marine Protection, Research and Sanctuaries Act. Both laws direct the Agency, and the States, to take measures to protect the Nation's waters so as to safeguard public health, recreational use, and aquatic life.

The Agency's charge under the Clean Water Act is to meet the goals of clean water through the use of the following mechanisms: (1) making regulatory decisions based on sound, comprehensive scientific and technical assessments; (2) implementing control measures directly, or indirectly through State and local programs; (3) providing technical, managerial, and administrative assistance to State programs, as well as overseeing them; and (4) providing financial assistance to supplement State and local resources.

The Clean Water Act relies on a well-defined partnership between EPA and the States. For example, many of EPA's statutorily mandated programs can be delegated to the States, including the permitting authority prescribed under Section 402 of the Act, known as the National Pollutant Discharge Elimination System (NPDES). States may also sign delegation agreements to administer the construction grants program. In the water quality standards program, the Agency develops water quality criteria based on scientific judgments, the States adopt stream standards defining designated uses and site-specific criteria to protect those uses, and EPA reviews the State standards.

The Act envisions a dual approach to pollution control: the technology-based approach, which uses nationally prescribed effluent limitations to achieve effluent reductions, and the water quality based approach, which is used to set permit limits based on the water quality problems in a specific stream.

The Agency has made considerable progress toward implementing Best Available Technology Economically Achievable guidelines (BAT). We are now meeting all proposal and promulgation dates set in an explicit court-ordered schedule and have proposed 13 BAT guidelines and promulgated 11 more as of December 31, 1982. To date, EPA and the States have focused primarily on permitting through the technology-based approach, although water quality based permitting has been used to some extent. In accordance with legislative intent, the Agency will continue to issue permits based on BAT toxic pollutant limitations. Similarly, the States and EPA are working to bring about compliance with the technology-based limit of secondary treatment for municipal treatment plants.

Water quality based controls are necessary in those cases where technology-based limits are not completely successful, by themselves, in meeting State water quality standards. The Agency recognizes that the water quality based approach must be more vigorously pursued and will work with the States in developing and implementing this approach. The States and EPA will focus on priority waterbodies within each State to protect and maintain designated uses.

The Marine Protection, Research and Sanctuaries Act authorizes the Agency to develop criteria for the ocean disposal of materials based on a number of statutory factors including environmental considerations and the need to use the ocean as a waste disposal medium. The Agency is also authorized to designate sites for those materials and issues permits for all nondredged materials. Although the Corps of Engineers is responsible for issuing permits for dredged material, EPA must review those applications for consistency with Agency-issued environmental criteria.

Within these two legislative authorities the water program strategy is to encourage State assumption and maintenance of water programs while focusing on the following priority areas:

- Promulgating remaining court-ordered effluent guidelines;
- Issuing NPDES permits in accordance with statutory requirements, insuring that these permits are based on sound scientific analysis, are complied with, and are not subject to frequent change;
- Improving the compliance of publicly owned treatment works, focusing on the Agency's municipal compliance strategy;
- Examining and developing State programs for making water quality based decisions through ranking and updating priority waterbodies, analyzing the attainability of standards, and conducting analyses of total maximum daily loads in connection with wasteload allocations;
- Implementing a sound marine protection program that will coordinate programs for ocean dumping, incineration at sea, Section 301(h) marine waivers, and Section 403(c) ocean discharges;
- Awarding construction grants that support State priorities and that are within the financial capability of the communities served;
- Responding to spills of oil and other petroleum products; and
- Implementing reforms in the dredge and fill program under Section 404 of the Clean Water Act.

Encompassing these areas is the continuing goal of ensuring that research and development provides timely analysis, information, and analytical techniques that are relevant and useful to the water program office and to the States.

Meeting Schedules for Effluent Guidelines

The Agency is meeting the revised court schedule for proposing and promulgating effluent guidelines. Thirteen regulations have been proposed and eleven more have been promulgated. The remaining guidelines will be promulgated by 1984. The guidelines will be used by the Agency and the States in developing toxics limitations for industrial dischargers. Activities in 1984 will also include support of litigation involving the guidelines that have already been issued and support to Regional and State permit writers for issuance of BAT permits.

Issuing NPDES Permits

The major focus of the NPDES permit program will be the reduction of the backlog of permits to be issued by the Environmental Protection Agency. Primary emphasis will be on the issuance of expired major industrial permits, using BAT guidelines to impose toxic limitations, and on implementation of the National Municipal Policy. Major municipal permits will have to be reissued as a result of Section 301(h) marine discharge waivers, 301(i) extensions, pretreatment requirements, and revisions to the secondary treatment standards. EPA will continue to process requests for ocean discharge waivers and to process permits resulting from waiver determinations. The Agency will continue to support the development of new State programs for administration of the NPDES program and necessary program modifications by States already having NPDES authority. We expect two additional States will assume NPDES program authority in 1984, while an additional eight States will receive program approval to modify their programs to take on authority for pretreatment and/or Federal facility permitting.

Promoting Compliance with NPDES Permits

Major emphasis will continue in 1984 on improving the compliance rate of municipal permittees, concentrating particularly where health and water quality problems result from noncompliance. Our goal will be to assure that Federally funded treatment facilities are properly operated and maintained and, in the case of noncompliance, that municipalities take adequate steps to correct deficiencies in design or operations and maintenance. Where significant noncompliance persists, EPA will take administrative enforcement action and, if necessary, refer the matter for formal action by the Agency's Office of Legal and Enforcement Counsel (OLEC).

To support this initiative, we will make use of performance audits and visits to identify causes of noncompliance. Also, EPA will maintain a source inventory for the highest priority Federally funded minor municipal treatment plants and for inspection of Federally funded municipal minors. This information is required to help us evaluate the effectiveness of the construction grants and compliance programs.

Resources will also be devoted to maintaining the relatively high rate of industrial compliance (88%). Data will continue to be collected and processed on industrial performance, and compliance inspections will occur where there is significant noncompliance. Persistent noncompliance will be subjected to administrative enforcement action and may be referred to OLEC for judicial action.

The industrial wastewater research program will provide support for the NPDES permit program by providing quality assurance for industrial effluent monitoring activities and research on improved analytical techniques.

Implementing the Water Quality Based Approach

The 1984 abatement and control program will emphasize the water quality based approach to water pollution control. Regions will help States to update their list of priority waterbodies, conduct use-attainability analyses, and review and modify as necessary water quality standards. The water monitoring program will support this approach by working with States to improve the quality of monitoring data generated by the States, local governments, and industry. The program will also provide techniques for the States to use in conducting wasteload allocations, which are critical to the establishment of appropriate water quality based controls.

The research program will refine, develop, and validate protocols for adapting water quality criteria to site-specific field applications and will upgrade and validate the field models needed to identify water quality limited stream reaches and to calculate wasteload allocations.

Implementing a Marine Protection Program

In 1984, the ocean disposal program will consist of a more comprehensive, scientifically supported effort designed to consider the ocean as a waste management alternative for certain wastes at certain sites. The major focus of this program will be to implement a coordinated marine resources strategy that will identify the relationship between ocean dumping, ocean discharge, incineration at sea, and 301(h) waivers to effectively manage the disposal of waste in the ocean. If appropriate legislation is approved by Congress in 1983, the Agency will implement a user fee system for disposal of waste at sea.

The basic objectives are 1) to develop an improved scientific capability to predict the effects of ocean dumping of materials; 2) to review ocean disposal as a waste management alternative; 3) to manage an environmentally sound incineration-at-sea program cooperatively with the Hazardous Waste program operating under the Resource Conservation and Recovery Act; and 4) to establish a better scientific basis for evaluating the range of sludge disposal options--including ocean dumping.

The research program will develop and validate techniques for assessing the impact of ocean disposal of wastes; develop monitoring techniques to evaluate the long-term effects of ocean disposal; and evaluate the trade-offs of alternative treatment technologies with respect to environmental effects of alternative levels of treatment in support of the ocean disposal program. In addition, short-term tests developed to assess health and environmental risks and effects will be used to assess complex mixtures.

Managing Construction Grants

EPA activities in the construction grants program will continue to move away from direct project management, reflecting the fact that EPA will have fully delegated the program to 36 States by the end of 1984. In 1984, the Agency will, however, continue to ensure that Federal construction dollars are appropriately managed and that the construction grants program meets its statutory responsibilities in both delegated and nondelegated States.

EPA will continue to ensure that limited funds are focused on priority projects with the greatest water quality and health impact; on local financial capability and implementation of least costly wastewater treatment approaches; on eliminating backlogs in project completions and closeouts; on effective performance of newly completed treatment facilities; on prevention of waste, fraud, and mismanagement; and on effective management of delegated and nondelegated responsibilities by States, the Corps of Engineers, and EPA.

The municipal wastewater research program will focus on post-construction evaluations of innovative and alternative treatment technologies for the construction grants program. Related to both the construction grant and marine protection programs, the research program will focus on developing more effective sludge treatment methods to enhance the utilization of sludge for a broad range of uses as well as reducing volumes of sludge expected from construction of new systems. Health research will continue to address the health implications associated with land treatment of wastewater and land application of sludge. Efforts in scientific assessment will be used to develop and implement methodologies for health hazard/risk assessment evaluations of sludge disposal options.

Maintaining Emergency Response Capability

The environmental emergency response program will continue to maintain a 24 hour per day capability to receive notice of and respond to major incidents of accidental releases of oil and other petroleum products (spills of hazardous substances are covered under Superfund). Removal actions will be directed by Regional field personnel at 120 serious incidents where the responsible party is unidentifiable, refuses to clean up, or is incapable of providing adequate removal, and where State or local authorities lack appropriate expertise or resources. The cleanup monitoring program will continue to provide incentive for adequate removal by the responsible party, as well as serve as a mechanism for drawing State and local agencies into directing removal themselves. The Agency's focus in 1984 will be on encouraging State and local governments to assume a greater share of the responsibility for responding to oil spills. Federal resources, therefore, will be concentrated on major actions where State, local, or private response is not feasible.

Reforming the Dredge and Fill Program

The major effort in 1984 will be to implement program reforms, consistent with those identified by the President's Task Force on Regulatory Relief, to make the Section 404 program more effective and efficient and to review individual and general permits, preapplication consultation, activities for 404(c) actions, and early planning and review for Environmental Impact Statements. Regions will assist States with planning and development of program proposals for transferring the 404 program. This request will include managing State program development grants, presubmittal consultation, review of submissions, and coordination with other agencies. In addition, assistance and oversight will be provided for States that have assumed the program.

WATER QUALITY

Program Activities	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase Decrease 1984 vs 1983
Effluent Guidelines (cumulative)					
Proposed.....	3	14	17	18	+1
Promulgated.....	5	16	20	29	+9
Ocean Dumping Permits.....	38	40	40	55	+15
Construction Grants Awards.....	586	661	771	597	-174
Step 1 Awards.....	(26)	...	...	...	...
Step 2 Awards.....	(36)	...	...	...	...
Step 3 and 2+3 Awards.....	(524)	(661)	(771)	(597)	(-174)
Active Construction Grants Projects	8,346	5,715	6,446	4,764	-1,682
Step 3 and Step 2+3 Project					
Completions.....	1,290	1,250	1,136	1,200	+64
Signed 205(g) Agreements.....	46	46	49	49	0
State Program Approvals, National Pollutant Discharge Elimination System (NPDES).....	35	37	36	38	+2
Adjudicatory Hearings Settled- Major Sources.....	74	76	76	76	0
Permits Issued by EPA:					
Municipal-					
Major.....	84	51	102	181	+79
Minor.....	235	...	...	...	...
Non-municipal					
Major.....	81	280	274	300	+26
Minor.....	679	...	...	...	...
General.....	2	15	26	58	+32
Enforcement Actions					
Notices of Violation (Administrative Orders).....	389	760	760	673	-87
Compliance Inspections.....	1,763	2,974	2,275	1,978	-297
Clean Lakes Projects Awarded.....	20	0	15	0	-15
Clean Lakes Projects Completed.....	30	40	35	40	+5



Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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WATER QUALITY

Water Quality Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS) -----					
PROGRAM -----					
Scientific Assessment					
Salaries & Expenses	\$750.1	\$541.1	\$541.1	\$197.5	-\$343.6
Research & Development	\$832.1	\$100.0	\$100.0	\$100.0	
TOTAL	\$1,582.2	\$641.1	\$641.1	\$297.5	-\$343.6
Technical Information & Liaison					
Salaries & Expenses	\$180.8	\$230.1			
Research & Development	\$21.0	\$100.0			
TOTAL	\$201.8	\$330.1			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$2,558.3	\$2,057.9	\$2,057.9	\$1,887.6	-\$170.3
Research & Development	\$910.2		\$276.2	\$425.0	\$148.8
TOTAL	\$3,468.5	\$2,057.9	\$2,334.1	\$2,312.6	-\$21.5
Health Effects					
Salaries & Expenses	\$982.7	\$1,096.8	\$1,096.8	\$420.7	-\$676.1
Research & Development	\$2,033.2	\$200.0	\$200.0		-\$200.0
TOTAL	\$3,015.9	\$1,296.8	\$1,296.8	\$420.7	-\$876.1
Environmental Engineering & Technology					
Salaries & Expenses			\$96.3	\$225.0	\$128.7
TOTAL			\$96.3	\$225.0	\$128.7
Environmental Processes & Effects					
Salaries & Expenses	\$7,160.4	\$6,217.4	\$6,217.4	\$6,424.1	\$206.7
Research & Development	\$2,645.8	\$500.0	\$1,500.0	\$2,507.5	\$1,007.5
TOTAL	\$9,806.2	\$6,717.4	\$7,717.4	\$8,931.6	\$1,214.2
Great Lakes Research					
Salaries & Expenses	\$905.9		\$1,000.0		-\$1,000.0
Research & Development	\$1,501.5		\$1,500.0		-\$1,500.0
TOTAL	\$2,407.4		\$2,500.0		-\$2,500.0
TOTAL:					
Salaries & Expenses	\$12,538.2	\$10,143.3	\$11,009.5	\$9,154.9	-\$1,854.6
Research & Development	\$7,943.8	\$900.0	\$3,576.2	\$3,032.5	-\$543.7
Water Quality Research TOTAL	\$20,482.0	\$11,043.3	\$14,585.7	\$12,187.4	-\$2,398.3
PERMANENT WORKYEARS -----					
Scientific Assessment	9.5	5.5	5.5	1.5	-4.0

WATER QUALITY

Water Quality Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Technical Information & Liaison	2.3	1.5			
Monitoring Systems & Quality Assurance	44.1	33.7	33.4	30.7	-2.7
Health Effects	12.2	13.0	13.0	3.0	-10.0
Environmental Engineering & Technology			2.9	2.9	
Environmental Processes & Effects	135.8	112.6	112.1	112.1	
Great Lakes Research	3.9		8.0		-8.0
TOTAL PERMANENT WORKYEARS	207.8	166.3	174.9	150.2	-24.7
TOTAL WORKYEARS					

Scientific Assessment	17.8	13.0	13.0	4.0	-9.0
Technical Information & Liaison	3.4	2.2			
Monitoring Systems & Quality Assurance	60.6	44.9	44.6	38.9	-5.7
Health Effects	17.6	19.1	18.1	6.1	-12.0
Environmental Engineering & Technology			2.9	4.1	1.2
Environmental Processes & Effects	179.4	184.0	175.0	183.5	8.5
Great Lakes Research	4.8		8.0		-8.0
TOTAL WORKYEARS	283.6	263.2	261.6	236.6	-25.0

WATER QUALITY

Water Quality Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop and Standardize Monitoring and Measurement Methods to Support Water Quality Programs.			
- Evaluate the enforcement potential of protocols for toxic effluents of metals to aquatic biota. (Monitoring)	6/82	4/83	8/84
- Standardize four fresh- water bioassays with four reference toxicants. (Monitoring)	6/82		
Provide Quality Assurance to Support Water Quality Programs.			
- Provide calibration materials water quality monitoring. (Monitoring)	9/82	9/83	9/84
- Develop reference toxicants using microinvertebrates, macroinvertebrates and vertebrates. (Monitoring)	6/82	6/83	6/84
Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control.			
- Methods for the derivation of site-specific water quality criteria. (Env. Processes)	6/82		
- Report describing usefulness and implementation of "regional" use- attainability approaches. (Env. Processes)	9/83	9/83	
- Assistance in modifying or determining health criteria/standards for site- specific situations. (Scientific Assessment)	9/82	9/83	9/84
- Develop guidelines for exposure to chemical mixtures. (Scientific Assessment)	8/84	8/84	8/84
- Evaluate the use of the minimum data set concept in the derivation of site- specific criteria. (Scientific - Assessment)	9/83	9/83	
Report on the biological significance of contaminated sediment, assessment methods and use as criteria. (Env. Processes)	9/84	9/84	9/84

WATER QUALITY

Water Quality Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Report on the feasibility of using a generic toxicity approach for waste-load allocation. (Env. Processes)	6/83	6/83	
- Provide revision of swimming water criteria to consider "clumps" of pathogens and resistant bacteria. (Health Effects)	12/84	12/84	12/84
- Provide health effects bioassay methods manual for determining stream wasteload allocations. (Health Effects)	6/86	6/86	6/86
- Wasteload allocation users manual for metals. (Env. Processes)	9/84	9/84	9/84
Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program.			
- Technical guidance document on ocean dumping site characterization. (Env. Processes)	6/83	6/83	
- Hazard assessment protocol for evaluating ocean dumping impacts. (Env. Processes)	9/86	9/86	9/86
- Persistence and fate of pollutants in marine food webs. (Env. Processes)	9/85	9/85	9/85
Great Lakes Research			
- Report on algal available phosphorus in suspended sediments. (Env. Processes)	4/83	4/83	
- Protocol for field assessment of watershed exposure, dose and effects. (Env. Processes)	4/83	4/83	
- Evaluations of Site-Specific Guidelines for three sites in the Great Lakes. (Env. Processes)	9/83	9/83	

WATER QUALITY

Water Quality Research

Budget Request

The Agency requests a total of \$12,187,400 and 150.2 permanent workyears for 1984, a decrease of \$2,398,300 and 24.7 permanent workyears from 1983. Included in this total are \$9,154,900 for Salaries and Expenses and \$3,032,500 for Research and Development, with decreases of \$1,854,600 and \$543,700 respectively. The decrease occurs mainly in the Great Lakes research and health effects program elements.

Program Description

Over the next several years, technology-based controls will largely be in place. Technology-based standards, however, will not achieve desirable water quality in all stream segments. In these cases, the Clean Water Act (CWA) provides for the establishment of effluent limitations based on water quality. A site-specific criteria approach will be encouraged to reflect local environmental conditions. States may also conduct a use-attainability analysis to consider fully the environmental and economic factors affecting the attainment of their water quality standards. The Environmental Protection Agency's research and development program will provide the scientific and technical base to help States develop site-specific standards to control pollutants and will conduct use-attainability analyses.

There is increasing interest in making safe use of the oceans for the disposal of wastes. This approach requires a capability to predict the impacts of ocean disposal, evaluate alternative disposal options, select appropriate disposal sites for a given waste, and detect disposal problems in order to make rational, scientifically supported regulatory decisions. The ocean disposal research program is structured to provide critical information for the development of a responsive and scientifically valid ocean disposal waste management program.

The following objectives support these goals:

Objective 1. Develop and Standardize Monitoring and Measurement Methods to Support Water Quality Programs. This activity provides the States and localities with assistance and a scientific and technical data base with which to carry out effective site-specific monitoring surveys in fresh and marine waters. This research develops and standardizes cost-effective monitoring and measurement methods needed for identifying toxic pollution problems, for concurrently evaluating stream flow and effluent variabilities and their combined effects on achieving designated water uses, and for evaluating compliance with ambient water quality standards and permit requirements.

Objective 2. Provide Quality Assurance to Support Water Quality Programs. This research develops and standardizes quality assurance methods. It also provides continuing basic quality control materials and guidance. Additionally, the adequacy of analytical procedures are determined to assure the quality of the gathered data.

Objective 3. Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. The objectives of this research are to provide the necessary scientific tools, such as site-specific protocols, wasteload allocation models, short-term bioassays, and hazard assessments, to enable the program office and States to implement the water quality-based approach to pollution control.

Objective 4. Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. This program area develops and validates protocols needed by EPA for predicting impacts from ocean disposal, making hazard assessments, selecting dumpsites, and developing biomonitoring techniques for estimating and documenting ecological impacts from the discharge of wastes into the ocean and for identifying acceptable disposal practices. The generated data will be used to regulate ocean disposal practices.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$297,500 and 1.5 permanent workyears for this program, of which \$197,500 is for Salaries and Expenses and \$100,000 is for Research and Development. This decrease of \$343,600 in the Salaries and Expenses appropriation reflects a lower need for risk assessment support for the development of criteria for the consent decree pollutants since major research efforts in this area have been completed.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. Activities in this research effort will revise and finalize guidelines for assessing risk of human exposure to mixtures of toxic chemicals and will evaluate site-specific health hazards as required by the States and EPA. These activities will include health assessments and minimum criteria reports.

1983 Program

In 1983, the Agency is allocating a total of \$641,100 and 5.5 permanent work-years to this program, of which \$541,100 is under the Salaries and Expenses appropriation and \$100,000 is for extramural purposes under the Research and Development appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. Guidelines for evaluating available health data associated with human exposure to complex mixtures of chemicals are being developed. Mini-criteria (i.e., maximum safe concentrations as indicated by a minimum data set) for preliminary hazard assessments are being developed in lieu of full criteria. Updates of existing guidelines and methodology are being initiated in 1983.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,582,200 for this program, of which \$750,100 was under the Salaries and Expenses appropriation and \$832,100 was for extramural purposes under the Research and Development appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. Efforts were initiated to expand existing guidelines and methodologies to include protocols for estimating risk to human health from exposure to complex mixtures of chemicals. Four workshops were conducted to address issues relevant to risk assessment methodology, i.e., threshold vs. non-threshold carcinogens. Draft interim criteria summary statements were developed for 12 nonconventional pollutants for use in updating the Water Quality Criteria. A report was prepared relating water quality factors to toxicity or bioavailability of pollutants to man.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$201,800 for this program, of which \$180,800 was under the Salaries and Expenses appropriation and \$21,000 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$2,312,600 and 30.7 permanent workyears for this program, of which \$1,887,600 is for Salaries and Expenses and \$425,000 is for Research and Development. This reflects a decrease of \$170,300 and increase of \$148,800 respectively. The decrease reflects a decision to proceed more slowly on the standardization and field evaluation of innovative, long-term bioassay and stream survey protocols. The increase will provide additional support for standardization of analyses of priority pollutants.

Develop and Standardize Monitoring and Measurement Methods to Support Water Quality Programs. The Agency needs to improve the scientific and technical data base necessary to carry out effective site-specific intensive monitoring surveys. Additionally, the Agency needs to further validate chemical methods capable of monitoring toxicologically significant pollution concentrations in ambient waters. A toxicity monitoring protocol will be developed to assist the allocation of waste-loads among dischargers to a particular water body.

Research on chemical measurement methods will focus on the development and standardization of measurement and quality assurance methods for priority toxic pollutants, especially in areas for which no standard methods now exist, viz., bottom sediments, fish tissue, and marine water. EPA will work on increasing the sensitivity of methods for toxic metals in water to permit measurements of specific forms of metals at concentrations down to the laboratory derived criteria values. Research on biological monitoring methods will emphasize: development and standardization of methods for screening high concentrations of toxic pollutants in ambient waters; development of quality assurance procedures to analyze chronic and acute toxicological effects; and standardization of microbial and viral sampling and analysis methods. Research on physical measurement methods will concentrate on documenting the validity, accuracy, and precision of sampling and flow-sensing equipment.

Provide Quality Assurance to Support Water Quality Programs. Quality control calibration materials will continue to be provided in support of fresh and marine water quality monitoring. Standardization of virus sample preservation and assay procedures will continue. Flow measurement will be evaluated in field trials. A computer software system will be expanded to cover new sample types that shortly will be ready for distribution for quality control, calibration, and/or audits.

1983 Program

In 1983, the Agency is allocating a total of \$2,334,100 and 33.4 permanent workyears to this program, of which \$2,057,900 is under the Salaries and Expenses appropriation and \$276,200 is for extramural purposes under the Research and Development appropriation.

Develop and Standardize Monitoring and Measurement Methods to Support Water Quality Programs. Rapid and inexpensive bacterial mutagenicity/carcinogenicity tests are being developed and standardized. Work will continue to evaluate and improve existing effluent toxicity tests. Extraction and clean up procedures for organic priority pollutants are being developed for contaminated sediments. Field measurement techniques, design procedures, and strategies are being refined through site-specific surveys. The design of the national water quality monitoring network is being evaluated to determine the relationship between a fixed station network to intensive site surveys.

Provide Quality Assurance to Support Water Quality Programs. Calibration materials are being furnished to support accurate data. A full scale implementation project using on-site quality assurance evaluations is being made as part of the mandatory quality assurance program. Analytical protocols are being standardized for: dredged material, chemical speciation, sediment sampling and site-specific surveys. An enzyme technique is being evaluated for use in monitoring freshwater pollution problems caused by metals, pesticides, and other organic contaminants.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$276,200 results from the following action:

-Congressional Action. (+\$276,200) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports the Agency's quality assurance initiative in relation to sampling and survey design.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,468,500 for this program, of which \$2,558,300 was under the Salaries and Expenses appropriation and \$910,200 was for extramural purposes under the Research and Development appropriation.

Develop and Standardize Monitoring and Measurement Methods to Support Water Quality Programs. In 1982, reference methods were published for chlorinated organics as a class, and four freshwater biological indicators of toxicity. Freshwater monitoring methods for pesticides and other organic chemicals have been adapted for seawater use. A method for recovering virus from sludges has been published and a method for enumerating virus attached to waterborne material has been developed. Aerial imagery for spill prevention planning and impact assessment of wetlands damage, land use and water quality status along the Alaskan pipeline was developed for use in enforcement support and emergency response.

Provide Quality Assurance to Support Water Quality Programs. Performance evaluations of mandatory quality assurance programs were completed at approximately 400 laboratories. New calibration samples were developed for a variety of substances. The program continued to furnish quality control samples of organic compounds for 95 of the 109 Consent Decree organic pollutants. Over 9000 of these samples were distributed during the year.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$420,700 and 3.0 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects a decrease of \$676,100 in the Salaries and Expenses appropriation and a decrease of \$200,000 in the Research and Development appropriation. This decrease reflects the completion of major health research efforts that supported the development of the water quality criteria documents pertaining to the Consent Decree priority pollutants. Some of the resources in this program have been shifted to the Drinking Water health effects research program to support the Office of Water's efforts to consolidate the consideration of water-related issues under the direction of the Drinking Water office.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. The Agency has identified specific sites where high concentrations of waterborne pollutants are of particular concern. Investigators will use existing short-term health tests for carcinogenicity, mutagenicity, and reproductive effects to determine whether or not a site receiving a large number of chemical contaminants is a public health risk. Research will focus on developing and evaluating test methods for toxicity in complex mixtures.

1983 Program

In 1983, the Agency is allocating a total of \$1,296,800 and 13.0 permanent workyears to this program, of which \$1,096,800 is under the Salaries and Expenses appropriation and \$200,000 is for extramural purposes under the Research and Development appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. A goal of the Clean Water Act is to develop water quality adequate for recreation. The existing recreational water quality criteria are based on the limited data available in 1968. To support the review and the revision of the existing recreational water quality criteria, a freshwater recreational water quality criteria document is being developed based on dose-response data for human infectious disease. The research on toxicological and dose-response data needed for implementation of Section 304 of the CWA is being completed for eight compounds.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,015,900 for this program, of which \$982,700 was under the Salaries and Expenses appropriation and \$2,033,200 was for extramural purposes under the Research and Develop appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. Research studies of the reproductive effects of selected organic pollutants have been completed. Studies on microbial sampling variables and recreational water quality standards have been published.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$225,000 and 2.9 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects an increase of \$128,700. This increase results from increased emphasis on ocean disposal related research.

Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. This in-house research program will correlate sludge treatment levels with environmental quality for use in determining appropriate treatment levels for sludge prior to ocean dumping as well as treatment levels for wastes discharged through ocean outfalls.

1983 Program

In 1983, the Agency is allocating a total of \$96,300 and 2.9 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation.

Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. Studies of technology issues related to ocean disposal are being initiated. Emphasis is being given to sludge characterization and correlating the levels of sludge treatment to environmental impacts in the ocean.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$96,300 results from the following action:

-Congressional Action. (+\$96,300) This increase includes +96,300 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency did not obligate any resources for this program for research related to the ocean disposal of wastes.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$8,931,600 and 112.1 permanent workyears for this program, of which \$6,424,100 is for Salaries and Expenses and \$2,507,500 is for Research and Development. This reflects increases of \$206,700 and \$1,007,500, respectively. These increases result from increased efforts to support a water quality-based regulatory approach and to support an environmentally sound ocean disposal program.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. The Agency is moving toward implementation of a site-specific approach for States to define water quality standards. Under this approach, the States will address the need for site-specific water quality criteria and will translate water quality standards into allowable loads for dischargers in some stream segments. Research will be undertaken to develop, test and transfer procedures to States to determine site-specific criteria. Newly developed site-specific criteria guidelines will be evaluated and refined in conjunction with developing more precise wasteload allocation models. These models will focus on toxic chemicals and transfer of pollutants between sediments and the water column. Additionally, research will concentrate on developing a generic protocol for allocating wasteload toxicity and continue to provide support to the Center for Water Quality Modeling.

Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. The Agency's ocean research disposal program has two components, ocean dumping and ocean outfall discharges. The ocean dumping research component will provide scientifically sound criteria for the determination of unreasonable degradation and irreparable harm to potential dumping sites. Protocols for the characterization of wastes proposed for ocean dumping will be developed. Research will also develop hazard assessment protocols to permit a better evaluation of the impacts of ocean dumping. These will include: procedures for estimating the severity of ecological changes and procedures for determining the transport and fate of ocean dumped wastes. Other research efforts will include development of biological procedures to monitor dumpsites for long-term effects and evaluation of procedures to be used in characterizing and designating dumpsites.

The ocean outfall discharge research component will provide assistance to the Office of Water in the review of applications and monitoring information under Section 301(h) of CWA for modifications to the mandatory secondary treatment requirement for ocean discharges of municipal wastes. Specific research efforts will include: developing techniques for characterizing sediment conditions, assessing ecological impacts near outfalls for setting permit conditions, and developing protocols for characterizing the movement and persistence of pollutants common to ocean outfalls. Research will also develop information for use in determining monitoring requirements and will assess the significance of changes in the marine environment.

1983 Program

In 1983, the Agency is allocating a total of \$7,717,400 and 112.1 permanent workyears to this program, of which \$6,217,400 is under the Salaries and Expenses appropriation and \$1,500,000 is for extramural purposes under the Research and Development appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. The development of protocols for determining the nature of chemical pollutants and their impact on aquatic ecosystems under different environmental conditions is continuing. Bioassessment methods for determining biological conditions of water bodies are also being developed to facilitate establishment of use-attainability assessment procedures. Revised aquatic criteria for ammonia and chlorine are being prepared.

The mathematical models that have been developed for identifying water quality limited stream segments and for making wasteload allocations of most conventional pollutants are being field validated. Existing models for making wasteload allocations are being expanded to address toxic pollutants both in water and in sediments. Results from this research effort will allow the prediction of environmental concentrations of pollutants resulting from alternative levels of toxic control. The development of bioassay methods for quantifying efficiency of toxics removal of industrial treatment processes are being conducted at pilot-scale facilities. Additionally, bioassays are being evaluated for use in measuring the toxicity of complex mixtures of pollutants.

Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. Techniques for measuring the impacts of ocean disposed materials on marine organisms are being refined. Techniques for estimating the impact of dredged material dumped in the ocean are being refined and field validated. Biological techniques for monitoring long-term impacts on dumpsites are being developed and validated. This effort is being coordinated with the National Oceanic and Atmospheric Administration and the Corps of Engineers.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,000,000 results from the following action:

-Congressional Action. (+\$1,000,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. A specific increase of +\$500,000 supports the verification of Section 301(h) ocean discharge impact prediction techniques and an increase of +\$500,000 supports ocean dumping hazard assessment protocols.

1982 Accomplishments

In 1982, the Agency obligated a total of \$9,806,200 for this program, of which \$7,160,400 was under the Salaries and Expenses appropriation and \$2,645,800 was for extramural purposes under the Research and Development appropriation.

Develop the Scientific Data to Support the Water Quality-Based Approach to Pollution Control. The draft methodology guidelines for the derivation of site-specific water quality criteria were completed as was the water quality criteria document for dissolved oxygen. An updated users manual for the basin scale analysis techniques to address water quality limited reaches was completed. A report was also completed on the application and evaluation of water quality model sets for the analysis of best management practices, land runoffs, and instream and estuary analysis.

Develop the Scientific Data to Support an Environmentally Sound Ocean Disposal Program. An ocean dumping research program was initiated. Guidelines for interpreting results of bioaccumulation studies of pollutants from dredged material were completed. This helped to resolve an issue involving the ocean dumping of contaminated dredged material in the New York Bight. A benthic bioassay procedure which can be used to evaluate the impact of ocean disposal was field validated. A 301(h)

technical support document was revised to make it easier for small communities to complete the technical/scientific requirements of a 301(h) application.

GREAT LAKES RESEARCH

1984 Program Request

EPA believes that although earmarked funding for the Great Lakes research program is not being requested, the Agency will provide adequate research support to the International Great Lakes Agreement with Canada. We will continue to maintain our Great Lakes National Program Office in Region V and provide technical assistance to the Great Lakes States, Region V and the International Joint Commission in the areas of model predictions, wasteload allocation, ecosystem responses, etc., utilizing current knowledge, expertise, and models. We feel that it is not necessary to maintain a separate and distinct Great Lakes research program since we can integrate any needs associated with the Great Lakes into the overall environmental research program. Such overall research which would be applicable to the Great Lakes includes: the development and verification of site-specific water quality criteria; the establishment of use-attainability assessment procedures; and the development and field validation of wasteload allocation models. It is important that our Agency develop information and solutions to national problems that can be transferred for application in the local area. Moreover, since the Agency has conducted many comprehensive studies concerning the pollution problems in the Great Lakes, the emphasis will be on utilizing the data in these studies to implement pollution abatement measures. For these reasons, the Agency is not allocating any funds in 1984 for its research facility in Grosse Ile, Michigan and is planning to close the facility at the end of 1983.

1983 Program

In 1983, the Agency is allocating a total of \$2,500,000 and 8.0 permanent workyears to this program, of which \$1,000,000 is under the Salaries and Expenses appropriation and \$1,500,000 is for extramural purposes under the Research and Development appropriation.

Research in site-specific water quality criteria, eutrophication, and ecological assessment is being conducted and technical support is being provided to the International Joint Commission and U.S./Canada Water Quality Board for the Great Lakes. An intensive field study of a watershed of the Great Lakes is being conducted to determine exposure, dose and effects on environmental populations by evaluating exposure potential, exposure experience, critical dose, and observed effects based on biological epidemiology.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$2,500,000 results from the following action:

-Congressional Action. (+\$2,500,000) The Congressional add-on to this activity of +\$1,000,000 to the Salaries and Expenses appropriation and +\$1,500,000 to the Research and Development appropriation was to retain the laboratory at Grosse Ile, Michigan.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,407,400 for this program, of which \$905,900 was under the Salaries and Expenses appropriation and \$1,501,500 was for extramural purposes under the Research and Development appropriation.

A report on the significance and amounts of PCB's and other persistent halogenated hydrocarbons that enter Lake Huron from precipitation was completed. Analysis of data from Saginaw Bay was completed in which model predictions were compared with actual water quality improvements that resulted from reductions in phosphorus loading. In addition, a report on a guidance document for wasteload allocation methodologies for rivers was completed.

WATER QUALITY

Municipal Wastewater

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Scientific Assessment
Salaries & Expenses

TOTAL

\$83.7 \$83.7
\$83.7 \$83.7

Technical Information &
Liaison

Salaries & Expenses

\$296.6 \$239.1

Research & Development

\$39.7 \$280.0

TOTAL

\$336.3 \$519.1

Monitoring Systems &
Quality Assurance

Research & Development

\$40.0

TOTAL

\$40.0

Health Effects

Salaries & Expenses

\$783.2 \$1,018.8 \$959.0 \$1,006.9 \$47.9

Research & Development

\$2,584.0 \$1,232.9 \$1,232.9 \$1,062.9 -\$170.0

TOTAL

\$3,367.2 \$2,251.7 \$2,191.9 \$2,069.8 -\$122.1

Environmental Engineering
& Technology

Salaries & Expenses

\$4,890.5 \$4,256.9 \$4,256.9 \$1,324.3 -\$2,932.6

Research & Development

\$11,602.8 \$4,604.1 \$4,604.1 \$1,784.2 -\$2,819.9

TOTAL

\$16,493.3 \$8,861.0 \$8,861.0 \$3,108.5 -\$5,752.5

TOTAL:

Salaries & Expenses

\$5,970.3 \$5,514.8 \$5,215.9 \$2,414.9 -\$2,801.0

Research & Development

\$14,266.5 \$6,117.0 \$5,837.0 \$2,847.1 -\$2,989.9

Municipal Wastewater

TOTAL

\$20,236.8 \$11,631.8 \$11,052.9 \$5,262.0 -\$5,790.9

PERMANENT WORK YEARS

Scientific Assessment

1.0 1.0

WATER QUALITY

Municipal Wastewater

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Technical Information & Liaison	5.2	3.2			
Health Effects	15.4	15.3	14.3	14.3	
Environmental Engineering & Technology	96.8	65.9	65.3	24.2	-41.1
TOTAL PERMANENT WORKYEARS	117.4	84.4	79.6	39.5	-40.1

TOTAL WORKYEARS					

Scientific Assessment				2.0	2.0
Technical Information & Liaison	7.4	4.8			
Health Effects	20.7	23.7	22.7	21.7	-1.0
Environmental Engineering & Technology	111.6	78.1	77.5	27.1	-50.4
TOTAL WORKYEARS	139.7	106.6	100.2	50.8	-49.4

WATER QUALITY

Municipal Wastewater

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Evaluate and Assess Innovative and Alternative Technologies to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems.			
- Assessment Reports of Emerging Technologies processes. (Env. Tech.)	10/82	9/83	7/84
- Conduct post construction evaluation of I/A projects and publish reports for feedback to States, municipalities and consultants. (Env. Tech.)	9/83	9/84	9/85
- Report on design methods to correct poor design practices, and improve cost and energy savings. (Env. Tech.)	6/84		
- Process Design Manual on Wastewater Disinfection. (Env. Tech.).	9/84	9/84	
- Process Design Manual for Wastewater Stabilization Ponds. (Env. Tech.).	6/83		
- Handbook for cost effective treatment and disposal of septage. (Env. Tech.).	9/83	9/83	
- Evaluation of Sewer Rehabilitation Techniques. (Env. Tech.).		6/84	6/84
- Provide appraisal document on health aspects of toxic chemicals in land treatment of wastewater. (Health Effects)	7/84	7/84	7/84
- Demonstration of an airborne real time television monitor for spill monitoring. (Monitoring)	9/83		
Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for Management of Municipal Sludge.			
- Design Manual Land Application of Sludge. (Env. Tech.).	9/83		
- Design Guidelines for Sludge Treatment Processes. (Env. Tech.)	6/84		
- Provide conference proceedings paper on health appraisal of sludge application. (Health Effects)	2/83		
- Assess human health hazard/risk assessment methodology and guidelines. (Sci. Assess.)			6/85

WATER QUALITY

Municipal Wastewater

Budget Request

The Agency requests a total of \$5,262,000 and 39.5 permanent workyears for 1984, a decrease of \$5,790,900 and 40.1 permanent workyears from 1983. Included in this total is \$2,414,900 for Salaries and Expenses and \$2,847,100 for Research and Development, with decreases of \$2,801,000 and \$2,989,900 respectively. The decrease occurs mainly in the environmental engineering and technology program element. In addition, the decrease reflects the transfer of \$917,600 in exploratory research funds to the Intermedia program.

Program Description

The Clean Water Act (CWA), as amended in 1977 and particularly in 1981, provides new incentives to municipalities for using innovative or alternative (I/A) technologies in the construction of wastewater treatment plants. Research can provide information on the capital cost, energy efficiency and performance reliability of emerging innovative treatment processes. The requested documentation by the States of the benefits and costs of operational, innovative construction grant projects is a significant part of this research program and supports the water quality-based approach to the standards setting and permits issuance processes. The following objectives support these goals:

Objective 1. Evaluate and Assess Innovative and Alternative (I/A) Technologies to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. In order to improve the cost effectiveness and performance of municipal treatment plants built by the construction grants program, the primary objective of the I/A technology research program is to develop a technology and health effects data base for direct assistance to States, municipalities and Environmental Protection Agency (EPA) Regions in applying I/A technologies to solve their water quality management problems. Currently, all major technological developments are carried out as cooperative efforts with the industrial, municipal or university sectors wherein we rely on industry to do the development work while EPA conducts evaluations to determine applicability to Agency programs.

Objective 2. Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. The levels of wastewater treatment required by the Clean Water Act result in large amounts, about 8 million dry tons/year, of sludge to be disposed of in an economical and environmentally safe manner. Research under this objective provides the support for developing the Agency's sludge policies, guidelines and regulations under the mandates of both the Clean Water Act and the Resource Conservation and Recovery Act (RCRA). The objective is to provide the engineering and health effects information needed by the States and municipalities for the effective treatment, use and disposal of sludges. The research emphasizes minimizing risk and environmental impacts, energy use and costs associated with sludge management.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$83,700 and 1.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This is the first year for which the Agency is requesting funding for this area.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. Methodology and guidelines for conducting health hazard and risk assessment evaluations of sludge disposal options will be developed. An assessment of the potential health hazards associated with selected sludge management options will be initiated.

1983 Program

In 1983, the Agency did not allocate resources to this program.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Program

In 1982, the Agency did not obligate resources for this program.

TECHNICAL INFORMATION AND LIASON

1982 Accomplishments

In 1982, the Agency obligated a total of \$336,300 for this program, of which \$296,600 was under the Salaries and Expenses appropriation and \$39,700 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

No resources are requested for 1984.

1983 Program

In 1983, the Agency did not allocate resources to this program.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$40,000 for this program, all of which was for extramural purposes under the Research and Development appropriation.

Demonstrate Applications of Monitoring Technology for Spill Monitoring. A television camera was adapted for airborne use in the aerial reconnaissance system. The device substitutes for the normal film camera and provides real time information to the ground based on-scene coordinator supporting spill control and restoration operations.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$2,069,800 and 14.3 permanent workyears for this program, of which \$1,006,900 is for Salaries and Expenses and \$1,062,900 is for Research and Development. This reflects an increase of \$47,900 and a decrease of \$170,000 respectively. The decrease results from the completion of major

portions of two large studies of the health effects of land treatment of wastewater. These studies are (1) an epidemiology study of potential adverse health effects in Lubbock, Texas related to spray application treatment using partially treated wastewater; and (2) a similar study in Israel of health effects related to spray application treatment of raw wastewater. The results of these studies will be used to assess the safety of land treatment processes. The decrease also includes a transfer of funds from exploratory research to the Intermedia program. Research emphasis will be shifting to focus on the health effects of land application of sludge.

Evaluate and Assess Innovative and Alternate (I/A) Technologies to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. Scientific information is needed to assess the effects on human health resulting from the exposure to biological and chemical toxicants contained in wastewater. Also, there is a need for health biomonitoring techniques to provide complex chemical effluent evaluations. These factors supply a major input to the formulation of EPA regulations, permits, and guidelines under the Clean Water Act. The Municipal Wastewater health research program focuses on three major I/A areas: 1) provide data on the health aspects of land application of municipal sludge, 2) provide data on the health aspects of land treatment, aquaculture treatment and reuse aspects of municipal wastewater, and 3) develop and validate health biomonitoring methodology applicable to a variety of effluents including small flow systems.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. Land disposal methods selected for sludges require careful assessment of effects on human health resulting from the exposure to pollutants contained in the sludges. An appraisal document will be prepared on potential effects of land application of municipal sludge. Research will focus on pathogenic organisms, heavy metals, and organic chemicals. Additionally, co-operative epidemiological studies of farm families utilizing sewage sludge for agricultural purposes will be continued. This scientific health information serves as a major input to the formulation of EPA regulations, permits and guidelines under the Clean Water Act.

1983 Program

In 1983, the Agency is allocating a total of \$2,191,900 and 14.3 permanent workyears to this program, of which \$959,000 is under the Salaries and Expenses appropriation and \$1,232,900 is for extramural purposes under the Research and Development appropriation.

Evaluate and Assess Innovative and Alternative Technologies (I/A) to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. Land treatment of wastewater has the potential of causing disease in humans from either microbial pathogens or toxic pollutants. Current research activities in this program include epidemiological studies in Lubbock, Texas and in Israel, movement of pollutants through the air and soil, and uptake of pollutants by plants. Research will provide data on the health aspects of land treatment, aquaculture treatment and reuse aspects of municipal wastewater. In addition, health biomonitoring methodology applicable to a variety of effluents, including small flow systems, is being developed and validated. This research is being carried out in conjunction with bioassessment of toxicity of effluent chemical complexes at the Agency's testing and evaluation facility.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. Land application of sludge to food chain crops has the potential of causing adverse health effects in humans and animals from direct contact with toxic pollutants and from ingestion of contaminated food and water. Research is focused on determining the transport and fate of

toxic pollutants resulting from land application of sludge. Research will provide data on the health aspects of land application of municipal sludge. The focus is on pathogens, heavy metals, and organic chemicals that may be transmitted from sludge.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$59,800 results from the following action:

-Reprogrammings. (-\$59,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$59,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,367,200 for this program, of which \$783,200 was under the Salaries and Expenses appropriation and \$2,584,000 was for extramural purposes under the Research and Development appropriation.

Evaluate and Assess Innovative and Alternative Technologies (I/A) to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. The first part of a two-part scientific appraisal document of the microbiological health effects of land treatment of wastewater has been written and published reporting on all completed research and providing a state-of-the-art assessment.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. Research on health risks of organic chemicals in land application has been published. Related to this is a report completed on research characterizing air pollutants from an activated sludge process.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$3,108,500 and 24.2 permanent workyears for this program, of which \$1,324,300 is for Salaries and Expenses and \$1,784,200 is for Research and Development. The decreases of \$2,932,600 and \$2,819,900, respectively, reflect the transfer of exploratory research funds to the Intermedia program and the elimination of EPA research efforts in new process development, plant operation and design, development of alternate options of land treatment of wastewater, as well as toxic pollutants control and urban runoff areas. This reduction reflects the Agency's view that there are major incentives for the private sector to develop innovative wastewater technology as a result of the Clean Water Act amendments which provide for a 10% additional increase to construction grants where innovative technology is utilized. This incentive grant is scheduled to increase to 20% in 1985. In addition, if an I/A project fails to perform as designed after 2 years following final on-site review, the Act provides for 100 percent reimbursement of project costs. Engineering support of the I/A technology and sludge management program will be continued at approximately the same level as 1983.

Evaluate and Assess Innovative and Alternative Technologies (I/A) to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. Activities in this area will support the Construction Grant I/A program by providing technical assistance in reviewing project plans and recommending innova-

tive technologies and by making available detailed planning, engineering and analytical assistance of I/A technologies. New information will be provided through the assessment of promising new treatment processes developed by the industrial or university sectors. Post construction evaluations of full-scale operational I/A projects will be continued in 1984 to produce feedback information on design, energy, capital and operation and maintenance costs.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. Research in this program will be conducted in two major areas: treatment and disposal of sludge. In the treatment area, emphasis will shift to innovative stabilization and digestion processes such as high solids retention reactors, two-phase digestion processes, and fixed-film reactors, that have the potential for destruction of greater quantities of sludge and reducing costs. The on-going full-scale evaluation of the vertical tube reactor for the treatment of high strength municipal sludge will be continued. This technique is efficient in energy conservation and has a significant potential for recovering the energy gained from the oxidation reaction. Research on the disposal area will focus on those projects that show great promise for minimizing handling costs, adverse land and environmental impacts. Research on land application of sludge will concentrate on characterizing the mechanisms controlling the uptake and the transformation of toxic organics and pathogenic organisms in sludge amended soils.

1983 Program

In 1983, the Agency is allocating a total of \$8,861,000 and 65.3 permanent workyears to this program, of which \$4,256,900 is under the Salaries and Expenses appropriation and \$4,604,100 is for extramural purposes under the Research and Development appropriation. This year will be a major transitional period and will see the orderly phasing out of research involving several areas cited in the 1984 program.

Evaluate and Assess Innovative and Alternative Technologies (I/A) to Improve the Efficiency of Municipal Wastewater Treatment Systems. To assist the Regions and States in implementing the 1981 CWA amendments, the I/A technology program evaluates new technologies developed by the private sector to meet discharge limitations in a cost-effective manner and disseminates the results to promote their use. Facility plan reviews are continually being carried out for the Regions and States to determine projects that qualify for I/A funding. Post-construction evaluations of operational I/A projects are being initiated and will be used to accelerate the transfer of operation and cost data on successful I/A technologies to the municipal sector. This information transfer is achieved through a centralized clearinghouse operated in direct support to the Construction Grants program and through a series of regional seminars. The evaluation of on-site treatment methods and alternative sewer systems is also an integral part of the I/A program.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. The aims of this research are: (1) to reduce the amount of sludge generated and (2) to render it amenable for beneficial uses and for offsite disposal. Emphasis is on evaluating more efficient sludge digestion and thermal conversion processes as a means of accomplishing these aims. Emphasis is also placed on processes that conserve or recover energy, such as more efficient incineration and gas utilization from digesters. Additional research to reduce the space and labor requirements are being studied for the various composting processes.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$16,493,300 for this program, of which \$4,890,500 was under the Salaries and Expenses appropriation and \$11,602,800 was for extramural purposes under the Research and Development appropriation.

Evaluate and Assess Innovative and Alternative Technologies (I/A) to Improve the Efficiency, Reliability and Effectiveness of Municipal Wastewater Treatment Systems. Assessment reports of emerging innovative technologies were produced and distributed at regional seminars for States, municipalities and consulting firms. The program initiated screening of operational innovative and alternative treatment projects in order to begin post-construction evaluations. Detailed engineering reviews of innovative facility plans were carried out to satisfy a continuing need of both the Regions and States.

Completion of the work of the Land Treatment Task Force has resulted in significant construction grant Awards for land treatment projects as an alternative technology, particularly in the southwest. Successful transfer of technical information to the States was accomplished through the Task Force and by dissemination of Land Treatment Design Manuals by the Agency.

Evaluate and Assess Improved Treatment, Utilization and Disposal Methods for the Management of Municipal Sludge. A design manual which gives a critical review of dewatering processes and a procedure for selecting an optimum dewatering strategy has been published. Reduction of about 35% in fuel requirements for incinerators was demonstrated through an EPA research grant study by upgrading the instrumentation and training of the operating staff. A concise report on land reclamation and biomass production from municipal sludge was published and this is being used as a guidance document for planning and designing land reclamation projects. A novel sludge digestion process, which reduces capital costs significantly, was demonstrated successfully through an EPA funded study. Two municipalities are presently constructing waste treatment plants using this process and several are in various stages of planning.

WATER QUALITY

Industrial Wastewater

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM					

Technical Information & Liaison					
Salaries & Expenses	\$197.5	\$69.9			
Research & Development	\$4.6	\$50.0			
TOTAL	\$202.1	\$119.9			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$1,992.0	\$1,807.7	\$1,842.7	\$1,052.0	-\$790.7
Research & Development	\$2,470.6	\$1,190.2	\$1,190.2	\$436.9	-\$753.3
TOTAL	\$4,462.6	\$2,997.9	\$3,032.9	\$1,488.9	-\$1,544.0
Health Effects					
Salaries & Expenses	\$40.9	\$16.5	\$16.5		-\$16.5
Research & Development	\$23.0	\$155.0	\$155.0		-\$155.0
TOTAL	\$63.9	\$171.5	\$171.5		-\$171.5
Environmental Engineering & Technology					
Salaries & Expenses	\$724.7	\$1,001.2	\$1,001.2		-\$1,001.2
Research & Development	\$6,995.5	\$439.5	\$439.5		-\$439.5
TOTAL	\$7,720.2	\$1,440.7	\$1,440.7		-\$1,440.7
Environmental Processes & Effects					
Salaries & Expenses	\$346.0	\$305.0	\$305.0	\$311.7	\$6.7
Research & Development	\$15.0				
TOTAL	\$361.0	\$305.0	\$305.0	\$311.7	\$6.7
TOTAL:					
Salaries & Expenses	\$3,301.1	\$3,200.3	\$3,165.4	\$1,363.7	-\$1,801.7
Research & Development	\$9,508.7	\$1,834.7	\$1,784.7	\$436.9	-\$1,347.8
Industrial Wastewater TOTAL	\$12,809.8	\$5,035.0	\$4,950.1	\$1,800.6	-\$3,149.5

PERMANENT WORKYEARS

Technical Information & Liaison	2.9	1.1			
Monitoring Systems & Quality Assurance	25.9	20.3	21.3	12.3	-9.0
Health Effects	1.0	.4	.4		-.4

WATER QUALITY

Industrial Wastewater

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
Environmental Engineering & Technology	10.0	9.5	9.5		-9.5
Environmental Processes & Effects	7.5	3.8	3.8	3.8	
TOTAL PERMANENT WORKYEARS	47.3	35.1	35.0	16.1	-18.9
TOTAL WORKYEARS					

Technical Information & Liaison	4.2	1.4			
Monitoring Systems & Quality Assurance	36.9	31.6	32.6	18.8	-13.8
Health Effects	1.0	.7	.7		-.7
Environmental Engineering & Technology	13.7	13.6	13.6		-13.6
Environmental Processes & Effects	9.0	5.7	5.7	5.7	
TOTAL WORKYEARS	64.8	53.0	52.6	24.5	-28.1

WATER QUALITY

Industrial Wastewater

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Provide Quality Assurance and Monitoring Support for Industrial Wastewater and National Pollutant Discharge Elimination System (NPDES) Activities.			
- Prepare annual QA Discharge Monitoring Report in support of NPDES. (Monitoring)	9/82	9/83	9/84
- Develop quality control samples for GC/MS analytical series. (Monitoring)		9/83	
- Develop/test feasibility of whole-volume performance evaluation samples. (Monitoring)		9/83	
Develop/Validate Measurement Systems for Industrial Wastewater Discharges and NPDES Support.			
- Develop/standardize/validate analytical methods for high priority pollutants required by NPDES. (Monitoring)	9/82	9/83	
- Review applications/recommend approval for 1-3 general and 90-100 specific equivalent test procedures. (Monitoring)	9/82	9/83	9/84
Develop/Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities.			
- Provide user manual for determining toxicity reduction achieved by waste treatment. (Env. Processes)	9/82		
- Provide Toxicity Reduction Manuals for selected Consent Decree Industries. (Env. Technology)	10/83	10/83	
- Revise and update Treatability Manual. (Env. Technology)	6/83	6/83	
- Provide unique analyses identifying recurring organics not identifiable through existing GC/MS tape library. (Env. Processes)		9/86	9/86

WATER QUALITY

Industrial Wastewater

Budget Request

The Agency requests a total of \$1,800,600 and 16.1 permanent workyears for 1984, a decrease of \$3,149,500 and 18.9 permanent workyears from 1983. Included in this total is \$1,363,700 for Salaries and Expenses and \$436,900 for Research and Development, with decreases of \$1,801,700 and \$1,347,800 respectively. The decrease occurs mainly in the monitoring and quality assurance and in the environmental engineering and technology program elements. In addition, the decrease reflects the transfer of \$202,500 in exploratory research funds to the Intermedia program.

Program Description

There are two major research goals in this program. The first is to assure the quality of industrial effluent data and to resolve deficiencies in existing analytical and monitoring methods for toxic components. The second goal is to help assure a sound technical and scientific basis for the defensibility of Agency regulations and policies on industrial water pollution control. The following objectives support these goals:

Objective 1. Provide Quality Assurance and Monitoring Support for Industrial Wastewater and National Pollutant Discharge Elimination System (NPDES) Activities. The objective of this research under this activity is to provide quality assurance support to ensure that all measurement data on industrial wastewater discharges used by EPA are reliable and accurate so that data used by the Agency for decision-making is of the highest quality.

Objective 2. Develop and Validate Measurement Systems for Industrial Wastewater Discharges and NPDES Support. This research provides practicable, verified least-cost methods for monitoring industrial effluents (both self-monitoring by industrial dischargers and monitoring by local, State and Federal regulatory agencies) for compliance with permit conditions. Monitoring requirements must be issued by the Administrator in carrying out provisions of Sections 304(h), 308(a) and 402 of the Clean Water Act for use by Federal, State, local and industrial organizations to show compliance with the National Pollutant Discharge Elimination System.

Objective 3. Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. This work provides advance notice of emerging or previously-unrecognized industrial wastewater pollution problems. This research also provides tools for simplified, more expeditious issuance of industrial discharge permits. This research, by providing user manuals on treatability, toxicity reduction, etc., makes consistent guidance available on the most up-to-date and efficient techniques for permit issuance.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$202,100 for this program, of which \$197,500 was under the Salaries and Expenses appropriation and \$4,600 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$1,488,900 and 12.3 permanent workyears for this program, of which \$1,052,000 is for Salaries and Expenses and \$436,900 is for Research and Development. This reflects decreases of \$790,700 and \$753,300 respectively. These decreases result from the transfer of exploratory research funds to the Intermedia program and the completion of analytical methods for most of the technology-based effluent guidelines. These decreases also reflect a re-direction of Agency priorities toward water quality-based permit limitations. Continuing research will emphasize support to the Agency enforcement program and the National Pollutant Discharge Elimination System (NPDES) in the implementation of the technology-based effluent limitation regulations and the modification of enforcement activities as required by water quality-based permit adjustments.

Provide Quality Assurance and Monitoring Support for Industrial Wastewater and National Pollutant Discharge Elimination System (NPDES) Activities. The research program will support NPDES quality assurance by providing quality control samples and protocols for their use in performance evaluations and laboratory quality controls. The National Pollutant Discharge Elimination System Standards Repository will be maintained, and, where appropriate, standards will be made according to National Bureau of Standards (NBS) reference materials. Quality assurance audit support to the NPDES Discharge Monitoring Report (DMR) monitoring network will be continued to maintain the reliability of the data and to document its precision and accuracy. Streamlined and more cost-effective quality assurance tools will be developed for use in enforcement activities.

Develop and Validate Measurement Systems for Industrial Wastewater Discharges and NPDES Support. Research will validate and correct analytical methods for high priority industrial wastewater components and evaluate alternative analytical methods to support the NPDES program. Component elements of the NPDES priority organic pollutant test procedures approved in 1983 under the provisions of Section 304(h) of the Clean Water Act will be re-evaluated for deficiencies and modified to make them more applicable to all wastewaters.

1983 Program

In 1983 the Agency is allocating a total of \$3,032,900 and 21.3 permanent workyears to this program, of which \$1,842,700 is under the Salaries and Expenses appropriation and \$1,190,200 is for extramural purposes under the Research and Development appropriation.

Provide Quality Assurance and Monitoring Support for Industrial Wastewater and National Pollutant Discharge Elimination System (NPDES) Activities. The operation of the NPDES Standards Repository is continuing. Development of a new series of standards for the gas chromatography/mass spectrometry test procedure is to be completed and the standards will be available for use in NPDES efforts. The feasibility of whole-volume performance evaluation samples will be evaluated. The annual NPDES Discharge Monitoring Report monitoring network audit is being continued.

Develop and Validate Measurement Systems for Industrial Wastewater Discharges and NPDES Support. The multi-laboratory priority pollutant analytical methods validation studies will be completed and final reports will be available. Development of a surrogate test procedure for certain organic chemical pollutants will be completed. Work on identifying and correcting deficiencies related to the general applicability of some test procedures for the priority organic pollutants will be initiated.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$35,000 results from the following action:

-Reprogrammings. (+\$35,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$35,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$4,462,600 for this program, of which \$1,992,000 was under the Salaries and Expenses appropriation and \$2,470,600 was for extramural purposes under the Research and Development appropriation.

Provide Quality Assurance and Monitoring Support for Industrial Wastewater and National Pollutant Discharge Elimination System (NPDES) Activities. The operation of the NPDES Standards Repository was continued and expanded to include standards for most priority pollutants. The annual audit of the NPDES Discharge Monitoring Report monitoring network was completed. A "Handbook on Analytical Quality Control in Water and Wastewater Laboratories" was completed and made available.

Develop and Validate Measurement Systems for Industrial Wastewater Discharges and NPDES Support. A comprehensive EPA "Handbook for Sampling and Sample Preservation in Water and Wastewater" was completed. Several guides for automation of analytical systems were published. Formal multi-laboratory studies were conducted on several categories of priority pollutants. Standardized analytical methods were provided for 13 classes of pesticides and the test procedures manual for the priority organic pollutants was published. The NPDES alternate test procedures equivalency program made several nationwide and about 90 case-by-case equivalency recommendations.

HEALTH EFFECTS

1984 Program Request

The Agency requests no resources for this program. This reflects a decrease of \$171,500, of which \$16,500 is for Salaries and Expenses and \$155,000 is for Research and Development, and a decrease of 0.4 permanent workyears. These reductions reflect the general phase-down in industrial research as a result of the completion of research support for the effluent guidelines and the Consent Decree efforts. Some work will be continued in other budget areas on short-term health effects testing methods for complex mixtures which will have applicability to industrial and other effluents.

1983 Accomplishments

In 1983, the Agency is allocating a total of \$171,500 and 0.4 permanent work-years to this program, of which \$16,500 is under the Salaries and Expenses appropriation and \$155,000 is for extramural purposes under the Research and Development appropriation.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. Bioassay methods which prove to have best applicability to complex effluents are being further refined. Such tests will allow permitting officials to utilize better health effects information for establishing proper waste-load allocations for specific water bodies.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$63,900 for this program, of which \$40,900 was under the Salaries and Expenses appropriation and \$23,000 was for extramural purposes under the Research and Development appropriation.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. Evaluations of a number of health effects bioassays for their applicability in determining toxicity of industrial discharges were begun. These bioassays are for use in a group of test methods for assessing carcinogenic, mutagenic, and reproductive risks related to industrial effluents.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests no resources for this program. This reflects a decrease of \$1,001,200 for Salaries and Expenses, a decrease of \$439,500 for Research and Development and a decrease of 9.5 permanent workyears. These reductions reflect the transfer of exploratory research funds to the Intermedia program and the phase-down in industrial wastewater research as a result of completion of research in support of technology-based effluent guidelines and the Consent Decree efforts. All effluent guidelines scheduled for promulgation are expected to be completed by 1984. These reductions also reflect the Agency's view that the private sector should have the predominant role in pollution control technology development.

1983 Program

In 1983, the Agency is allocating a total of \$1,440,700 and 9.5 permanent workyears to this program, of which \$1,001,200 is under the Salaries and Expenses appropriation and \$439,500 is for extramural purposes under the Research and Development appropriation.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. A study of acid discharges from lead and zinc mining refuse piles will evaluate the extent to which tailings piles, which contain toxic heavy metals, are affecting ground and surface water. The metal finishing industry is being examined to determine if changes in NPDES permit limitations might be warranted because treatment technologies have advanced or because changes in the state-of-the-art of manufacturing processes have occurred. Available cost-versus-performance data (EPA's Treatability Manual) for frequently used industrial waste treatment technologies will be updated and made available for utilization by regional offices and State permitting officials.

Efficient, lower-cost treatment technologies for toxic metals and organic pollutants will be evaluated. Priority will be given to treatment of waste streams from organic chemicals manufacturing, pesticides production and metal finishing. These industrial categories have potentially severe toxicity problems and may, therefore, be particularly impacted by discharge regulations in water quality-limited areas. The results of these evaluations will be used to establish reasonable and attainable individual permit discharge limits.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$7,720,200 for this program, of which \$724,700 was under the Salaries and Expenses appropriation and \$6,995,500 was for extramural purposes under the Research and Development Appropriation.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. Treatability research, including work on the toxicity reduction concept, provided support to regional office and State permitting activities and enforcement efforts. This work defined the efficiency, reliability and costs of various existing technologies for treating toxic pollutants. The extent of toxicity reductions by using various technologies was documented.

Evaluations of abatement pollution controls for textile, pesticide, petrochemical, and electroplating wastewaters were completed. Documentation of the engineering and economic advantages of the centralized waste treatment concept for small business metal finishers and the development of a novel method for removal of toxic heavy metals from industrial effluents were also provided. These results were produced in support of the promulgation of effluent guideline regulations and the issuance of individual industrial discharge permits.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$311,700 and 3.8 permanent workyears for this program, all of which is for Salaries and Expenses. This is an increase of \$6,700 from 1983. The level of effort of the program in 1984 will remain about the same as in 1983.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. This program will continue to provide information on the composition of complex industrial effluents. The information will be gathered from scanning the data which were generated by gas chromatographic/mass spectrometric (GC/MS) analyses of industrial effluents. This information, which is compiled in a GC/MS computer tape library, is being verified by specialized analyses.

1983 Program

In 1983, the Agency is allocating a total of \$305,000 and 3.8 permanent workyears to this program; all of which is under the Salaries and Expenses appropriation.

Develop and Evaluate Scientific and Technical Tools To Support Permitting and Enforcement Activities. The GC/MS tape library will be maintained and information on additional effluent characteristics will be added. This work is being performed in response to needs of the program office.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$361,000 for this program, of which \$346,000 was under the Salaries and Expenses appropriation and \$15,000 was for extramural purposes under the Research and Development appropriation.

Develop and Evaluate Scientific and Technical Tools to Support Permitting and Enforcement Activities. Tapes from 20,000 GC/MS runs were analyzed and the identities of 500 selected compounds were confirmed. The Effluent Guidelines Division and the Permits Division of the Office of Water utilized these analyses in developing guidelines and in formulating permitting procedures. Additionally, a methodology for determining levels of toxicity in the leather tanning industry's wastewaters was developed.

Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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WATER QUALITY

Water Quality State Programs Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

State Programs Management						
Salaries & Expenses	\$12,286.1	\$9,661.4	\$9,290.4	\$8,284.6	-\$1,005.8	
Abatement Control & Compliance	\$3,597.1	\$350.0	\$350.0	\$180.0	-\$170.0	
TOTAL	\$15,883.2	\$10,011.4	\$9,640.4	\$8,464.6	-\$1,175.8	
Great Lakes Program						
Salaries & Expenses	\$1,396.3	\$1,313.5	\$1,313.5	\$800.0	-\$513.5	
Abatement Control & Compliance	\$4,178.8	\$2,500.0	\$3,500.0	\$2,897.3	-\$602.7	
TOTAL	\$5,575.1	\$3,813.5	\$4,813.5	\$3,697.3	-\$1,116.2	
Chesapeake Bay Water Quality Study						
Salaries & Expenses	\$277.9		\$53.1		-\$53.1	
Abatement Control & Compliance	\$1,600.2		\$900.0		-\$900.0	
TOTAL	\$1,878.1		\$953.1		-\$953.1	
TOTAL:						
Salaries & Expenses	\$13,960.3	\$10,974.9	\$10,657.0	\$9,084.6	-\$1,572.4	
Abatement Control & Compliance	\$9,376.1	\$2,850.0	\$4,750.0	\$3,077.3	-\$1,672.7	
Water Quality State Programs Management	TOTAL	\$23,336.4	\$13,824.9	\$15,407.0	\$12,161.9	-\$3,245.1
PERMANENT WORKYEARS						

State Programs Management	258.9	200.0	210.1	170.4	-39.7	
Great Lakes Program	16.2	10.8	10.8	10.8		
Chesapeake Bay Water Quality Study	4.4		2.0		-2.0	
TOTAL PERMANENT WORKYEARS	279.5	210.8	222.9	181.2	-41.7	
TOTAL WORKYEARS						

State Programs Management	312.3	254.4	266.4	212.4	-54.0	
Great Lakes Program	21.6	15.0	15.0	15.0		

WATER QUALITY

Water Quality State Programs Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
Chesapeake Bay Water Quality Study	5.4		2.0		-2.0
TOTAL WORKYEARS	339.3	269.4	283.4	227.4	-56.0

WATER QUALITY

Water Quality State Programs Management

Budget Request

The Agency requests a total of \$12,161,900 and 181.2 permanent workyears for this subactivity. Of this amount, \$9,084,600 will be for the Salaries and Expenses appropriation and \$3,077,300 will be for the Abatement, Control and Compliance appropriation, for a decrease of \$3,245,100 and 41.7 permanent workyears.

Program Description

This area provides for the overall management of State financial assistance programs and other local programs for water pollution control. It includes oversight of Section 205(g) construction grants management delegation agreements and water quality management programs under Sections 106, 201, 205(j), 208, and 303 of the Clean Water Act. The subactivity also provides for administration of an interagency agreement with the U.S. Army Corps of Engineers; support for training of water pollution control personnel; and administration of the Great Lakes and Chesapeake Bay programs.

For Agency budgetary purposes, these activities are divided into three program elements:

State Programs Management -- This program includes monitoring and overview of State activities to implement negotiated agreements under Section 205(g) of the Clean Water Act, which provides for phased transfers of delegable construction grants project and program management activities, administration of the interagency agreement with the Corps of Engineers, and training programs to meet professional manpower development and training needs of wastewater treatment plant operators and EPA, State, and private sector personnel. Other construction grant management resources are described in the Municipal Source Control subactivity. This program element also includes management of water quality and State financial assistance programs under Sections 106, 201, 205(j), 208, and 303 of the Act.

Great Lakes Program -- This program provides assistance in implementing U.S. programs in support of the U.S. - Canada Great Lakes Water Quality Agreement. A major focus of the program is the measurement of ambient conditions in the Great Lakes in order to determine compliance with the objectives of the Agreement. The monitoring activity measures water quality trends and the effectiveness of remedial responses to emerging pollution problems.

Chesapeake Bay Program Water Quality Study -- This program was developed in response to a Congressional mandate requiring EPA to conduct a study of the Chesapeake Bay. The objectives of the study were define the factors adversely affecting the environment, develop research to address adverse factors, and define management strategies to ameliorate degradation of water quality in the Bay. The program has been developed through a cooperative effort among the affected States, local governments, and EPA.

STATE PROGRAMS MANAGEMENT

1984 Program Request

The Agency requests a total of \$8,464,600 and 170.4 permanent workyears for this activity, including \$8,284,600 under the Salaries and Expenses appropriation and \$180,000 under the Abatement, Control and Compliance appropriation. This represents a decrease of \$1,175,800 and 39.7 permanent workyears. Of this amount, \$1,005,800 will be from the Salaries and Expenses appropriation and \$170,000 will be from the Abatement, Control and Compliance appropriation.

These decreases primarily reflect progress in State delegation of construction grants management, reduced oversight of State water quality management activities, completion of EPA's study of urban nonpoint source runoff problems, a phasing down of assistance to the States in identifying nonpoint source problems and developing related control programs, and a reduction in resources needed for management of wastewater treatment plant operator training funds.

Oversight: In accordance with EPA policy to delegate maximum management responsibility and authority, EPA will continue working with the States to coordinate program objectives and outputs and to integrate funding mechanisms. EPA and State program managers will determine annual program priorities and commitments; Agency personnel will provide feedback and assistance based on the results of annual evaluations. These efforts will provide essential links to ensure that Federal and State objectives, priorities, and funds are meeting construction grants and water quality management needs through the most cost-effective approaches. The Federal program will emphasize results-oriented oversight of activities where there are priority financial, water quality, or public health concerns.

Corps of Engineers: EPA and the Corps of Engineers will continue efforts to ensure the integrity of construction grants projects and prevent waste, fraud, or abuse. Corps activities, which are described under the Municipal Source Control subactivity, will be supported by \$16,000,000 in the Abatement, Control and Compliance appropriation. EPA will negotiate annual workplans and monitor Corps of Engineers accomplishments in priority areas, including preconstruction reviews, on-site presence at large, complex projects, interim and final inspections, and special construction management activities.

State Delegation: Of the 49 States (including Puerto Rico) with signed delegation agreements in 1984, a total of 36 States will be fully delegated for management of construction grants, an increase of six over 1983. The Agency expects this level of delegation to continue essentially unchanged for the near future. Based on this assumption, the program may be considered as essentially fully delegated. In 1984, States will provide 2,140 workyears or 68% of the total management staffing, the Corps of Engineers 14%, and EPA 18%.

Water Quality Management: During 1984, EPA will continue implementation of simplified water quality management regulations and the water quality based approach initiated in 1982. The Agency will update guidance to the States in the following areas: the eligibilities of various activities, including monitoring and standard setting for funding under Section 205(j) of the Act, procedures for revising State continuing planning processes, and procedures for insuring the consistency of permit and construction grants decisions with water quality management plans. EPA will continue to focus water planning activities on insuring that States complete their identification of priority water bodies and the States carry out reviews of the consistency of plans with water quality management decisions.

Financial Assistance: Grants totaling \$24,000,000 are being requested for award under Section 106 of the Clean Water Act to support State and Interstate water pollution control programs. States will target funds to permits and enforcement activities, including high priority ambient and source surveys. One third of the States are expected to use part of their Section 205(g) funds for these priority activities, in addition to supporting their delegated construction grants management programs. In 1984 the States will obligate \$90,797,000 in 205(g) funds to support activities eligible for funding under this Section of the Clean Water Act.

In addition, the Agency expects to award \$24,407,792 to the States in 1984 for activities under Section 205(j). The highest priority for funding will be the review of water quality standards to determine if designated uses can be attained, water quality management planning, and associated monitoring. EPA will continue its efforts to ensure that State processes for developing Section 205(j) workplans focus on effective approaches to solving water quality problems and involve local, regional, and interstate agencies closest to water quality problems.

EPA will work with the States to ensure effective coordination of Section 106, 205(g), and 205(j) financial assistance agreements. A study will be conducted to determine how effectively Section 106 and 205(j) funds have been coordinated and used in 1982 and 1983, with findings leading to recommendations for improved management.

In 1984 EPA will assist States that received grants in 1982 and 1983 for wastewater treatment plant operator training and will look to the States and municipalities to establish self-sustaining training programs without Federal funds.

1983 Program

In 1983, the Agency is allocating a total of \$9,640,400 and 210.1 permanent workyears to this program, of which \$9,290,400 is for Salaries and Expenses and \$350,000 is for extramural purposes under the Abatement, Control and Compliance appropriation.

Oversight: EPA policy is to give States maximum latitude in managing environmental programs while the Agency retains appropriate overview responsibility. EPA overview responsibilities include ensuring program accountability in meeting statutory goals, assessing how program and management accomplishments meet these goals, providing information transfer on program progress and problems, and ensuring efficient use of resources. In 1983 EPA will evaluate current overview practices for each water program and develop, as appropriate, an integrated overview policy covering all water programs.

Streamlined Section 205(g) delegation management regulations and guidance will be issued, strengthening State project responsibilities and defining State and EPA program oversight roles. EPA will fulfill the role of overall program manager of an increasingly delegated effort by working with the States to define annual national program priorities and objectives, monitor and evaluate accomplishments, and provide needed management assistance.

Corps of Engineers: During 1983, EPA and the Corps of Engineers will also continue intensive efforts to ensure the integrity of construction grants projects; prevent waste, fraud, and abuse; and respond effectively to allegations or evidence of problems. In accordance with negotiated and approved plans, the Corps of Engineers will conduct preconstruction reviews, maintain on-site presence at large, complex projects, and conduct interim and final inspections.

Delegation: Three additional States are expected to sign an initial Section 205(g) delegation management agreement, bringing the total to 49 delegated States. Of these 49 States, 30 are expected to have assumed full responsibility for managing the construction grants program, an increase of 9 over 1982. States are expected to commit 2,078 workyears or 64% of the total construction grants management staffing in 1983. EPA will provide 19% of the total and the Corps of Engineers the remaining 17%.

Water Quality Management: In 1983, EPA's water planning activities will focus on encouraging the States to establish water quality needs based priorities. The Agency will help the States determine the most cost-effective mixes of municipal, industrial, and nonpoint source controls needed to meet attainable uses on priority water bodies. State water quality management plans and continuing planning processes will be updated. As the States develop confidence in accomplishing these activities, EPA will increasingly rely on the States to carry out the plan consistency reviews required by the Act.

Simplified water quality management and standards regulations embodying the water quality based approach will be promulgated. Administrative reforms have already increased the States' flexibility in planning and implementing water quality programs.

Financial Assistance: Funds totaling \$54,400,000 have been allocated for award under Section 106 of the Clean Water Act to support State and Interstate water pollution control programs. Increased funding for permits and enforcement activities, including necessary intensive surveys, will have highest priority under Section 106 in 1983.

The Agency expects the States to obligate \$45,200,000 in 1983 for activities under Section 205(j). Priority activities for Section 205(j) funding are water quality standards, planning, and associated monitoring. States are expected to implement this new planning program in coordination with appropriate local agencies. The Agency expects the States to obligate \$107,103,000 in 1983 to support activities under Section 205(g). Priority activities are State construction grants management.

Major emphasis will be placed on negotiating coordinated financial assistance agreements with the States covering Sections 106, 205(g), and 205(j) funds. State resources for planning, monitoring, and water quality standards activities under the water quality based approach will be supplemented primarily by Section 205(j) grants. Section 106 and 205(g) funds will be provided primarily for permitting, enforcement, water quality monitoring, and State construction grants management.

As in 1982, the Agency will manage and allocate the 1983 Congressional add-on of \$2,625,200 for operator training for support and development of State self-sufficiency and improved municipal treatment facilities compliance.

Nonpoint Source Controls: Headquarters will publish a policy statement on appropriate Federal, State, and local roles in identifying and solving priority nonpoint source problems. The final report of the five year National Urban Runoff Project (NURP) will be published and transmitted to Congress in 1983. A NURP handbook on determining instream effects of pollution sources will be published. EPA will work with the U.S. Department of Agriculture's (USDA's) Rural Clean Water Program to publish Best Management Practices (BMPs) for pest control and salinity problems. EPA will continue work with the USDA and North Carolina State University in monitoring selected costsharing projects to determine the most cost-effective agricultural BMPs. A yearend progress report will be published in September. The EPA - Forest Service interagency agreement was renewed to continue work on silviculture nonpoint source control implementation.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$371,000 results from the following actions:

-Reprogrammings. (-\$371,000) This change reflects the reversal of the construction grants restructuring which was not approved by Congress. Since the restructuring was proposed some six months earlier, reversing the action revised the earlier resource estimates and resulted in a net change of -\$63,700 to the Salaries and Expenses appropriation.

During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$307,300 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$15,883,200 and 258.9 permanent workyears for this program activity, of which \$12,286,100 was under the Salaries and Expenses appropriation and \$3,597,100 was for extramural purposes under the Abatement, Control and Compliance appropriation.

Regulatory Reform: Early in 1982, EPA proposed changes to construction grants regulations to simplify program requirements, decrease costs, and increase State management flexibility. Following enactment of the 1981 Amendments to the Clean Water Act, EPA developed regulations, policy, and guidance documents needed to implement the statutory requirements. Interim final project management related regulations were published within five months of enactment.

During 1982, the Agency continued a major effort to reorient management of the construction grants program away from Federal project decision-making and toward results-oriented overview of delegated State program activities. EPA and States established joint program priorities and began developing coordinated approaches to assure improved facilities performance, local financial capability, elimination of backlogs, prevention of waste, fraud and abuse, increased delegation, and refinement of construction grants obligation and outlay projections.

One additional State accepted initial Section 205(g) delegation, bringing to 46 the number of delegated States and Territories; 21 of these States assumed full responsibility for project management, including assistance provided by the Corps of Engineers. States committed 1,901 workyears to program management in 1982, 59% of total program resources. EPA staff represented 22% of total staffing and the Corps of Engineers 19%.

EPA initiated a major effort in 1982 to reorient management of the water programs, and to enhance program performance. The Agency's proposed revisions to the Clean Water Act were developed and proposed to Congress. Simplified Water Quality Management regulations were drafted for Federal Register publication as proposed rules, in coordination with development of revised Grants Management and Water Quality Standards regulations. A comprehensive guidance and review system was implemented, emphasizing a water quality based approach, including update of State continuing planning processes and water quality management plans. The performance of all EPA Regions and selected States was reviewed during the year.

Financial Assistance: A total of \$51,338,300 in Section 106 grants was awarded to State and interstate water pollution control agencies. Principal 1982 funding priorities included issuance and reissuance of major permits, enforcement, water quality standards reviews, and associated monitoring. Several States supplemented their Section 106 grants with Section 205(g) funds, particularly for permits and enforcement activities. In 1982 States obligated \$50,131,000 under Section 205(g) primarily for construction grants management activities.

In 1982 total of \$22,200,000 available under Section 205(j) for water quality planning was reserved for obligation by the States in 1983. Several States are planning to reserve funds for obligation but have not done so as of January 1983. Priorities for use of these funds include wasteload allocations, analysis of total maximum daily loadings, water quality standards attainability reviews, and site-specific criteria studies. Joint State, areawide, and local development of workplans for these activities was underway at year end.

Nonpoint Source Controls: The preliminary report on the results of the Nationwide Urban Runoff Program was completed. Handbooks on identifying and correcting significant stormwater control problems were completed as part of the Project. EPA worked with the USDA in the Rural Clean Water Program to publish an agricultural nonpoint source control planning manual and state-of-art report on best management practices for handling animal wastes, use of fertilizers, and sediment control. EPA and USDA soil conservation agencies continued working with North Carolina State University in a study to determine the most cost-effective agricultural best management practices through cause and effect monitoring of selected Rural Clean Water and other cost-sharing projects. EPA also worked with the Forest Service under an interagency agreement to implement training for foresters and forest land owners.

In response to Congressional directives to focus training funds on alleviating noncompliance problems in Federally funded municipal plants, EPA obligated \$3,807,000 from the Congressional add-on to fund on-site, over-the-shoulder operator training programs conducted by State agencies (especially those with dedicated Section 109(b) centers) and other qualified training organizations. An additional \$236,000 of the add-on was obligated for salary costs associated with the program.

GREAT LAKES PROGRAM

1984 Program Request

The Agency requests \$3,697,300 and 10.8 permanent workyears for 1984, a decrease of \$1,116,200 from 1983. This request includes \$800,000 for the Salaries and Expenses appropriation and \$2,897,300 for extramural purposes under the Abatement, Control and Compliance appropriation, with decreases of \$513,500 and \$602,700, respectively. The requested level will allow EPA to continue to meet our commitments under the U.S. - Canada Great Lakes Water Quality Agreement. The decrease reflects completion of the Niagara River (Lake Ontario) ground water contamination study as well as completion of grant awards for demonstrating innovative control techniques under Section 108(a) of the Clean Water Act.

The Great Lakes program will support the International Joint Commission. It will respond to information requests and will provide technical assistance to Headquarters and the State Department on official Canadian requests and notes concerning U.S. Great Lakes policies. Staff support and technical assistance to the Water Quality Board and its committees will continue to ensure that U.S. views and policies are accurately represented.

The compliance of U.S. industrial and municipal dischargers with the International Agreement objectives will be assessed and reported to the Commission.

A Great Lakes surveillance program to detect toxic substances in Great Lakes fish and sediments will be conducted in 20 tributaries and 10 harbors, respectively. Results will be analyzed and reported to the States for regulatory follow-up.

The atmospheric deposition sampling network will be maintained and data analyzed to determine loadings to the Lakes of organic chemicals, nutrients and heavy metals.

A sampling network and strategy to monitor the trophic status of the connecting channels will be designed and implemented. Annual surveys of the lakes in spring, summer, and fall will be conducted in cooperation with State and Canadian agencies to determine the annual variability of ambient phosphorus concentrations and the levels and trends in metals and conventional pollutant parameters. This monitoring strategy, along with the fish, sediment, and air data, will provide the information necessary to assess compliance with Agreement objectives, to evaluate effectiveness of control programs and to identify emerging problems. EPA will continue to work with the States to implement State-EPA Action Plans developed in 1983 to address remaining pollution problems in the lakes.

1983 Program

In 1983, the Agency is allocating \$4,813,500 and 10.8 permanent workyears to this program, of which \$1,313,500 is for the Salaries and Expenses appropriation and \$3,500,000 is for extramural purposes under the Abatement, Control and Compliance appropriation.

The major focus of the program continues to be directed toward support of the U.S. - Canada Great Lakes Water Quality Agreement.

International Joint Commission sponsored Agreement activities will be supported by the United States and Canada. Annual lake water quality surveys will be conducted on Lakes Michigan, Huron and Erie, and an intensive survey in cooperation with Canadian and State agencies will be conducted on Lake Superior. Fish, sediment and air sampling will continue to determine levels and trends of nutrients and toxicants affecting Great Lakes water quality. Joint State, local and other Federal agency efforts will continue to develop plans for further phosphorus reductions in the Lower Lakes. EPA and the States will develop Action Plans to address remaining pollution problems in the 12 most significantly degraded areas of the Lakes.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,000,000 results from the following action:

-Congressional Action. (+\$1,000,000) The Congressional add-on to this activity of +\$1,000,000 to the Abatement, Control and Compliance appropriation is to continue the Section 108(a) program of demonstration grants to test new or innovative wastewater techniques, as well as to carry forward water intake and high flow tributary monitoring to determine water quality trends and pollutant loadings in the Lakes.

1982 Accomplishments

In 1982, the Agency obligated \$5,575,100 and 16.2 permanent workyears for this program, of which \$1,396,300 was for the Salaries and Expenses appropriation and \$4,178,800 for the Abatement, Control and Compliance appropriation.

In 1982, the Great Lakes National Program continued its lead role in coordinating and implementing U.S. programs in fulfillment of the U.S.-Canada Great Lakes Quality Agreement. Specific activities conducted in 1982 to ascertain ambient conditions included fish flesh analyses from nearshore and open water locations; sediment surveys of suspected toxic hot spots in tributary mouths; atmospheric deposition collections at 41 sites; and mathematical modeling to determine transport, fate, and maximum allowable loading of pollutants.

Other accomplishments included initiation of a major ground water contamination investigation in the Niagara River Frontier in cooperation with New York and other Federal offices as part of the Administrator's Niagara River Agenda.

The program also funded cooperative programs with State and local entities in 31 counties in Indiana, Michigan, Ohio and New York to encourage the voluntary adoption of best management practices to further reduce phosphorus loadings, particularly to Lakes Erie and Ontario.

CHESAPEAKE BAY WATER QUALITY STUDY

The purpose of the six-year study was to identify problems, conduct research, and develop management recommendations to preserve and enhance water quality in the Chesapeake Bay. Of ten major problem areas, three have top priority: toxic substances, submerged aquatic vegetation, and nutrients (eutrophication). Approximately 40 research projects on the three priority areas have been completed, or are nearing completion. All publications are being disseminated through the National Technical Information Service, U.S. Department of Commerce.

1984 Program Request

Information developed during the course of the Chesapeake Bay study will be disseminated in 1983. No further resources are needed to complete the Agency's commitments in this area.

1983 Program

In 1983 the program is allocating \$953,100 and 2.0 permanent workyears to this program of which \$53,100 is for Salaries and Expenses and \$900,000 is for Abatement, Control and Compliance.

The Agency will complete and publish all remaining technical studies in the three priority areas of the program: toxics, nutrients, and submerged aquatic vegetation.

Toxic Substances: The study identified the relative amount and distribution of toxic substances in the water, sediments, and living organisms throughout the bay and major tributaries. Natural and manmade sources of toxics were noted, along with the rate at which toxic substances traveled to different parts of the bay and the degree to which they changed from their original condition. The final segment of this study developed options for reducing toxics in the bay.

Submerged Aquatic Vegetation: The study investigated the effects of manmade changes in water quality on submerged aquatic vegetation. The study also measured the impact of the decline on various species of fish and wildlife. This segment of the study proposed alternatives for preserving and enhancing bay vegetation and associated species of fish and wildlife.

Nutrients (eutrophication): This segment of the study identified the effects on the bay ecosystem of nutrients such as nitrogen and phosphorus. This section of the study proposed measures for limiting agricultural nonpoint source runoff and other measures to limit nutrients flowing into the bay from the Susquehanna, Potomac, and James Rivers.

EPA plans to disseminate the results of the Chesapeake Bay program's studies through the National Technical Information Service and by holding two major conferences to provide opportunities for discussion of the findings of these reports. The first conference is designed for participation by various agencies at the Federal, State, and local level who are responsible for maintaining and enhancing ambient environmental quality in the Chesapeake Bay region. The second conference is designed for participation by the general public. These conferences will be based on the work in the three priority areas.

During 1983 EPA will maintain the computerized data base for use by States and local governments. The Agency is working with the States to transfer the computer and its data base to them by the end of this year.

In 1983 the program will also publish four major reports describing the findings in the three priority areas. The "Chesapeake Bay Primer" explains important ecological relationships in the bay and is a basic reference for understanding future reports. The "Synthesis Report" explains the technical knowledge gained from all Federally funded research for the three priority areas. This report was distributed to Congress and the public in September 1982. The "Chesapeake Bay Characterization Study" explains the trends in data relating environmental quality fish, and wildlife populations, from the late 1930s to the present. Statistics in these areas will be analyzed for significant trends comparing environmental quality and fish and wildlife populations. The "Management Alternatives Report" explains the results of various modeling exercises to analyze the technical and economic feasibility of various pollution abatement strategies including control of toxics; nonpoint source runoff from agriculture, urban areas, and construction; and sewage treatment plants, and industrial dischargers.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$953,100 results from the following actions:

-Congressional Action. (+\$953,100) The Congressional add-on to this activity of +\$900,000 to the Abatement, Control and Compliance appropriation will complete final hand-off of the Chesapeake Bay study results and responsibilities to the States.

(+\$53,100) This increase includes +\$53,100 of the +10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

During 1982 the Agency obligated \$1,878,100 and 4.4 permanent workyears, of which \$277,900 was for Salaries and Expenses and \$1,600,200 was for Abatement Control and Compliance.

In 1982, the Chesapeake Bay Program completed the following work.

Chesapeake Bay Primer: Published.

Synthesis Report: Published.

Chesapeake Bay Characterization Study: Draft report completed.

Management Alternatives: Draft report completed.

WATER QUALITY

Effluent Standards & Guidelines

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Effluent Standards & Guidelines

Salaries & Expenses	\$4,901.3	\$4,785.5	\$5,429.6	\$4,220.7	-\$1,208.9
Abatement Control & Compliance	\$9,141.8	\$7,448.5	\$7,448.5	\$5,407.1	-\$2,041.4
TOTAL	\$14,043.1	\$12,234.0	\$12,878.1	\$9,627.8	-\$3,250.3

TOTAL:

Salaries & Expenses	\$4,901.3	\$4,785.5	\$5,429.6	\$4,220.7	-\$1,208.9
Abatement Control & Compliance	\$9,141.8	\$7,448.5	\$7,448.5	\$5,407.1	-\$2,041.4

Effluent Standards & Guidelines	TOTAL	\$14,043.1	\$12,234.0	\$12,878.1	\$9,627.8	-\$3,250.3
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PERMANENT WORKYEARS

Effluent Standards & Guidelines	82.8	68.4	82.7	60.0	-22.7
TOTAL PERMANENT WORKYEARS	82.8	68.4	82.7	60.0	-22.7

TOTAL WORKYEARS

Effluent Standards & Guidelines	102.7	93.4	107.7	82.9	-24.8
TOTAL WORKYEARS	102.7	93.4	107.7	82.9	-24.8

WATER QUALITY

Effluent Standards and Guidelines

Budget Request

The Agency requests \$9,627,800 and 60.0 permanent workyears for 1984, a decrease of \$3,250,300 and 22.7 permanent workyears from 1983. Included in this total is \$4,220,700 for Salaries and Expenses and \$5,407,100 for Abatement, Control and Compliance, with decreases of \$1,208,900 and \$2,041,400, respectively.

Program Description

This subactivity includes establishing effluent limits for industries discharging directly to waterways and indirectly through publicly owned treatment works (POTWs). Effluent standards and guidelines are promulgated under the authority of Sections 301, 304, 306, 307, and 501 of the Clean Water Act.

The Clean Water Act established a comprehensive program to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." This program is part of EPA's effort to implement this legislative mandate through the issuance of effluent standards, pretreatment standards, and new source performance standards for industrial dischargers. Through this program, the Agency establishes a number of different kinds of effluent limitations which are summarized below.

Best Practicable Control Technology limitations (BPT) are generally based on the average of the best existing performance by plants of various sizes, ages, and unit processes within an industrial category or subcategory. In establishing BPT limitations, EPA considers the total cost of applying the treatment technology in relation to the effluent reduction derived, the age of facilities and equipment involved, the production process employed, the engineering aspects of the control technologies, process changes, and non-water quality environmental impacts, including energy requirements.

Best Available Technology Economically Achievable limitations (BAT) generally represent the best existing performance in the industrial category or subcategory. The Act establishes BAT as the principal national means of controlling the direct discharge of toxic and nonconventional pollutants into navigable waters. In arriving at BAT, the Agency considers the same factors that are considered in arriving at BPT. The Administrator retains considerable discretion in assigning the weights to be accorded these factors.

Best Conventional Pollutant Control Technology limitations (BCT) are based on the "best conventional pollutant control technology" for discharges of conventional pollutants from existing sources. Conventional pollutants include biochemical oxygen demand, total suspended solids, fecal coliform, acidity (pH), and oil and grease. BCT is not an additional limitation, but replaces BAT for the conventional pollutants. In addition to other factors, the Act requires that BCT limitations be assessed in light of a two-part "cost reasonableness" test. The first test compares the cost for private industry to reduce its conventional pollutants with the costs to POTWs for similar levels of reduction in their discharge of such pollutants. The second test examines the cost-effectiveness of treatment beyond BPT. EPA must find that limitations are reasonable under both tests before establishing them under BCT. In no case may BCT be less stringent than BPT.

New Source Performance Standards (NSPS) are based on the best available demonstrated technology (BDT). New plants have the opportunity to install the best and most efficient production processes and wastewater treatment technologies.

Pretreatment Standards for Existing Sources (PSES) are designed to prevent the discharge of pollutants which pass through, interfere with, or are otherwise incompatible with the operation of a POTW. The Clean Water Act of 1977 requires pretreatment for pollutants that pass through the POTW or interfere with the POTW's treatment process or chosen sludge-disposal method. The legislative history of the 1977 Amendments indicates that pretreatment standards are to be technology-based, analogous to BAT for removal of toxic pollutants. EPA has generally determined that pollutants are passing through a POTW if the percent of pollutants removed by a well-operated POTW achieving secondary treatment is less than the percent removed by the BAT model treatment system. The general pretreatment regulations which serve as the framework for the industrial pretreatment efforts are found at 40 CFR Part 403.

Pretreatment Standards for New Sources (PSNS), like PSES, are to prevent the discharge of pollutants which pass through, interfere with, or otherwise are incompatible with the operation of a POTW. PSNS are to be issued at the same time as NSPS. New indirect dischargers, like new direct dischargers, have the opportunity to incorporate the best available demonstrated technologies. EPA considers the same factors in promulgating PSNS as it considers in promulgating PSES.

In developing each regulation the Agency examines industrial processes, water usage, wastewater characteristics, and treatment technologies in use or potentially applicable. The requirement for economic achievability has led the Agency to conduct extensive studies of the financial and economic achievability of regulatory options. These options are examined separately to determine the possibility of closures as well as impacts on production levels, employment, industry size and concentration, foreign trade, regional economics, and the economics of related industries.

In the past, EPA was unable to promulgate many of these regulations by the dates contained in the 1972 Act. In 1976, as a result of delays in issuing these regulations, EPA was sued by several environmental groups; the outcome was a Settlement Agreement. The Settlement Agreement required EPA to develop a program and adhere to a schedule for 21 major industries with 37 industry categories and to promulgate BAT effluent limitation guidelines, pretreatment standards, and NSPS for 65 "priority" pollutants and classes of pollutants. (See *Natural Resources Defense Council, Inc. v. Train*, 8 ERC 2120 (D.D.C. 1976), modified March 9, 1979.) The 1977 Amendments to the 1972 Act incorporated elements of the Settlement Agreement related to toxic pollutant control. Section 301(b)(2) of the Act now requires the achievement by July 1, 1984 of effluent limitations requiring application of BCT for conventional pollutants and BAT for toxic pollutants, including the 65 "priority" pollutants and classes of pollutants which Congress declared toxic under Section 307(a) of the 1972 Act. Likewise, NSPS and pretreatment standards were redirected toward toxic pollutant controls.

Because the Agency was unable to meet deadlines contained in the Settlement Agreement, in 1981 EPA moved to modify the proposal and promulgation dates. In May 1982, the U.S. District Court for the District of Columbia ordered the Agency to propose and promulgate regulations in compliance with a new time frame. In June 1982, the Agency submitted to the Court a streamlined schedule which presented its best estimates for completion of industry projects. In August 1982, the Court approved this streamlined schedule.

EPA is now in compliance with the Court's schedule, and is issuing all guidelines on time. Between 1978 and December 31, 1982, effluent guidelines standards regulations were proposed for 21 industrial categories (includes electroplating pretreatment regulations proposed in 1978) and promulgated regulations for 13 industrial categories (includes electroplating pretreatment and timber products processing, promulgated in 1979 and 1981, respectively). In 1983, regulations will be proposed for 14 industries (includes deferred segments for four industries) and promulgated for 15 industries. In 1984, regulations will be proposed for one industry and promulgated for 9 (includes deferred segments of four industries).

EFFLUENT STANDARDS AND GUIDELINES

1984 Program Request

The Agency requests a total of \$9,627,800 and 60.0 permanent workyears for this program, of which \$4,220,700 will be for the Salaries and Expenses appropriation and \$5,407,100 will be for the Abatement, Control and Compliance appropriation. This is a decrease of \$1,208,900 and \$2,041,400 respectively, which reflects the Agency's progress in developing effluent standards and guidelines. In 1984, the program will continue its progress on three fronts.

Complete Regulatory Requirements: The Agency will complete technical, economic, statistical, environmental studies, and regulatory flexibility analyses prior to promulgating effluent guidelines for the four previously deferred industries and the remaining six industries. The Agency will perform verification sampling and analysis and technical studies prior to developing improved pretreatment standards for new sources for the six "dirtiest" industries based on Paragraph 4(c) of the Consent Decree. These industries discharge toxic pollutants which are incompatible with a POTW. In accordance with Section 316(a) of the Act, the Agency will repair the remanded regulation for cooling water intake structures and develop guidelines for the prevention of thermal pollution from steam electric generating plants.

Assist State Control Efforts: EPA will provide engineering and scientific support to Regional and State permit writers for development and negotiation of permit limits. This will enable permit writers to make decisions based on protection of water quality at 20 organic chemical complexes and two integrated manufacturing complexes with combined waste streams from two more product processes. Assistance will be provided in developing approximately 165 plant-specific permits and 40 industry-specific general permits concerning facilities with the same or substantially similar types of operations.

Improve Regulation Development: The Agency will identify innovative technologies and product substitutions which may be significantly more cost-effective than BAT. Section 301(k) of the CWA allows for the extension of compliance deadlines for "innovative technologies," where "innovative" refers to treatment systems which reduce pollution loadings at substantially lower costs. EPA will also provide technical, statistical and economic support to post-proposal/promulgation litigation and negotiations on effluent guidelines.

1983 Program

In 1983, the Agency is allocating a total of \$12,878,100 and 82.7 permanent workyears for this program, including \$5,429,600 for the Salaries and Expenses appropriation and \$7,448,500 for the Abatement, Control and Compliance appropriation. Extramural funds are being used for the completion of technical investigations, economic and statistical support, exposure and risk assessments, analytical and sampling support, and support for litigation and remand work.

In 1983, the program will focus on the following key areas.

Eliminate Backlogs: The program will publish proposed regulations establishing national effluent limitations and standards for 14 industries (includes deferred segments of four industries) and promulgate effluent limitations for 15 industries.

Provide Assistance to State Permit Writers: The program will assist State and EPA permit writers in analyzing and interpreting information on treatability of toxic compounds, conventional pollutant cost tests, controls for toxic pollutants not covered by national regulations, and controls for facilities that include manufacturing processes not covered by national standards.

Through consultation activities, EPA will assist State and Regional permit writers in resolving engineering, economic, scientific and statistical problems arising from permitting activities based on effluent standards and guidelines.

Improve Our Regulatory Actions: The program will perform Regulatory Impact Analyses and environmental assessments required by Executive Order 12291 and review regulations which will have a significant economic impact on a substantial number of small entities as required by the Regulatory Flexibility Act.

Additionally, EPA will assess samples from the Combined Sewer Overflow Study and issue a final report, provide technical, economic, and statistical support for post-proposal/promulgation negotiations, and develop a multi-media regulatory approach for several emerging synthetic fuels industries including low-BTU coal gasification, medium coal gasification, and gasohol production.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$644,100 results from the following action:

-Congressional Action. (+\$644,100) This increase includes +\$644,100 of the \$10.5 million Salaries and Expenses add-on which supports workyears in the proposal and promulgation of industry category effluent guidelines.

1982 Accomplishments

In 1982, the Agency obligated a total of \$14,043,100 for this program, including \$4,901,300 for the Salaries and Expenses appropriation and \$9,141,800 for the Abatement, Control and Compliance appropriation. Contract resources were used for technical analytic studies, economic and statistical analyses, health effect determinations, and environmental exposure and risk analyses. Program accomplishments included proposing and promulgating BAT guidelines, pretreatment standards, and NSPS.

This program also prepared three regulations establishing national effluent limitations and standards resulting from the Settlement Agreement and the Act and promulgated three regulations; it also proposed a revised BCT methodology and BCT limitations.

Assistance was provided to Regional and State permit writers for analyzing and interpreting information on the treatability of toxic pollutants and nonconventional treatment cost test, controls for toxic pollutants not covered by effluent standards and guidelines, and the application of effluent standards and guidelines to industrial processes not covered by national regulation.

During 1982, the Office of Management Systems and Evaluation (OMSE) reviewed the Agency's procedures for internal review and coordination of draft effluent guidelines prior to publication in the Federal Register. OMSE developed recommendations for streamlining the internal Agency review process. These measures were adopted and applied to the review of eleven final guidelines and eight proposed guidelines during 1982. The streamlined review procedures resulted in a significant saving of time. They insure that the time needed for internal Agency review will not be an impediment to compliance with the Court-ordered deadlines for proposing and promulgating all remaining effluent guidelines.

WATER QUALITY

Grants Assistance Programs

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Clean Lakes Program						
Abatement Control & Compliance	\$8,992.1		\$3,000.0		-\$3,000.0	
TOTAL	\$8,992.1		\$3,000.0		-\$3,000.0	
Control Agency Resource Supplementation (Section 106)						
Abatement Control & Compliance	\$51,338.3	\$40,845.6	\$54,200.0	\$24,000.0	-\$30,200.0	
TOTAL	\$51,338.3	\$40,845.6	\$54,200.0	\$24,000.0	-\$30,200.0	
Areawide Waste Treatment Management Resources						
Abatement Control & Compliance	\$0.5					
TOTAL	\$0.5					
Training Grants (Section 104)						
Abatement Control & Compliance	\$168.4		\$169.0		-\$169.0	
TOTAL	\$168.4		\$169.0		-\$169.0	
TOTAL:						
Abatement Control & Compliance	\$60,499.3	\$40,845.6	\$57,369.0	\$24,000.0	-\$33,369.0	
Grants Assistance Programs	TOTAL	\$60,499.3	\$40,845.6	\$57,369.0	\$24,000.0	-\$33,369.0

WATER QUALITY

Grants Assistance Programs

Budget Request

The Agency requests a total of \$24,000,000 under the Abatement, Control and Compliance appropriation, a decrease of \$33,369,000 from 1983. This total includes decreases from 1983 of \$30,200,000 for State water pollution control programs under Section 106, \$169,000 in Section 104 Training Grants and \$3,000,000 for the Clean Lakes program.

Program Description

Federal assistance to the States for water quality programs is covered in three programs: 1) Clean Lakes grants under Section 314, 2) control agency program grants under Section 106, and 3) training grants under Section 104.

Clean Lakes Program -- Section 314 of the Clean Water Act sets forth the principal administrative and technical requirements for developing a national program to enhance the quality of freshwater lakes.

Control Agency Resource Supplementation (Section 106)-- These grants supplement State resources for water pollution control programs. They are negotiated annually with 50 States, 7 territories, and 6 interstate compact agencies. Funds have been directed to cover a wide range of water quality programs, including permits, enforcement, monitoring, construction grants management, water quality planning and standards, wasteload allocations, nonpoint source control, pretreatment, oil and hazardous materials spill response, and other priority programs.

States also receive financial assistance for water quality program activities under Sections 205(g) and 205(j) of the Clean Water Act as reserves from their annual Construction Grants allotment. Primary funding is provided under Section 205(g) for construction grants management in delegated States and under Section 205(j) for water quality planning and standards activities.

Training Grants -- Training assistance is provided to institutions of higher education and other public or private agencies and institutions to meet professional manpower needs. Efforts in this area include professional graduate training, State agency fellowships, undergraduate training grants, curriculum development, and other special training projects in critical areas of water pollution control.

CLEAN LAKES PROGRAM

1984 Program Request

In 1984, the Agency requests no funds for the Clean Lakes Program. The 1983 Congressional add-on was intended to close down the Federal funding effort. In past years the Agency has developed and demonstrated lake restoration techniques and assisted States in classifying lakes, identifying the most suitable techniques for restoring the level of water quality needed to maintain or enhance use, and actually implementing cleanup and control projects. Since the Agency has provided guidance to the States on maintaining clean lakes, it believes that the States are now able to address lake restoration needs, along with other local priorities, under their water quality management programs.

1983 Program

The Agency is allocating, through a Congressional add-on, \$3,000,000 in Abatement, Control and Compliance to bring the program to an end as intended by the Congress and complete any Federal funding of existing Clean Lakes projects. The funds

provided will be allocated according to the following priority criteria: (a) additional funding would complete existing implementation projects; (b) would complete projects regardless of their present status; (c) would support in-lake restoration activities as opposed to watershed management projects; (d) would support lake projects close to a standard metropolitan statistical area; and (e) funding is appropriate and necessary.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$3,000,000 results from the following action:

-Congressional Action. (+\$3,000,000) The Congressional add-on to this activity of +\$3,000,000 to the Abatement, Control and Compliance appropriation was for the Clean Lakes Program.

1982 Accomplishments

In 1982, \$8,992,100 was obligated from the Abatement, Control and Compliance appropriation under the Clean Lakes Program to help complete 25 existing implementation projects. The funds provided were awarded according to the criteria outlined by the Congress, that is: (a) only existing implementation projects would be eligible for funding; (b) priority would be given to projects within a standard metropolitan statistical area; (c) priority would be for in-lake restoration activities; (d) additional funding would complete the project; and (e) certification of additional funding requests would be by the Regional and State offices.

CONTROL AGENCY RESOURCE SUPPLEMENTATION (SECTION 106)

1984 Program Request

In 1984, the Agency requests a total of \$24,000,000 for Section 106 grants under the Abatement, Control and Compliance appropriation. This represents a decrease of \$30,200,000 from the 1983 level. This reduction reflects the availability of funds under Sections 205(g) and 205(j) which will enable States to carry out priority activities such as revision of water quality standards, permits issuance, and enforcement. In addition, there will be a reduced need to provide funding for management and overhead activities in grant programs which will benefit from reduced Federal reporting and oversight requirements. At the beginning of 1984 approximately \$200 million will be available to States under Section 205(g). While the bulk of these funds will support construction grants management activities, they will be available as well to support programs that also receive funds through 106 grants. In 1984, when funds under the 106 program are combined with funds available under Sections 205(g) and 205(j), States will have available to them approximately \$139,000,000 to carry out various water quality activities.

State program activities primarily funded under Section 106 will continue to include National Pollutant Discharge Elimination System (NPDES) permitting, enforcement, associated ambient and source monitoring, nondelegated construction grants program activities, and State program administration. Construction grants management related activities will be funded under Section 205(g); the States may also use these funds for permitting and dredge and fill activities. Water quality standards reviews, wasteload analyses, and water quality management planning and associated monitoring will be funded primarily under Section 205(j).

Financial assistance to the States in 1984 will emphasize both phases of the water program strategy under the Clean Water Act. Technology based work will include issuance of permits for Best Available Technology Economically Achievable (BAT) and secondary treatment limits. The States will also develop water quality based effluent limits through identifying their priority water bodies, analyzing the attainability of their standards, performing total maximum daily load and waste load allocation calculations, issuing water quality based permits, and implementing nonpoint source controls where needed to meet designated uses.

Section 106 grants will continue to emphasize major NPDES permit reissuance, including BAT permits and permits needed to address problems in priority water bodies; enforcement, particularly in the area of municipal facilities compliance; and monitoring essential to support permits issuance and enforcement. Two State NPDES programs will be approved, bringing to 38 the number of States that have assumed NPDES delegation. Modifications of approved NPDES programs, including three new State pretreatment programs, five added Federal facility permitting programs, and 10 more State general permit programs, also are expected. The other States will continue to assist EPA with NPDES permits and enforcement.

1983 Program

In 1983, \$54,200,000, including a Congressional add-on of \$13,354,400, will be used for Section 106 grants under the Abatement, Control and Compliance appropriation. These funds will be matched by over \$90 million in State resources.

State activities primarily funded under Section 106 will include NPDES permitting, ambient and source monitoring of toxics and conventional pollutants, enforcement, nondelegated construction grants program activities, nonpoint source control programs management, and State programs administration. Delegated construction grants management related activities will be funded under Section 205(g). Water quality standards reviews, planning, and associated monitoring will be funded primarily under Section 205(j).

Increased 1983 resources for NPDES permitting, especially issuance and reissuance of BAT permits, will allow the States to reduce backlogs. Enforcement efforts also will be strengthened, with continued emphasis on municipal facilities compliance. States will continue to use Section 106 funds for monitoring essential to permits issuance and enforcement. States with critical nonpoint source problems will also continue to use Section 106 funds to initiate, where necessary, control programs directed to priority water bodies as a necessary adjunct to existing point source control programs.

During 1983, one more State NPDES program will be approved, bringing the total to 36; the other States will continue to assist EPA in many aspects of permits issuance. In addition, several States will be developing NPDES program modifications to assume pretreatment, Federal facility, and general permitting responsibilities. The States will issue or reissue 750 major discharger BAT permits, including toxics controls. Nearly 4500 State compliance inspections will be conducted and the States will take increasing responsibility for compliance activities. All States will develop analytical capabilities to support increased emphasis on water quality based permitting, toxics control, and requests for variances as well as strengthen their abilities to perform conventional pollutant wasteload analyses for major permits. An estimated 19 States will manage nonpoint source control programs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$13,354,400 results from the following action:

-Congressional Action. (+\$13,354,400) The Congressional add-on to this activity of +\$13,354,400 to the Abatement, Control and Compliance appropriation was for the State water grants under Section 106 of the Clean Water Act.

1982 Accomplishments

In 1982, \$51,338,400 was obligated for Section 106 grants under the Abatement, Control and Compliance appropriation, matched by over \$90 million in State resources. State activities funded under Section 106 included NPDES permitting, ambient and source monitoring of toxics and conventional pollutants, enforcement, oil and

hazardous materials spill response, nondelegated construction grants program activities, water quality standards reviews, nonpoint source control programs management, water quality planning, training, and State programs administration.

The States increased emphasis on NPDES permitting, especially major permit re-issuance and Best Available Technology permits. Thirty-five States with approved NPDES programs, an increase of two from the 1981 levels, issued and reissued more than 12,000 permits, including 700 major permits. Enforcement efforts were also increased, with emphasis on municipal facilities compliance. National reorientation of EPA water programs was reflected in 1982 State workplans for water quality standards reviews, which incorporated use attainability and site-specific criteria considerations. Overall monitoring costs were reduced by more effective focusing of resources on priority program needs. Section 106 support to nondelegated construction grants program activities was decreased significantly.

Approximately 700 major discharger permits were issued or reissued by the States, including permits for BAT and toxics; over 3500 compliance inspections were conducted and nearly 1600 enforcement actions were initiated, concentrating primarily on municipal facilities compliance. State NPDES programs were modified to include pretreatment programs and Federal facilities permitting. Twenty-five States were operating biological monitoring programs during 1982; about twenty States developed capabilities to perform conventional pollutant wasteload analyses for major permits. Fifteen States managed nonpoint source control programs based on completed water quality management plans.

Finally, a total of \$500 was obligated in 1982 from existing grant funds for water quality management planning under Section 208.

TRAINING GRANTS (SECTION 104)

1984 Program Request

We are requesting no funds for these grants in 1984, as EPA believes that the Federal government has fulfilled its commitment for the initial funding of these programs, responsibility for which should now be assumed by the States.

1983 Program

A Congressional add-on of \$169,000 in Abatement, Control and Compliance will be used to support environmental fellowships at 28 universities.

1983 Explanation of Changes from Budget Estimate

The net increase of +169,000 results from the following action:

-Congressional Action. (+169,000) The Congressional add-on to this activity of +169,000 to the Abatement, Control, and Compliance appropriation was for academic training.

1982 Accomplishments

In 1982, the Agency obligated \$168,400 under the Abatement, Control and Compliance appropriation. These funds were used to support environmental fellowships at 27 universities.

WATER QUALITY

Water Quality Strategies Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS) -----					
PROGRAM -----					
Dredge and Fill					
Salaries & Expenses	\$2,466.5	\$2,145.2	\$2,334.3	\$2,303.3	-\$31.0
Abatement Control & Compliance	\$207.6	\$344.9	\$344.9	\$344.9	
TOTAL	\$2,674.1	\$2,490.1	\$2,679.2	\$2,648.2	-\$31.0
Ocean Disposal Permits					
Salaries & Expenses	\$1,099.2	\$1,223.4	\$1,491.6	\$1,793.2	\$301.6
Abatement Control & Compliance	\$4,188.3	\$2,343.2	\$2,343.2	\$2,203.2	-\$140.0
TOTAL	\$5,287.5	\$3,566.6	\$3,834.8	\$3,996.4	\$161.6
Environmental Emergency Response & Prevention					
Salaries & Expenses	\$3,323.3	\$4,030.9	\$3,733.3	\$2,939.6	-\$793.7
Abatement Control & Compliance	\$2,196.0	\$1,593.0	\$1,601.0	\$1,832.0	\$231.0
TOTAL	\$5,519.3	\$5,623.9	\$5,334.3	\$4,771.6	-\$562.7
Standards & Regulations					
Salaries & Expenses	\$2,787.6	\$2,839.9	\$2,780.3	\$3,853.9	\$1,073.6
Abatement Control & Compliance	\$472.0	\$339.2	\$339.2	\$865.3	\$526.1
TOTAL	\$3,259.6	\$3,179.1	\$3,119.5	\$4,719.2	\$1,599.7
EPA Oil Spill Project					
Salaries & Expenses	\$1.9				
TOTAL	\$1.9				
TOTAL:					
Salaries & Expenses	\$9,678.5	\$10,239.4	\$10,339.5	\$10,890.0	\$550.5
Abatement Control & Compliance	\$7,063.9	\$4,620.3	\$4,628.3	\$5,245.4	\$617.1
TOTAL	\$16,742.4	\$14,859.7	\$14,967.8	\$16,135.4	\$1,167.6
Water Quality Strategies Implementation					

PERMANENT WORK YEARS -----

Dredge and Fill	68.3	55.3	55.3	52.3	-3.0
Ocean Disposal Permits	23.4	24.3	33.3	31.4	-1.9
Environmental Emergency Response & Prevention	78.4	82.3	82.3	62.6	-19.7
Standards & Regulations	58.3	55.9	61.6	75.9	14.3
EPA Oil Spill Project	.1				

WATER QUALITY

Water Quality Strategies Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
TOTAL PERMANENT WORKYEARS	228.5	217.8	232.5	222.2	-10.3
TOTAL WORKYEARS	-----				
Dredge and Fill	74.1	58.2	58.8	54.7	-4.1
Ocean Disposal Permits	29.7	29.1	38.9	39.5	.6
Environmental Emergency Response & Prevention	84.0	90.7	90.4	68.1	-22.3
Standards & Regulations	68.6	69.3	74.2	90.1	15.9
EPA Oil Spill Project	.1				
TOTAL WORKYEARS	256.5	247.3	262.3	252.4	-9.9

WATER QUALITY

Water Quality Strategies Implementation

Budget Request

The Agency requests a total of \$16,135,400 and 222.2 permanent workyears for 1984, an increase of \$1,167,600 and a decrease of 10.3 permanent workyears. Of the amount requested, \$10,890,000 will be for Salaries and Expenses and \$5,245,400 will be for Abatement, Control and Compliance.

Program Description

The water quality strategies implementation subactivity covers Dredge and Fill, Ocean Disposal Permits, Environmental Emergency Response and Prevention, and Standards and Regulations.

Dredge and Fill -- Major activities include review of individual and general permits, preapplication consultation, activities for Section 404(c) actions, early planning and review of Environmental Impact Statements, Regional assistance to States in planning and developing delegation proposals, as well as assistance and oversight to States which have assumed the 404 Program.

Ocean Disposal Permits -- The ocean disposal program includes the regulation of ocean disposal by outfalls and dumping, designation of disposal sites, development of ocean disposal policies, and participation in interagency programs that deal with the development and protection of ocean resources. The Agency's ocean disposal programs are authorized by the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 and the Clean Water Act, as amended, and are consistent with the Convention on Prevention of Marine Pollution by Dumping of Wastes and Other Matter, known as the London Dumping Convention (LDC).

To carry out ocean disposal permitting functions, the Administrator of EPA is authorized to regulate the disposition of all materials except dredged material, which is regulated by the Corps of Engineers (COE). MPRSA prohibits the transportation and dumping in ocean water of chemical, biological, and radiological warfare agents and high level radioactive materials. EPA has statutory responsibility for designating all ocean dumping sites, including those for dredged material.

Environmental Emergency Response and Prevention -- The objective of this program is to protect public welfare, property owners, and the environment from the hazards associated with accidental releases of oil and other petroleum products to navigable waters of the United States, as mandated by Section 311 of the Clean Water Act. The Agency shares responsibility for this program with the United States Coast Guard, which addresses those incidents in coastal areas and the Great Lakes.

Standards and Regulations -- This program includes development and publication of water quality criteria and standards regulations, and related guidance pursuant to Sections 303, 304(a) and 307(a) of the Clean Water Act. EPA publishes guidance on criteria for water quality, based on the latest scientific knowledge on the kind and extent of all identifiable effects of conventional and toxic pollutants on human health and aquatic life. Protocols are developed to provide scientific and technical guidance to States on methods for developing criteria which reflect site-specific conditions. EPA provides assistance to the States in applying these protocols. Assistance in the development and review of State water quality standards is provided to ensure that attainable uses and appropriate criteria are established. This program also includes Clean Lakes grant management.

DREDGE AND FILL

1984 Budget Request

The Agency requests a total of \$2,648,200 and 52.3 permanent workyears for this program, of which \$2,303,300 is for the Salaries and Expenses appropriation and \$344,900 is for the Abatement, Control and Compliance appropriation. This represents a decrease of \$31,000 and 3.0 permanent workyears from 1983 levels, made possible by increased efficiency through program reforms.

The major focus in 1984 will be to increase State involvement in the 404 program, whether through program transfer or, in some cases, through development of a formal role for States unable to accept program transfer in the future. In addition, the Agency expects to review over 9,000 Section 404 permits and 250 environmental impact statements with dredge or fill implications.

1983 Program

In 1983, the Agency is allocating a total of \$2,679,200 and 55.3 permanent workyears to this program, of which \$2,334,300 is for the Salaries and Expenses appropriation and \$344,900 is for the Abatement, Control and Compliance appropriation. In 1983, the Agency expects to complete work on clarifying the scope of the program. Continued emphasis is on State 404 program development, and the Agency anticipates that several States will undertake pilot programs with continuing support from EPA. EPA will also complete streamlining requirements to facilitate additional program transfers to the States. EPA will work to expand opportunities for State involvement in 404 activities. In addition, the Agency expects to review over 10,000 Section 404 permits and 300 environmental impact statements with dredge or fill implications.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$189,100 results from the following action:

-Reprogrammings. (+\$189,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$189,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,674,100 for this program, of which \$2,466,500 was for the Salaries and Expenses appropriation and \$207,600 was for the Abatement, Control and Compliance appropriation. In 1982, the 404 Program began development and implementation of program reforms identified by the Vice President's Task Force on Regulatory Reform, including program delegation to States, streamlined procedural arrangements with the Corps of Engineers, revisions to the Section 404(b)(1) Environmental Guidelines, and clarification of program scope. The major emphasis for the Dredge and Fill program was State 404 program development. Program development grants were made to eight States. In 1982, the program finalized the Section 404(b)(1) guidelines, as well as the streamlined procedural arrangements with the Corps. In addition, EPA initiated a review of the program in order to streamline requirements for transfer to the States. Other accomplishments included reviewing over 10,000 Section 404 permits and over 300 environmental impact statements with dredge or fill implications.

OCEAN DISPOSAL PERMITS

1984 Program Request

The Agency requests a total of \$3,996,400 and 31.4 permanent workyears for this program, of which \$1,793,200 is for the Salaries and Expenses appropriation

and \$2,203,200 is for the Abatement, Control and Compliance appropriation. This is an increase of \$301,600 for Salaries and Expenses reflecting increased workyear costs and a decrease of 1.9 permanent workyears. The decrease of \$140,000 in Abatement, Control and Compliance reflects the completion of court-ordered environmental impact statements and consequent diminished site designation activity.

The 1984 program includes the revision of the ocean dumping regulation and criteria, which will provide a more comprehensive, scientifically supported ocean disposal program. Activities scheduled for 1984 include the following:

Permit Issuance: This program will review, process, and issue approximately 60 permit applications for ocean disposal. This activity will include evaluating and characterizing all waste samples on a case-by-case basis. EPA will review approximately 80 dredged material disposal permits, evaluate requests by the Corps of Engineers for waivers, review permit applications, and issue research and special permits for incineration of wastes at sea.

Site Designation: This program will survey three potential disposal sites for site designation purposes and eight existing sites to determine the impacts of dumping. This activity will provide more refined scientific information on which to base site designations. Environmental Assessments will be prepared for ocean disposal sites. The Agency will designate new ocean incineration sites, evaluate existing sites through compliance monitoring, and initiate criteria development for general incineration permits.

Criteria Development: This program will develop protocols and specific criteria to be used to examine the scientific parameters for the site selection and designation process and assessment of permittee wastes. The Agency will examine four NOAA predictive indices which measure environmental impacts to determine the most relevant and applicable indices in regard to ocean dumping. These indices will be used to revise ocean dumping criteria and methods for interpreting them. The methodologies will be verified by field testing. The new ocean dumping criteria will then be ready to be used as tools to assess "unreasonable degradation" and "irreparable harm" and to scientifically determine the acceptable environmental impact in a discharge or disposal area.

User Fee System: If appropriate legislation is approved by Congress in 1983, the Agency will implement a user fee system. Permit processing fees would recover the cost of reviewing permit applications. User fees would be collected to recover costs related to designating sites and compliance monitoring for industrial and municipal waste disposal.

Guidance Development and Statutory Reports: The program will issue guidance on the balancing of environmental and economic impacts of alternative disposal options. It will also issue an Annual Report to Congress pursuant to MPRSA and the LDC.

1983 Program

In 1983, the Agency is allocating a total of \$3,834,800 and 33.3 permanent workyears to this program, of which \$1,491,600 is for the Salaries and Expenses appropriation and \$2,343,200 is for the Abatement, Control and Compliance appropriation. The majority of the extramural resources are for site surveys, development of environmental assessments, and site designation.

Regulatory/Legislative Activities: EPA will publish the modification to the final ocean dumping regulation to implement the City of New York decision and to revise and simplify the regulations. EPA will complete the design of a user fee system, and propose legislation to the Congress.

Permit Issuance: EPA will review, process, and issue approximately 50 permit applications for ocean disposal. This will include evaluating and characterizing

all waste samples provided by facilities applying for permits. The waste characteristics will be examined for suitability of ocean disposal at existing sites on a case-by-case basis. The Agency will review approximately 75 dredged material disposal permits, evaluate requests by the Corps of Engineers for waivers, review permit applications, and issue research and special permits for incineration of wastes at sea.

Site Designation: The Agency will survey and monitor eight disposal sites to determine impacts of dumping, including more refined scientific information on which to base site designations. Environmental assessments will be prepared on ocean disposal sites.

Criteria Development: The Agency will test four wastes to determine their suitability for ocean disposal, and prepare a technical guidance document on the application and interpretation of predictive assessment techniques developed in the laboratory. EPA will update the Section 403(c) handbook for ocean discharge criteria to include additional industrial dischargers.

Guidance Development and Statutory Reports: The Agency will issue program guidance, appropriate controls, and procedures for the issuance of NPDES permits for offshore oil and gas and other offshore industries. This activity will include the development of a data base to evaluate the impact of oil and gas drilling on receiving waters. The data base will establish the basis for the issuance of general permits. The Agency will also initiate the development of guidance on the balancing of environmental and economic impacts of alternative disposal options, and issue the Annual Report to Congress pursuant to MPRSA and LDC.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$268,200 results from the following actions:

-Congressional Action. (+\$247,600) This increase includes +\$247,600 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$20,600) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$20,600 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982 this program obligated \$5,287,500. Of this amount, \$1,099,200 was for the Salaries and Expenses appropriation and \$4,188,300 for the Abatement, Control and Compliance appropriation. This included support for surveys of ocean disposal sites, the development of court-ordered Environmental Impact Statements (EISs), and site designation. The program accomplished the following.

Regulatory/Legislative Activities: EPA initiated the revision of the ocean dumping regulation in response to a 1981 decision of United States District Court for the Southern District of New York, which ruled that the Agency must consider the comparative risks of land- versus ocean-based disposal before precluding the use of the ocean medium. The review of the ocean dumping regulation focused on the development of waste characterization and on basic physical measurements. EPA also conducted analyses on the feasibility and content of a user fee system.

Permit Issuance: The Agency reviewed, processed, and issued 38 permit applications for ocean disposal and reviewed 81 Corps of Engineers dredged material disposal permits for environmental considerations pursuant to MPRSA. EPA also issued one research permit for incineration at sea.

Site Designation: During 1982 EPA produced EISs designating three dredged material disposal sites for Corps of Engineers projects, an ocean dumping site for municipal sewage sludge disposal, and a site for incineration of wastes at sea. The Agency worked with NOAA to collect and analyze data related to ocean dumping, especially for use in designating suitable sites, for ocean industries operations, and for monitoring existing sites.

Guidance Development and Statutory Report: EPA issued an Annual Report to Congress pursuant to MPRSA and LDC, issued draft program guidance and appropriate controls and procedures for the issuance of NPDES permits for offshore oil and gas and other offshore industries, and updated the Section 403(c) handbook for ocean discharge criteria to include additional industrial dischargers.

ENVIRONMENTAL EMERGENCY RESPONSE AND PREVENTION

1984 Program Request

The Agency requests a total of \$4,771,600 and 62.6 permanent workyears for this program, of which \$2,939,600 will be for Salaries and Expenses and \$1,832,000 will be for Abatement, Control, and Compliance. This reflects a decrease of \$793,700 and an increase of \$231,000 respectively. The net decrease of \$562,700 reflects the decreased need for a Federal role as States gain experience.

The Agency has a 24-hour capability to respond to notifications of accidental spills or threat of releases. Federal removal is directed at major incidents where the responsible party is unidentifiable, refuses to clean up, or is incapable of providing timely and adequate removal and where the States and local authorities lack the necessary expertise, equipment, or funding.

Spill notifications will be processed to determine what, if any, response is required. Response operations will be directed at 120 major spills to ensure adequate response. Regions will respond on-scene at 400 removals conducted by responsible parties or State and local authorities to ensure adequate response.

Removal by responsible parties and State and local governments is also monitored by the Agency to ensure that the response is adequate. Federal regulations require the implementation of a Spill Prevention, Control, and Countermeasure (SPCC) plan at oil storage facilities and transfer points that could reasonably be expected to spill a significant amount of oil into the waters of the United States. Regional staff, with assistance from contractor personnel, conduct compliance inspections at selected non-transportation-related (NTR) facilities included in the SPCC program, in an effort to reduce the frequency and volume of releases that occur.

The Agency also maintains an Environmental Response Team (ERT) to provide Regional and State personnel with response training and on-site technical and operational assistance at complex emergency incidents. The ERT is staffed by personnel with a high degree of expertise in the areas of spill control and removal, spill sampling and analysis techniques, and damage assessments.

Regional response capability is augmented through the Technical Assistance Team (TAT) contract. This contract provides contractor workyears to assist Regional staff and the ERT in responding to Section 311 spills and environmental emergencies.

An estimated 2,000 Spill Prevention Control and Countermeasure (SPCC) inspections will be conducted at non-transportation-related facilities. The Environmental Response Team will have the resources and expertise to provide special on-scene advice at unusually complex spills.

1983 Program

In 1983, the Agency is allocating a total of \$5,334,300 and 82.3 permanent workyears to this program, of which \$3,733,300 is for the Salaries and Expenses appropriation and \$1,601,000 is for extramural purposes under the Abatement, Control, and Compliance appropriation.

The Agency is maintaining its field response program. Headquarters will ensure overall management of the program and the Regions will be responsible for managing response actions. The oil component of the Environmental Response Team will provide special engineering and technical advice at an estimated 10 incidents. Regional personnel will be available on a 24 hour basis to respond to the estimated 7,000 notifications received by the National Response Center of accidental releases of oil and other petroleum products. The Agency will respond on-scene at 400 removals undertaken by responsible parties or State/local authorities and will direct removals at 120 major oil incidents. An estimate 2,000 SPCC inspections will be conducted at NTR facilities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$289,600 results from the following action:

-Reprogrammings. (-\$289,600) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$297,600 to the Salaries and Expenses appropriation and a net increase of +\$8,000 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$5,519,300 for this program, of which \$3,323,300 was for the Salaries and Expenses appropriation and \$2,196,000 was for extramural purposes under the Abatement, Control, and Compliance appropriation. The Agency's Technical Assistance Team contract provided 20 contract workyears to assist Regional staffs in directing removals at 120 major oil spills, responding on-scene at 450 non-Federally-funded incidents, and conducting over 1,700 SPCC inspections at NTR facilities. In addition, Regional offices received and screened over 7,000 notifications of oil spill releases.

STANDARDS AND REGULATIONS

1984 Program Request

In 1984, the Agency requests a total of \$4,719,200 and 75.9 permanent workyears. This amount will include \$3,853,900 for the Salaries and Expenses appropriation and \$865,300 for the Abatement, Control and Compliance appropriation. This is an increase of \$1,073,600 and 14.3 permanent workyears in Salaries and Expenses and an increase of \$526,100 in Abatement, Control and Compliance. The increase reflects additional work in the Regions to provide technical assistance to the States in interpreting and implementing procedures to define water quality criteria. The criteria are incorporated by the States in their water quality standards.

No funds are requested for management of Clean Lakes grant projects. The Agency expects to complete all remaining Clean Lakes grant projects in 1983, or that the States will assume these responsibilities due to the local nature of the projects.

Water quality standards are the basis for establishing pollution abatement efforts needed to maintain and enhance ambient environmental conditions in the Nation's waters. In 1984, the Agency will de-emphasize national criteria development activities, which are nearing completion. The program will work to increase

State flexibility to set economically and environmentally attainable standards and in the application of procedures to set criteria at levels which reflect local environmental conditions. The Agency will implement the final rule on water quality standards and will field test and revise guidance to reflect the development of new or refined procedures for setting water quality standards.

These procedures cover the analyses of environmental factors affecting the designated uses of water bodies. The Agency will adapt, test, and validate protocols to develop site-specific criteria for water bodies, and will assist the States in the use of these protocols. EPA will also review State-initiated revisions to current water quality standards and assist the States in resolving inconsistent or incompatible water quality standards on interstate and international waters.

Headquarters will evaluate Regional and State water quality standards programs for application of new policies, and develop and field test technical guidance and site-specific criteria and standards for estuaries and marine waters. Assistance will be provided to the States to modify and adapt freshwater protocols for use on marine waters.

The Agency will also continue to examine and improve the scientific basis of the criteria guidance issued under Section 304(a) of the CWA, and develop specific criteria to be used as a basis for modifying the Section 307(a) toxic pollutant list. The Agency will also refine toxicological testing procedures for pollutants arising from dredge and fill activities.

1983 Program

In 1983, the Agency is allocating a total of \$3,119,500 and 61.6 permanent workyears for this program, including \$2,780,300 for Salaries and Expenses and \$339,200 for Abatement, Control and Compliance. Major accomplishments planned for 1983 include the promulgation of a revised water quality standards regulation, field testing the use of guidance on setting water quality standards, assistance to the States in applying site-specific criteria procedures, development of site-specific criteria for estuaries and marine waters, and the transfer of Clean Lakes Program responsibilities to State and local agencies.

Program objectives include assisting the Regions in reviewing State-adopted standards and in resolving questions of inconsistent or incompatible water quality standards on interstate and international waters. The Agency will continue work to develop criteria for making recommendations on the toxicity of various pollutants on aquatic organisms, and will continue to improve the scientific basis of the criteria guidance. In addition the Agency is formulating and making action recommendations on the modification of the Section 307(a) list of toxic pollutants. EPA will propose appropriate revisions to the Section 404(B)(1) dredge and fill guidelines to comply with instructions from the President's Task Force on Regulatory Reform.

During the last year of Clean Lakes management, the Agency will review and approve grant applications for the completion of existing lake restoration projects, and will continue the transfer of Clean Lakes Program responsibilities to the States.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$59,600 results from the following actions:

-Congressional Action. (+\$50,800) This increase includes +\$50,800 of the Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$110,400) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$110,400 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$3,259,600 and 58.3 permanent workyears. Of this amount \$2,787,600 was for the Salaries and Expenses appropriation and \$472,000 for the Abatement, Control and Compliance appropriation. The contract resources were used to review pollutants on the Section 307(a) list, to prepare criteria documents, develop and field test site-specific water quality criteria modification procedures, test toxicity procedures for dredged material, prepare a proposed water quality standards regulation, assist Regions and States in conducting use attainability analyses, and in determining the economic attainability of water quality standards.

The program also developed the revisions to the water quality standards regulation, assisted States in conducting nine case studies on use attainability guidance to reevaluate existing stream uses by considering the environmental and economic impact of established uses, and developed site-specific criteria development methodology for field testing and application in 15 States. The Agency continued to develop criteria for making recommendations on the toxicity of eight pollutants on aquatic organisms.

EPA Headquarters assisted Regions in reviewing State adopted standards and in resolving inconsistent standards involving interstate and international waters. The Agency reviewed environmental status of estuaries in relation to their economic importance as a national resource. Additional work included publication of an Advanced Notice of Proposed Rule Making (ANPRM) to identify alternative approaches to the Section 404(B)(1) dredge and fill guidelines to comply with the program reforms recommended by the President's Task Force on Regulatory Reform.

EPA also provided technical review for 30 Clean Lakes project completion requests and awarded grants to 25 existing implementation projects, and continued the transfer of Clean Lakes Program responsibilities to the Regions and States.

WATER QUALITY

Water Quality Monitoring & Analysis

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

Water Quality						
Monitoring & Analysis						
Salaries & Expenses	\$7,566.4	\$8,791.7	\$8,516.7	\$7,896.3	-\$620.4	
Abatement Control & Compliance	\$634.5	\$375.7	\$345.1	\$595.1	\$250.0	
TOTAL	\$8,200.9	\$9,167.4	\$8,861.8	\$8,491.4	-\$370.4	
TOTAL:						
Salaries & Expenses	\$7,566.4	\$8,791.7	\$8,516.7	\$7,896.3	-\$620.4	
Abatement Control & Compliance	\$634.5	\$375.7	\$345.1	\$595.1	\$250.0	
Water Quality	TOTAL	\$8,200.9	\$9,167.4	\$8,861.8	\$8,491.4	-\$370.4
Monitoring & Analysis						
PERMANENT WORKYEARS						

Water Quality	154.2	140.6	140.3	134.3	-6.0	
Monitoring & Analysis						
TOTAL PERMANENT WORKYEARS	154.2	140.6	140.3	134.3	-6.0	
TOTAL WORKYEARS						

Water Quality	186.2	181.0	181.2	173.9	-7.3	
Monitoring & Analysis						
TOTAL WORKYEARS	186.2	181.0	181.2	173.9	-7.3	

WATER QUALITY

Water Quality Monitoring and Analysis

Budget Request

The Agency requests \$8,491,400 and 134.3 permanent workyears for 1984, a decrease of \$370,400 and 6.0 permanent workyears from 1983. This request includes \$7,896,300 for the Salaries and Expenses appropriation and \$595,100 for extramural purposes under the Abatement, Control and Compliance appropriation.

Program Description

This subactivity develops water quality monitoring strategies, systems and procedures used to identify the biological and chemical measures of environmental quality. These measures are necessary for assessing local water quality and determining cost-effective measures required to meet local water quality objectives. These are primarily State activities, supported by EPA. They include water quality sampling and analysis to identify water quality problems, their causes and relative severity and technical studies to support the water quality management program, including use attainability analyses. Throughout, the program emphasizes the effective use of local, State, and Federal resources for collecting, analyzing and interpreting monitoring data.

The program develops procedures to assist the States in using water quality data in technical analyses including total maximum daily loads (TMDLs) and waste-load allocations (WLAs). These analyses support the development and implementation of specific discharge effluent limitations and controls. This approach ensures that pollution controls necessary to meet local water quality objectives are applied in permits issued to industrial and municipal dischargers.

This program also manages national efforts to perform environmental benefit assessments of water regulations and standards for inclusion in Regulatory Impact Analysis (RIAs) and for fulfilling related requirements of Executive Order 12291. This includes technical evaluations of the environmental exposure and risks associated with the presence of key pollutants in surface waters.

Similarly, the program provides national guidance and technical assistance for State efforts to analyze and report on their water quality and to identify priority problem areas and needed State action to implement required controls. These efforts also serve as an important source of information on water quality and program planning for the State continuing planning process (CPP) as required under Section 303(e) of the Clean Water Act (CWA). EPA's responsibility under Section 305(b) is to consolidate the information provided by the States into a national water quality report which discusses water quality as well as national program management trends. The program provides user technical assistance for ADP systems used to manage State and EPA water quality information for these types of analyses.

WATER QUALITY MONITORING AND ANALYSIS

1984 Program Request

In 1984, the Agency requests a total of \$8,491,400 and 134.3 permanent workyears for this program, of which \$7,896,300 is for the Salaries and Expenses appropriation and \$595,100 is for the Abatement, Control and Compliance appropriation. This is a decrease of \$620,400 in Salaries and Expenses and an increase of \$250,000 in Abatement, Control and Compliance. The decrease of 6.0 permanent workyears reflects a reduction in Regional resources to assist States in revising their continuing planning processes and monitoring programs. The majority of the

States will have completed this work in 1983. The increase reflects support for the water quality based approach, specifically for the development of TMDL/WLA guidance. Major accomplishments planned for 1984 include the following.

EPA will prepare an annual update of program guidance for monitoring and for preparation of total maximum daily loadings and waste load allocations (TMDL/WLA).

The program will continue its development of technical guidance documents to support the water quality-based approach (developed in concert with EPA Regional offices, other Federal agencies, States, and industry and environmental groups). These documents include: priority waterbody identification and ranking; improved screening techniques for States to follow in setting priorities; step-by-step user guidance for TMDLs and WLA models; local cooperative sampling and analysis programs; quality assurance; and measurement of water quality results. The program will also issue updated guidance describing the relationship between Section 303(d) waterbody priorities and key annual program priorities. Technical information on biological screening techniques will be made available for States to use in setting priorities.

The program will also develop a step-by-step user guidance for applying the WLA models developed by ORD and contractors so they can be used under varying site-specific conditions. The Agency will evaluate variability of selected treatment processes and develop guidance for incorporating results in WLA calculations. A data base for WLA parameters will be assembled (e.g., decay rates, temperature, pH, alkalinity) and model limitations evaluated in order to provide practical technical guidance for key steps in the TMDL/WLA process.

A program for State assistance in conducting WLAs and TMDLs will be established. Consultation assistance to all States will be continued and direct assistance on specific sites will be initiated where requested by about 10 States in order to contend with complex or controversial situations. Assistance will continue to focus primarily on conventional pollutants, with an initial effort on toxic pollutants in some areas. An additional 16 States will be assisted in revising their continuing planning processes to reflect the need for improved monitoring and WLAs in State programs. Assistance will be granted to States, as requested, to help coordinate local cooperative monitoring programs.

The Regions will review the water quality justification for advanced treatment construction grants projects. Included in this review will be 132 projects smaller than \$3,000,000 in size. An evaluation of the water quality justification of approximately 20 advanced treatment projects, over \$3,000,000 in cost, will also be conducted in Headquarters. The monitoring data and ambient water quality analyses supporting State proposed water quality standards revisions will be reviewed.

Other activities include technical assistance to States in performing water quality analyses for the States' 1984 Section 305(b) reports, development of an initial strategy for marine and estuarine monitoring activities, and assistance to approximately 25 States in using the STORET System to support the water quality-based approach.

1983 Program

In 1983, the Agency is allocating a total of \$8,861,800 and 140.3 permanent workyears for this program, of which \$8,516,700 is for the Salaries and Expenses appropriation and \$345,100 is for the Abatement, Control and Compliance appropriation. A major focus in 1983 is the continued development and implementation of a water monitoring program which will improve and upgrade water quality data collection, analysis, and reporting for the States in order to define uses. Additionally, EPA is assisting in developing supporting water quality criteria and standards and will ultimately measure the results of clean-up programs.

EPA is proposing and promulgating basic regulations governing water quality monitoring, priority waterbody identification, conduct of total maximum daily loads and wasteload allocations, and other components of the water quality-based approach, implementing Sections 303(d) and 303(e) of the CWA.

As a step toward developing a monitoring strategy for marine and estuarine waters, the program is evaluating existing marine and estuarine monitoring programs and sampling and analysis protocols.

To improve State monitoring programs, EPA is assisting States as they revise their continuing planning processes. Efforts will focus on improving biological monitoring efforts and on redirecting fixed stations to collect data needed to support water quality decisions. EPA will also develop guidance for applying biological principles in specific Regions and States (based upon the Aquatic Life Survey conducted in 1982).

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$305,600 results from the following action:

-Reprogrammings. (-\$305,600) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$275,000 to the Salaries and Expenses appropriation and a net decrease of -\$30,600 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$8,200,900. Of this amount \$7,566,400 was for the Salaries and Expenses appropriation and \$634,500 was for the Abatement, Control and Compliance appropriation. Major accomplishments included the issuance of the Aquatic Life Survey, a statistically based survey of the aquatic life (fisheries) in U.S. flowing waters, and completion of the Section 305(b) report.

Additional accomplishments included analysis of toxic pollutant samples in order to evaluate exposure, fate, and effects of priority pollutants. Emphasis was placed on evaluating specific geographic areas ("hot spots") with projected toxic pollutant problems.

The program issued a basic user-oriented program guidance for water monitoring and for conducting TMDLs/WLAs as an aid to States in updating their continuing planning process under the water quality management regulation.

The monitoring program also evaluated the water quality benefits for 15 advanced treatment projects, issued policy guidance to States for preparing biennial Section 305(b) reports, and operated and maintained the STORET System for 600 users in Regions, States and other Federal Agencies.

WATER QUALITY

Municipal Source Control

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Municipal Waste Treatment Facility Construction						
Salaries & Expenses	\$16,430.4	\$14,291.2	\$16,380.8	\$15,296.9	-\$1,083.9	
Abatement Control & Compliance	\$3,614.3	\$1,904.4	\$4,529.6	\$2,054.4	-\$2,475.2	
TOTAL	\$20,044.7	\$16,195.6	\$20,910.4	\$17,351.3	-\$3,559.1	
Corps of Engineers Abatement Control & Compliance	\$17,452.5	\$17,387.4	\$20,187.4	\$16,000.0	-\$4,187.4	
TOTAL	\$17,452.5	\$17,387.4	\$20,187.4	\$16,000.0	-\$4,187.4	
Waste Treatment Operations & Maintenance						
Salaries & Expenses	\$1,258.5	\$1,693.9	\$1,419.6	\$1,363.9	-\$55.7	
Abatement Control & Compliance	\$203.6					
TOTAL	\$1,462.1	\$1,693.9	\$1,419.6	\$1,363.9	-\$55.7	
NEPA Compliance - Municipal Wastewater Treatment Facility Construction						
Salaries & Expenses	\$2,993.9	\$2,282.1	\$2,606.2		-\$2,606.2	
Abatement Control & Compliance	\$3,374.5	\$6,210.6	\$6,210.6		-\$6,210.6	
TOTAL	\$6,368.4	\$8,492.7	\$8,816.8		-\$8,816.8	
TOTAL:						
Salaries & Expenses	\$20,682.8	\$18,267.2	\$20,406.6	\$16,660.8	-\$3,745.8	
Abatement Control & Compliance	\$24,644.9	\$25,502.4	\$30,927.6	\$18,054.4	-\$12,873.2	
Municipal Source Control	TOTAL	\$45,327.7	\$43,769.6	\$51,334.2	\$34,715.2	-\$16,619.0

PERMANENT WORKYEARS

Municipal Waste Treatment Facility Construction	422.8	331.7	352.6	323.3	-29.3
Waste Treatment Operations & Maintenance	31.9	37.4	36.0	35.4	-.6

WATER QUALITY

Municipal Source Control

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
NEPA Compliance - Municipal Wastewater Treatment Facility Construction	82.0	67.0	67.0		-67.0
TOTAL PERMANENT WORKYEARS	536.7	436.1	455.6	358.7	-96.9
TOTAL WORK YEARS					
Municipal Waste Treatment Facility Construction	492.6	400.1	414.9	395.0	-19.9
Waste Treatment Operations & Maintenance	32.7	39.0	38.1	36.0	-2.1
NEPA Compliance - Municipal Wastewater Treatment Facility Construction	85.0	67.0	69.5		-69.5
TOTAL WORKYEARS	610.3	506.1	522.5	431.0	-91.5

WATER QUALITY

Municipal Source Control

Budget Request

The Agency requests a total of \$34,715,200 and 358.7 permanent workyears for 1984, of which \$16,660,800 is under the Salaries and Expenses appropriation and \$18,054,400 is under the Abatement, Control and Compliance appropriation. This is a decrease of \$3,745,800 in Salaries and Expenses, \$12,873,200 in Abatement, Control and Compliance, and 96.9 permanent workyears. These decreases primarily reflect progress in delegating the construction grants program and the the transfer of NEPA compliance resources to the Interdisciplinary medium.

Program Description

This program provides resources for management of most of the Construction Grants program, including direct program management and project management related activities not delegated to States.

Since 1977, EPA has negotiated Section 205(g) delegation agreements with most States to provide for phased transfers of authority and responsibility. By the end of 1984, a total of 49 States are expected to have signed delegation agreements with 36 of these considered fully delegated.

EPA will continue to exercise project management responsibilities in the remaining nondelegated and partially delegated States and Territories; to maintain Federal responsibilities for ensuring effective, orderly use of construction grant funds; to ensure program accountability in meeting statutory goals; and to work with the States in implementing results-oriented program management. With the continuing assistance of the U.S Army Corps of Engineers in priority construction management activities, EPA is continuing to reorient its role and resources to overall program management, State training, and State management assistance.

For budgetary purposes, Construction Grants Program Management is divided into the following four program elements:

Municipal Waste Treatment Facility Construction -- This program includes most of the day-to-day management activities associated with the Construction Grants program in Headquarters and Regional Offices.

Corps of Engineers -- This program covers a range of construction management related activities assigned to the Corps of Engineers under an interagency agreement to assure the technical and fiscal integrity of waste water treatment project construction. It includes only Abatement, Control and Compliance resources supporting the agreement.

Waste Treatment Operations and Maintenance -- This program involves development of State programs to ensure that Publicly Owned Wastewater Treatment Works (POTWs) meet effluent requirements during their first year of operation. It also provides construction grants program support in implementing the Agency's National Municipal Policy.

NEPA Compliance- Municipal Wastewater Treatment Facility Construction -- EPA is responsible for preparing its own Environmental Impact Statements (EISs) or, alternatively, determining findings of no significant impact on municipal wastewater treatment grant actions to assure that new facilities with Federal funding are planned, constructed, and operated pursuant to Section 511 (c) of the Clean Water Act and the National Environmental Policy Act (NEPA). These activities and supporting resources for 1984 are combined with New Source EIS Preparation and appear in the Interdisciplinary medium.

MUNICIPAL WASTE TREATMENT FACILITY CONSTRUCTION

1984 Program Request

In 1984, the Agency requests \$17,351,300 and 323.3 permanent workyears for this activity, including \$15,296,900 under the Salaries and Expenses appropriation and \$2,054,400 under the Abatement, Control, and Compliance appropriation. The decrease of 29.3 permanent workyears and \$3,559,100 primarily reflects reduced EPA staffing needs due to program delegation to the States. In addition, the Agency is not requesting 1984 resources for Headquarters Advanced Treatment project reviews, which had been added to the Agency's 1983 budget by the Congress; the Agency will operate these responsibilities within the requested level. Finally, the Agency is not requesting funds to be allocated to States and institutions to support development of training of local personnel in the operation of municipal treatment facilities. This training has promoted State self-sufficiency and improved municipal treatment facilities compliance.

With a proposed 1984 construction grants appropriation of \$2,400,000,000, EPA expects to award 597 grants resulting in 4,764 active projects at year's end. Approximately 1,200 projects are expected to complete construction during the year.

Of the 49 States (including Puerto Rico) with signed delegation agreements expected in 1984, a total of 36 States will be fully delegated (including assistance provided by the Corps of Engineers), an increase of 20%, or six, over 1983. The Agency expects this level of delegation to continue essentially unchanged for the near future. Based on this assumption, the program may be considered as essentially fully delegated. In 1984, States will provide 2,140 workyears or 68% of the total management staffing, the Corps of Engineers 14% and EPA 18%.

With these resources, EPA will exercise project management-related responsibilities in the remaining nondelegated States and Territories. EPA will also work with the States in targeting construction grants funds to priority water quality needs; selecting appropriate technologies; assuring that plants are within communities' financial capabilities and have the capacity for becoming self-sustaining; completing and closing out projects as quickly as possible; ensuring effective facilities construction; ensuring orderly grant obligations and outlays; and conducting shared EPA, State, and Corps of Engineer activities.

Using a number of water quality-related data bases and computerized analytic capabilities developed in 1982 and 1983, EPA will work with States to implement comprehensive, systematic, water quality based approaches for identifying construction needs, improving priority list development, and making water quality needs based funding decisions.

Since 1976, EPA's value engineering requirements have resulted in savings of over \$235 million. In 1984, EPA will issue consolidated value engineering guidance emphasizing life cycle and energy cost considerations. Regions will review 132 proposed Advanced Treatment (AT) projects, referring those with over \$3 million in incremental costs to Headquarters for review and concurrence. Based upon performance and cost evaluations of existing AT facilities, EPA will issue policy and accompanying guidance on selection and use of appropriate, cost-effective AT technologies. Through 1982, EPA saved \$826,000,000 through the AT review process. EPA will also work with States and municipalities in developing procedures to ensure that they are able to plan, construct, and operate self-sustaining treatment works.

The innovative and alternative technologies program will continue its emphasis on delegation to States and implementation of a technical information system to assure quick utilization of advances in technology. Increased emphasis will be placed on use of field testing and post-construction evaluation of operating projects. Major design, process, or operations and maintenance problems will be

identified and solutions suggested; a clearinghouse will be established to ensure design feedback to engineering firms, States, and municipalities. EPA will work with States and municipalities in resolving sludge management problems using the multimedia sludge management guidance developed in 1983, including selection of appropriate technologies. Field assistance will continue to be provided to small communities on treatment and collection alternatives and small flows management. Construction grants guidance documents will be updated as needed to continue implementing the 1981 Amendments. EPA will eliminate all remaining backlogs by closing out approximately 1,500 projects. EPA will also ensure that project completion and audit resolution backlogs do not recur and will continue to resolve audit exceptions within six months of audit completion.

EPA, with the Corps of Engineers, will also continue efforts to ensure project integrity and prevent waste, fraud, or abuse. EPA will conduct approximately 125 evaluations of major projects under construction to minimize potential for construction and operations problems and, in conjunction with other offices, investigate allegations or evidences of waste, fraud, or mismanagement, taking appropriate corrective actions.

The construction grants program will evaluate waste water treatment needs in communities which have received Section 301(h) marine discharge waivers to review current and proposed construction and identify necessary changes.

1983 Program

In 1983, the Agency is allocating \$20,910,400 and 352.6 permanent work-years for this activity, including \$16,380,800 under the Salaries and Expenses appropriation and \$4,529,600 under the Abatement, Control and Compliance appropriation.

With a 1983 construction grants appropriation of \$2,430,000,000 EPA expects to award 771 construction grants resulting in 6,446 active projects at year's end. Approximately 1,136 projects are expected to complete construction during the year.

Three additional States are expected to sign initial Section 205(g) delegation management agreements, bringing the total to 49 delegated States. Of these States, 30 are expected to have assumed full responsibility for managing the program, an increase of nine over 1982. In 1983, States are expected to commit 2,078 workyears, or 64% of the total construction grants staffing, the Corps of Engineers 17% and EPA the remaining 19%.

In 1983, EPA will ensure that construction grants funds are targeted to identified water quality and public health needs; projects are technologically appropriate and within the financial capability of the communities served; appropriate Advanced Treatment funding decisions are made; projects are expeditiously completed and closed out; grant obligation and outlay projections are met; and optimum delegation of the program is achieved. EPA will also continue to exercise project management responsibilities in nondelegated or, as appropriate, in partially delegated States.

Construction grants guidance will continue to be updated to reflect regulatory reforms and legislative changes. EPA will publish a national financial capability policy and accompanying guidance. This policy will require applicants to demonstrate financial and management capability to construct, operate, and maintain proposed treatment works prior to receiving a construction grant and to implement user charge systems mandated by the 1981 Amendments. Guidance will be issued to help States complete modifications to their priority systems and lists, incorporating additional water quality criteria. Finally, EPA will allocate funds provided in the Congressional add-on to States and institutions to support development of State self-sufficiency and improved municipal treatment facilities compliance.

Increased emphasis will be placed on documenting innovative and alternative technologies, disseminating information on successful and unsuccessful treatment processes, and delegating review and approval responsibility for these projects to States. The Agency will continue to address the problems of small communities by issuing guidance on comparative costs of alternate treatment works, and by continuing work with communities to select effective, lower cost treatment processes.

Based, on the 1981 Amendments, a revised secondary treatment regulation will be issued, broadening the definition of eligible secondary treatment processes. Accompanying technical information and guidance will provide criteria for identifying affected facilities and implementing the technologies specified in the Amendments. EPA will issue Advanced Treatment (AT) Review policy and guidance to ensure that funded AT projects will significantly improve water quality, that reasonable benefits can be demonstrated, and that funding decisions are coordinated with State water quality standards reviews. Regions will review 167 AT projects, forwarding to Headquarters those projects with incremental costs over \$3 million. Staff will also review Marine Combined Sewer Overflow projects to be funded with the \$30,000,000 Congress provided in 1983.

EPA will eliminate all remaining project completion and audit resolution backlogs. All project completions will be referred to audit and all audit issues resolved within six months of project and audit completion.

During 1983, EPA and the Corps of Engineers will continue intensive efforts to ensure construction integrity; prevent waste, fraud, and abuse; and respond effectively to allegations or evidence of problems. EPA will conduct approximately 75 evaluations of projects under construction to minimize construction and operations problems. Program staff will take appropriate actions in cooperation with the Inspector General in response to problems of waste, fraud, and abuse.

As a result of the 1981 Amendments, approximately 430 additional Section 301(h) marine discharge waiver applications are expected, including 100 majors, with total potential secondary treatments costs of \$2 billion. The final regulation on the 301(h) program will be issued, clarifying and simplifying application requirements. Advisory guidance on monitoring and technical support will be published along with an overall program monitoring strategy.

The Needs Survey was accelerated to meet the mandated December 31, 1982 completion date and revised to reflect changes made by the 1981 Amendments.

1983 Explanation of Changes from Budget Estimate

The net increase +\$4,714,800 results from the following actions:

-Congressional Actions. (+\$3,995,700) The Congressional add-on to this activity was composed of an increase of +\$350,000 to the Salaries and Expenses appropriation for the advanced Wastewater Treatment construction grants projects and +\$2,625,200 to the Abatement, Control and Compliance appropriation for the wastewater treatment operator training programs focusing on alleviating noncompliance problems in Federally funded municipal plants.

(+\$1,020,500) This increase includes +\$1,020,500 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$719,100) This change reflects the reversal of the construction grants restructuring which was not approved by Congress. Since the restructuring was proposed some six months earlier, reversing the action revised the earlier resource estimates and resulted in a net change of +\$356,000 to the Salaries and Expenses appropriation.

During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$363,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

Obligations for management of the Construction Grants program in 1982 totaled \$20,044,700 and 422.8 permanent workyears, of which \$16,430,400 was for Salaries and Expenses and \$3,614,300 for extramural activities under the Abatement, Control and Compliance appropriation.

EPA awarded 586 construction grants totaling \$1,435,200,000, resulting in a total of 8,346 active projects at year end. Approximately 1,290 projects completed construction during the year and are operational.

During 1982, one additional State accepted initial Section 205(g) delegation, bringing to 46 the number of delegated States and Territories; 21 of these States assumed full responsibility for project management. States committed 1,901 work-years to program management in 1982, which was 59% of the total program staffing. The Corps of Engineers provided 19% and EPA the remaining 22%.

EPA proposed and the Congress enacted major amendments to the Clean Water Act providing for more cost-effective, water-quality based targeting of funds for publicly owned treatment works. These amendments are described in the Construction Grants medium. Implementing the 1981 Amendments and regulatory reforms, the Agency held seminars on the effects of the changes in the program and published guidance consolidating and making discretionary all procedural requirements for facilities planning, design, and construction.

Working with the Corps of Engineers, the Agency increased efforts to eliminate backlogs of projects awaiting completion, audit resolution, and closeout. Consistent with Congressional directives, program staff resolved audit issues within six months of audit completion. The Corps of Engineers also assisted EPA and States in the prevention of waste, fraud, and abuse through on-site presence at large facilities, construction management evaluations, and response to allegations or evidence of problems identified to the program.

The Agency continued to encourage use of innovative and alternative (I&A) technologies. Through 1982, 1900 awards totaling \$189.2 million have been made to approximately 1,100 facilities for innovative and alternative technology implementation. In addition, over 15,000 grant awards totaling over \$7.6 billion have been made to small communities.

In 1982, the Agency completed determinations on 11 pending Section 301(h) marine discharge waiver determinations for major cities. Of the original 30 waiver requests received from major cities, 6 were returned for further action, 16 were approved, and 8 were denied. Cost savings for the 16 approved waivers are estimated at \$820 million.

EPA Regions referred 15 proposed advanced treatment projects with incremental costs over \$3 million to the Administrator for review and approval. EPA's Headquarters review of advanced treatment projects has resulted in savings of over \$826 million to date in construction costs and estimated yearly operations and maintenance cost savings of over \$21 million.

CORPS OF ENGINEERS

1984 Request

For 1984, the Agency requests \$16,000,000 under the Abatement, Control and Compliance appropriation to support the interagency agreement with the U.S. Army Corps of Engineers. This represents a decrease of \$4,187,400 from 1983 due to an increase in the number of construction grants management activities to be conducted by the States and an overall reduction in the number of active construction projects.

This funding level will purchase 370 workyears of effort. The Corps will continue its traditional pre-construction and construction management activities including conducting 1,170 biddability and constructability reviews to determine the basic feasibility of project proposals prior to construction awards, performing interim inspections on 1,460 projects, conducting final inspections on approximately 680 projects, managing 46% of active projects under construction, and maintaining on-site presence at large, complex projects. Additionally, it will continue supporting the elimination of backlogs and preventing their recurrence, perform an increased number of special State assignments supporting emerging priority areas, and train and advise State personnel on construction management.

1983 Program

EPA is allocating \$20,187,400 in 1983 under the Abatement, Control and Compliance appropriation. These funds will purchase approximately 500 workyears of effort.

The Corps will continue to perform biddability and constructability reviews, manage 60% of active projects under construction, perform interim inspections on 1,920 projects, conduct 785 final inspections, and maintain on-site presence at large complex projects. Supporting efforts to closeout completed projects, the Corps will handle construction claims, make credit determinations and grant payments, and resolve deficiencies with grantees. The Corps is expected to perform special assignments requested by States to support closeout efforts and other priority needs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$2,800,000 results from the following action:

-Congressional Action. (+\$2,800,000) The Congressional add-on to this activity of +\$2,800,000 to the Abatement, Control and Compliance appropriation was for the purchase of additional workyears from the U.S. Army Corps of Engineers to support various wastewater treatment facilities construction management activities.

1982 Accomplishments

\$17,452,500 was obligated in 1982 under the Corps interagency agreement. These resources purchased 516 workyears of support to EPA and States in ensuring technical and fiscal integrity of construction projects.

The Corps performed 1,547 biddability and constructability reviews to assure that designs were technically adequate before the construction contract was awarded, managed 65% of active projects under construction, performed interim inspections on 2,440 projects, and performed 731 final inspections. Continuing on-site presence also was maintained at all large, complex projects to minimize

potential for waste, fraud, and abuse. The Corps provided significant support to State and EPA efforts to eliminate backlogs by handling change orders, making payments, resolving project deficiencies, and assisting other needs of the States.

WASTE TREATMENT OPERATIONS AND MAINTENANCE

1984 Program Request

In 1984, the Agency requests \$1,363,900 and 35.4 permanent workyears under the Salaries and Expenses appropriation. The decrease of .6 permanent workyears and \$55,700 represents Headquarters completion of guidance development efforts during the year.

Implementing provisions of the 1981 Amendments, EPA will issue early in 1984 final guidance on grantee certification of plant performance following the first year of operation, including recommended corrective actions, and continue assisting States, grantees, and engineering firms to help ensure that all new facilities meet and maintain performance requirements. Program staff will also coordinate with Agency compliance personnel and States to assist in the implementation of the National Municipal Policy for coordinating permitting, enforcement, and construction grants activities to ensure improved plant performance and compliance. Staff will help identify plants with revised treatment requirements and municipalities requiring additional or new construction funding to meet water quality needs.

1983 Program

In 1983, the Agency is allocating \$1,419,600 and 36.0 permanent workyears for this activity under the Salaries and Expenses appropriation.

EPA will begin developing guidance to implement grantee certification requirements with respect to wastewater treatment plant performance following the first year of operation. The program will also assist in the development and implementation of the Agency's National Municipal Policy to ensure improved performance and compliance by municipal facilities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$274,300 results from the following actions:

-Reprogrammings. (-\$274,300) This change reflects the reversal of the construction grants restructuring which was not approved by Congress. Since the restructuring was proposed some six months earlier, reversing the action revised the earlier resource estimates and resulted in a net change of -\$292,300 to the Salaries and Expenses appropriation.

During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$18,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$1,462,100 and 31.9 permanent workyears, of which \$1,258,500 was for Salaries and Expenses and \$203,600 was for Abatement, Control, and Compliance. Emphasis in 1982 was placed on improving performance and compliance of wastewater treatment plants built with funds authorized in P.L. 92-500. Major treatment plant compliance increased from 79% at the beginning of the year to 89% by the end of the third quarter. For the approximately 600 plants involved, this represents a 50% reduction in noncompliance. In addition, the annual survey of operations and maintenance required under Section 210 of the Clean Water Act was prepared.

NEPA COMPLIANCE - MUNICIPAL WASTEWATER TREATMENT FACILITY CONSTRUCTION

1984 Program Request

The Agency is requesting no resources for this program element in the water medium for 1984. This represents a decrease of \$8,816,800 and 67.0 permanent work-years from the 1983 levels. All resources and activities for this program are transferred to the newly created Interdisciplinary NEPA Compliance program element.

1983 Program

In 1983, the Agency is allocating \$8,816,800 and 67.0 permanent workyears for this activity, of which \$2,606,200 is for Salaries and Expenses and \$6,210,600 is under the Abatement, Control and Compliance appropriation. Contract resources will be used to fund preparation of EISs and related studies. The Agency expects to initiate 45 new studies in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$324,100 results from the following action:

-Reprogrammings. (+\$324,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$324,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$6,368,400 of which \$2,993,900 was for the Salaries and Expenses appropriation and \$3,374,500 was for the Abatement, Control and Compliance appropriation. In addition to ongoing work in reviewing environmental information documents, preparing environmental assessments and issuing findings of no significant impact, the Agency initiated 49 EISs and special studies and completed three special areawide studies.

Enforcement

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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WATER QUALITY

Water Quality Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Water Quality Enforcement						
Salaries & Expenses	\$16,360.1	\$13,181.0	\$13,267.5	\$13,383.8	\$116.3	
Abatement Control & Compliance	\$1,005.4	\$176.9	\$186.9	\$203.6	\$16.7	
TOTAL	\$17,365.5	\$13,357.9	\$13,454.4	\$13,587.4	\$133.0	
Water Quality Enforcement - Legal & Enforcement Counsel						
Abatement Control & Compliance	\$224.6					
TOTAL	\$224.6					
TOTAL:						
Salaries & Expenses	\$16,360.1	\$13,181.0	\$13,267.5	\$13,383.8	\$116.3	
Abatement Control & Compliance	\$1,230.0	\$176.9	\$186.9	\$203.6	\$16.7	
Water Quality Enforcement	TOTAL	\$17,590.1	\$13,357.9	\$13,454.4	\$13,587.4	\$133.0
PERMANENT WORKYEARS						

Water Quality Enforcement	440.6	326.1	325.6	313.2	-12.4	
TOTAL PERMANENT WORKYEARS	440.6	326.1	325.6	313.2	-12.4	
TOTAL WORKYEARS						

Water Quality Enforcement	486.0	365.7	365.2	352.9	-12.3	
TOTAL WORKYEARS	486.0	365.7	365.2	352.9	-12.3	

WATER QUALITY

Water Quality Enforcement

Budget Request

The Agency requests a total of \$13,587,400 and 313.2 permanent workyears for 1984, an increase of \$133,000 and a decrease of 12.4 permanent workyears from 1983. Included in the total is \$13,383,800 for Salaries and Expenses and \$203,600 for Abatement, Control and Compliance, an increase of \$116,300 and of \$16,700 respectively. The program includes both Headquarters and Regional resources.

Program Description

Water Quality Enforcement -- The National Pollutant Discharge Elimination System (NPDES) Enforcement program monitors compliance, initiates administrative enforcement actions, and provides technical support for enforcement litigation against violators of NPDES permit conditions. The compliance status of permittees is monitored through on-site inspections and the review of self-monitoring reports. Administrative or legal actions are initiated in cases of significant noncompliance. This subactivity covers compliance monitoring, compliance strategy development, and administrative enforcement remedies. Legal case development and referral of actions to the Department of Justice are covered in the enforcement operations subactivity.

Major functions of this program are identification of noncompliers, initiation of informal actions to secure compliance, and negotiation leading to administrative enforcement actions. Where informal negotiations and administrative actions do not achieve compliance, cases will be forwarded to the Office of Legal and Enforcement Counsel (OLEC) for action. Technical support for such referrals is provided as a function of this program.

In addition to the NPDES portion of the Water Quality Enforcement program, administrative and technical support is provided for the issuance of administrative actions against violations of the Spill Prevention Control and Countermeasure Plan requirements. Referrals are made to the U.S. Coast Guard for civil penalty assessment for oil and hazardous substance spill violations (Section 311(b)(6)(A)) in waters where EPA has jurisdiction, and inspection support is provided for enforcement against illegal dredge and fill activities (Section 404).

Water Quality Enforcement - Legal and Enforcement Counsel -- In 1982 only, this program element provided contract funds to support a portion of the enforcement data system and assist in case development and training.

WATER QUALITY ENFORCEMENT

1984 Program Request

The Agency requests a total of \$13,587,400 and 313.2 permanent workyears for this program, of which \$13,383,800 will be for the Salaries and Expenses appropriation and \$203,600 will be for the Abatement, Control and Compliance appropriation. This is an increase of \$116,300 and \$16,700, respectively. The reduction of 12.4 permanent workyears for this activity from 1983 to 1984 is attributable to increased delegation of the program and progress in 1983 in raising the compliance rates for industrial and municipal sources, as well as a slight reduction in non-NPDES administrative activities. The water enforcement program will continue to identify and respond to instances of significant noncompliance with NPDES permit requirements and seek resolution through negotiations, administrative remedies, or referrals to the Office of Legal and Enforcement Counsel for further action.

In 1984 significant progress will be emphasized by the Office of Water in two key areas: municipal compliance and compliance by industrial facilities with second round permits.

The NPDES program will continue to focus on improving the rate of municipal compliance. Support will be provided for implementing the National Municipal Policy, which addresses permitting, compliance monitoring, and construction grant priorities for promoting attainment of statutory treatment requirements by July 1988. The Agency will continue the program for tracking compliance of major and minor Publicly Owned Treatment Works (POTWs) funded under the Clean Water Act.

Where instances of noncompliance occur in completed facilities, municipal operations and maintenance procedures will be evaluated to determine the cause of the violation. When inadequate operation and maintenance is determined to be a causal factor of violations, the Agency will review past municipal plant budget and operations records to determine if the problem is a result of inadequate funding through the EPA-approved user charge system. Enforcement remedies will be applied, as needed, to resolve problems of continuing noncompliance.

In 1984 the Agency will shift resources from compliance sampling inspections to less resource intensive nonsampling inspections. These activities will involve performance audit and municipal diagnostic inspections. As a result, there will be a decrease of 297 compliance inspections from 2,275 to 1,978. There will be no decrease in resources to support enforcement cases requiring intensive field inspections.

EPA will cooperate with the States to monitor compliance of all non-municipal dischargers with the requirements of their NPDES permits. All major permittees and selected minor permittees will be inspected by EPA and the States to determine compliance, evaluate operation and maintenance procedures, or audit the permittee self-monitoring procedures. EPA or the States will utilize all available administrative and judicial enforcement mechanisms, as necessary, to resolve verified instances of noncompliance.

EPA will continue to improve the quality of self-monitoring data submitted by NPDES permittees through the Discharge Monitoring Report Quality Assurance program. The compliance inspection program will be managed and necessary follow-up activities initiated. Regional operating efficiency in the compliance review area will be enhanced through reform of requirements of discharge monitoring reports and improved compliance inspection strategies. Technical support for judicial actions and follow-up programs will be provided, and a greater effort will be focused on improving the technical capability of State programs in order for the States to assume more of the compliance monitoring activities.

Headquarters will review and evaluate Regional compliance monitoring programs, give guidance on compliance policy and enforcement remedies, and provide technical and administrative support as necessary. Regional administrative enforcement activity will be monitored to ensure nationally consistent implementation. The automated Permit Compliance System (PCS) will be strengthened and improved through data quality assurance measures, and additional NPDES States will be encouraged to use PCS. A complete national data base for majors will be maintained in 1984.

Non-NPDES administrative enforcement activities will continue, but below the 1983 level. Technical assistance and support will be provided to the Office of Legal and Enforcement Counsel in the development of civil and criminal referrals to the Department of Justice and for follow-up and conclusion of previously filed cases.

1983 Program

The Agency is allocating a total of \$13,454,400 and 325.6 permanent workyears to this program, of which \$13,267,500 is for Salaries and Expenses and \$186,900 is

for the Abatement, Control and Compliance appropriation. During 1983, the program continues to emphasize achieving an improved rate of municipal and industrial compliance while working to promote cooperation among Headquarters, Regional, and State agencies.

The compliance program is encouraging the development of greater State technical expertise and will encourage States to assume more of the compliance monitoring activities. A revised strategy for the compliance inspection program has been developed. A neutral inspection scheme, to satisfy the judicial requirement for objective random selection of candidates for compliance inspections, will be implemented. An estimated 2,275 compliance inspections will be conducted by EPA, and eight NPDES compliance monitoring training and guidance manuals developed in 1981 will be put into use. Quality assurance will become a more important part of the program.

Approximately 760 administrative orders and notices of violations will be issued for violations of NPDES requirements. Non-NPDES administrative enforcement activities are expected to result in approximately 512 actions under the Spill Prevention, Control, and Countermeasures program, 915 oil and hazardous substances spill referrals to the U.S. Coast Guard, and 300 dredge and fill compliance inspections.

Support will be provided to help NPDES States develop their enforcement management systems and maintain their data systems. The Permits Compliance System (PCS), used by both States and Regions, will be maintained and upgraded. Increased State direct use of PCS and link-up with existing States systems with PCS will be encouraged.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$96,500 results from the following action:

-Reprogrammings. (+\$96,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$86,500 to the Salaries and Expenses appropriation and a net increase of +\$10,000 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982 the Agency obligated a total of \$17,365,500 for this program, including \$16,360,100 for the Salaries and Expenses appropriation and \$1,005,400 for the Abatement, Control and Compliance appropriation.

Contract resources were used to meet ADP information needs, provide technical and legal case support, and conduct monitoring and inspection training. During 1982, the activities supporting enforcement actions in emergency situations involving substantial threats to public health and safety received the highest program priority.

The national permit compliance rate for publically owned treatment works (POTWs) in 1982 was 82% for major dischargers. Of 2,385 facilities, only 438 were not meeting final effluent limits for secondary treatment or better. In 1983 EPA expects the POTW compliance rate for plants built with Federal funds under P.L. 92-500 will be 85%.

The national permit compliance rate for industrial and other nonmunicipal dischargers in 1982 was 88% for major permits. Of 3,106 facilities, only 359 were not meeting final effluent limits. In 1983 EPA expects the compliance rate for these dischargers will be 89%.

Enforcement against municipal facilities that missed the secondary treatment deadline of July 1, 1977, was also a priority. Approximately 82 Administrative Orders under Section 301(A)(5)(a) were issued in 1982. Permit, enforcement, and construction grant activities were coordinated to expedite municipal construction and increase municipal compliance.

Regional offices conducted approximately 1,763 compliance inspections, and issued 72 Notices of Violations and 317 Administrative Orders. In States without approved NPDES programs, EPA reviewed major dischargers' self-monitoring reports. Technical support was provided for the development of 47 civil cases which were referred to Headquarters for review.

Enforcement of Section 311 oil and hazardous substance spill requirements consisted of 523 referrals to the U.S Coast Guard for assessment of civil penalties and 187 administrative actions for violations of Spill Prevention Control and Counter measure plan requirements.

Enforcement of Section 404 provisions focused on identifying illegal dischargers of dredge and fill material. Three administrative actions were taken.

WATER QUALITY ENFORCEMENT - Legal and Enforcement Counsel

1984 Program Request

The Agency requests no funds for this activity in 1984.

1983 Accomplishments

The Agency is allocating no funds for this activity in 1983.

1982 Accomplishments

The Agency obligated \$224,600 in Abatement, Control and Compliance funds to provide support for the enforcement docket system, case development, and training efforts. This work was completed in 1982.

WATER QUALITY

Water Quality Permit Issuance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Permit Issuance					
Salaries & Expenses	\$6,770.5	\$6,986.6	\$7,932.3	\$8,659.1	\$726.8
Abatement Control & Compliance	\$4,207.2	\$3,209.9	\$3,205.6	\$4,741.1	\$1,535.5
Operations, Research & Facilities	\$700.0				
TOTAL	\$11,677.7	\$10,196.5	\$11,137.9	\$13,400.2	\$2,262.3

TOTAL:					
Salaries & Expenses	\$6,770.5	\$6,986.6	\$7,932.3	\$8,659.1	\$726.8
Abatement Control & Compliance	\$4,207.2	\$3,209.9	\$3,205.6	\$4,741.1	\$1,535.5
Operations, Research & Facilities	\$700.0				

Water Quality Permit Issuance	TOTAL	\$11,677.7	\$10,196.5	\$11,137.9	\$13,400.2	\$2,262.3
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PERMANENT WORKYEARS

Permit Issuance	177.1	163.9	201.5	187.5	-14.0
TOTAL PERMANENT WORKYEARS	177.1	163.9	201.5	187.5	-14.0

TOTAL WORKYEARS

Permit Issuance	202.0	206.3	242.6	233.1	-9.5
TOTAL WORKYEARS	202.0	206.3	242.6	233.1	-9.5

WATER QUALITY

Permit Issuance

Budget Request

The Agency requests a total of \$13,400,200 and 187.5 permanent workyears for 1984. This represents an increase of \$2,262,300 and a decrease of 14.0 permanent workyears from 1983. Included in the request is \$8,659,100 for Salaries and Expenses and \$4,741,100 for Abatement, Control and Compliance, representing increases of \$726,800 and \$1,535,500, respectively. This program includes both Headquarters and Regional resources.

Program Description

The National Pollutant Discharge Elimination System (NPDES) permit program is a result of a comprehensive legislative mandate in the Clean Water Act to reduce or eliminate point source pollution from industrial, municipal, commercial, and agricultural discharges. The Act prohibits the discharge of pollutants into all waters of the United States unless a permit is issued by EPA or an EPA-approved State program. A primary function of the permit program is the encouragement of State assumption of responsibility for the NPDES program. At present, 34 States and one Territory have approved NPDES programs.

The permit is a mechanism for imposing discharge limitations on point source dischargers based on national effluent limitation guidelines, national performance standards for new source facilities, or water quality standards. Where national effluent limitation guidelines have not been promulgated for a particular industrial discharger, the effluent limits are set by the permitting authority using best professional judgment based on available and economically feasible technology. Those permits are issued case by case. Additionally, if established national effluent limits will not reduce pollutants enough to meet the ambient water quality standards set by the State or EPA, the permit imposes more stringent limitations on a facility to meet the water quality standards. Permits also include time schedules and deadlines for pollutant reduction.

Controlling discharges of priority pollutants including toxics is the major emphasis of the NPDES permit program. Direct discharges of these pollutants into navigable waters are controlled by the inclusion of Best Available Technology (BAT) limitations into industrial permits. Indirect discharges of priority pollutants, i.e., industrial discharges to publicly owned treatment works, are controlled through the pretreatment program. This program gives municipalities and States the primary responsibility for enforcing national pretreatment standards.

Another important function of the NPDES program is to provide technical support for evidentiary hearings held on the terms, conditions, and effluent limitations in permits and requests for variances from permit effluent limitations. EPA also conducts nonadversarial panel hearings for municipalities which have requested marine discharge modifications under Section 301(h) of the Clean Water Act. Non-adversarial panel hearings are used to issue an NPDES permit to a discharger that has not previously held an NPDES permit, as well as in decisions on variances requested by direct dischargers.

PERMIT ISSUANCE

1984 Program Request

The Agency requests a total of \$13,400,200 and 187.5 permanent workyears for the NPDES Permits Issuance program, of which \$8,659,100 will be for the Salaries and Expenses appropriation and \$4,741,100 will be for the Abatement, Control, and

Compliance appropriation. This reflects an increase of \$2,262,300 and a decrease of 14.0 permanent workyears. The increase of \$1,535,500 in Abatement, Control and Compliance will be for technical support to review marine discharge waiver requests under Section 301(h) of the Act. The decrease in permanent workyears is attributable to increased use of general permits, delegation of the program to the States, and more efficient Agency procedures. The increase of \$726,800 in Salaries and Expenses represents increased workyear costs.

These resources will be used primarily for major permit issuance (EPA classifies discharges as "major" or "minor" depending on effluent volume, strength, toxics, and environmental consequences) as well as related activities, including resolution of evidentiary hearings and determinations on variance requests for municipalities and industries.

Priority industrial permit lists developed in accordance with the national second round permit policy will be the basis for issuing permits during 1984. Approximately 300 major industrial permits will be issued by EPA in nondelegated States.

Increased emphasis will be given to issuing general permits, including Outer Continental Shelf general permits. Wherever possible, consistent with legal and environmental considerations, general permits will be issued to categories of facilities in order to reduce the backlog of expired permits as quickly as possible and to ensure control of pollutants from facilities which might otherwise remain unpermitted. Approximately 60 general permits, including 10 OCS general permits, will be issued by EPA during 1984.

During 1984, added emphasis will be given to reissuing municipal permits to reflect Section 301(h) waivers and revisions to secondary treatment standards, and to reduce the backlog of expired municipal permits. The Agency will issue 181 major municipal permits.

As effluent guidelines are promulgated, the number of variance requests from industries will increase and could be significant in 1984. Approximately 600 to 850 requests each are expected for Sections 301(c) and 301(g) variances. Only the highest priority variance requests will be evaluated during 1984. Evaluation and review of these variances will continue into 1985 and beyond.

During 1984, requests for appeals will be granted on about 50% of the major industrial permits issued. These granted requests will be in addition to the requests that will carry over from 1983. An estimated 76 granted requests will be resolved in 1984; 73 will be resolved through negotiation and 3 will require formal hearings. These numbers are based on the assumptions that more than 95% of the appeals of permits limitations that are granted can be resolved through negotiation.

Emphasis will be given to assisting in development of new State NPDES programs and achieving necessary program modifications by States already having NPDES authority. Such program modifications include NPDES State assumption of pretreatment, Federal facilities, and general permit program authorities. It is estimated that during 1984 two States will receive full NPDES authority and 18 NPDES States will receive program modification approval. EPA will be working with NPDES States which request EPA Regional assistance in developing permits, especially where guidelines are not available. Such requests are expected to increase as the States focus on more difficult high priority second round permits.

In 1981 and 1982, permits issued to most POTWs required to develop pretreatment programs included schedules for submitting such programs for approval by July 1983. A small number of programs have been submitted, but a significant increase in submittals should occur in late 1983 and in 1984. During 1983 and 1984, these POTW programs will be reviewed and permits will be reissued to require implementa-

tion of approved pretreatment programs. Fundamentally Different Factors (FDF) requests and categorical standards determinations will continue as pretreatment categorical standards are promulgated.

During 1984, emphasis will be given to approval or denial of Section 301(h) marine discharge waivers consistent with the large increase in applications following the December 1981 CWA amendments. These waivers are technically complex and require contractor support to assist in evaluating the adequacy of application information necessary for making initial determinations on the 301(h) request. EPA will evaluate 80 applications for marine discharge waivers.

A major initiative will continue in 1984 to review and revise the NPDES policies and regulations to reduce paperwork, improve application forms, and eliminate unnecessary or overly burdensome requirements. Regulations reflecting litigation settlement and Paperwork Reduction Act reforms will be proposed in 1983 and should be promulgated in late 1983 or early 1984. Much of this activity will result from anticipated litigation on the revisions to the NPDES and pretreatment regulations. In addition, work groups will be formed to re-evaluate all reporting requirements to assess appropriateness, adequacy, and use of information required of States and the regulated public.

1983 Program

In 1983, the Agency is allocating a total of \$11,137,900 to the Permits Issuance program, of which \$7,932,300 is for the Salaries and Expenses appropriation and \$3,205,600 is for the Abatement, Control and Compliance appropriation. Contracts provide support for technical assistance for permit writers, evidentiary hearing support, pretreatment program assistance, and general program operations.

In 1983, the program will continue to issue second round permits consistent with the permit strategy issued in 1982. The strategy requires establishment of priorities for industrial permits based on known or suspected impairment of uses attributable to water pollution and on industrial categories where effluent guidelines have been established or where such guidelines are not scheduled to be established. The Agency estimates that 274 priority industrial permits will be issued in 1983.

Most municipal permits must be reissued during 1983 and beyond based on revisions to secondary treatment standards, Section 301(h) waivers, Section 301(i) extensions, pretreatment program requirements, and expiration of existing permits. In order to avoid doubling permit issuance workload, permits will be issued in 1983 only to municipalities where subsequent revisions will not be necessary. The Agency estimates that approximately 100 municipal permits will be issued in 1983.

During 1983, priority again will be given to the development and issuance of general permits to the Outer Continental Shelf activities and new general permitting categories. An additional 26 general permits will be issued during 1983.

Municipal permits issued to most POTWs required to develop pretreatment programs included schedules for submitting such programs for approval by July, 1983. The Agency will focus on reviewing these POTW program submittals in 1983.

Major emphasis will continue on revising permitting and pretreatment regulations. Revisions to the NPDES portion of the Consolidated Permit regulations, based on the litigation settlement, were proposed in 1982. Additional revisions reflecting Paperwork Reduction Act reforms should be completed by late 1983 or early 1984. The Consolidated Permit regulations will also be revamped to provide separate, easier to understand, regulations for each permitting program and should be completed during 1983. In 1983 proposed revisions to pretreatment regulations will be promulgated, reflecting changes in the removal credits formula.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$941,400 results from the following actions:

-Congressional Action. (+\$738,900) This increase includes +738,900 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$202,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$206,800 to the Salaries and Expenses appropriation and a net decrease of -\$4,300 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$11,677,700 for this program, including \$6,770,500 for the Salaries and Expenses appropriation, \$4,207,200 for the Abatement, Control, and Compliance appropriation, and \$700,000 for the Operations, Research, and Facilities appropriation.

In 1982, EPA issued a total of 165 major and 914 minor permits. Of the 1079 permits, 760 were industrial (81 majors), and 319 were municipal (84 majors). Other activities included assistance to the pretreatment program and technical guidance on second round permit issuance with emphasis on control of toxics and on water quality impaired areas.

In 1982, a second round permit strategy was issued which gave priority to issuing permits in water use impaired areas and where BAT guidelines have been promulgated. Permit priority lists were developed based on this strategy. Industrial teams, composed of EPA and State personnel, developed permits for facilities ranked high on these priority lists. These industry team permits were used by EPA and State permit writers as models to assist in translating guidelines into permit conditions and to assist in developing permit conditions for industrial subcategories where guidelines are not scheduled.

Currently, 35 States and Territories have approved NPDES programs and are issuing permits. Two States were approved during 1982. In addition, four previously approved NPDES States received pretreatment authority, and one received Federal facility authorization. This brings the total to 14 States with pretreatment authority and 22 States with Federal facility permitting authority.

EPA continued to develop and issue resource-saving general permits for offshore oil and gas facilities. The program developed new categories of point sources which can be included in general permits. The process for reviewing draft and final general permits was streamlined.

The Agency continued its review of all permitting policies and procedures to streamline the permitting process by reducing paperwork and reporting burdens on permittees and to encourage State program approvals. As a result of this review, the NPDES regulations and the NPDES permit application forms were revised. Reforms based on litigation issues were proposed in 1982 and will be promulgated in 1983 or early 1984. Additional reforms covering regulations and administrative procedures have been developed and will be proposed in early 1983.

In 1982, Phase I of the Regulatory Impact Analysis for EPA's pretreatment program was completed. The review led to suggested Clean Water Act amendments. Revisions to the removal credit formula in the General Pretreatment regulations were proposed in 1982. The Agency began to review POTW pretreatment program submittals in 1982.



Drinking Water

ENVIRONMENTAL PROTECTION AGENCY

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DRINKING WATER

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					

APPROPRIATION					

Salaries & Expenses	\$22,224.7	\$24,515.9	\$24,796.7	\$24,554.5	-\$242.2
Abatement Control & Compliance	\$40,944.5	\$31,775.9	\$39,303.5	\$29,893.4	-\$9,410.1
Research & Development	\$22,729.5	\$13,458.3	\$13,858.3	\$11,908.0	-\$1,950.3
TOTAL, Drinking Water	\$85,898.7	\$69,750.1	\$77,958.5	\$66,355.9	-\$11,602.6
PERMANENT WORKYEARS	474.3	455.5	471.2	465.1	-6.1
TOTAL WORKYEARS	566.4	550.8	562.4	560.8	-1.6
OUTLAYS	\$80,715.0	\$83,882.7	\$76,760.0	\$73,568.0	-\$3,192.0
AUTHORIZATION LEVELS	\$90,000.0				

DRINKING WATER

OVERVIEW AND STRATEGY

The Safe Drinking Water Act of 1974 charged EPA with the responsibility of ensuring that the Nation's water supplies are free from contamination which may pose a risk to the health of persons. In carrying out this mandate, EPA is required to set standards for these contaminants and to assure compliance among public water systems. The Agency is also required to protect underground water sources of drinking water from contamination due to underground injection practices. Although EPA is required to establish minimum national requirements for these programs, the Act clearly intended that the States would assume primary enforcement responsibility (primacy) for implementing these programs. (The term "States" collectively refers to the 57 States and Territories as defined in the Act.) To provide incentive to the States in their efforts to assume primacy, the Act provides that EPA offer technical and financial assistance.

To be granted program delegations for the Public Water Systems Supervision (PWS) or Underground Injection Control (UIC) programs, the States must first adopt regulatory requirements at least as stringent as the Federal requirements. In the event a State does not choose to accept primacy and on Indian Lands, EPA must implement and enforce the regulatory requirements directly.

Over the past years, the Agency has worked closely with the States in promoting primary enforcement responsibility for the PWS program. This major effort proved to be a worthwhile investment in that 51 States and Territories now have assumed this responsibility. In the early stages of the program, the States placed major emphasis on achieving compliance among the systems serving the largest populations. However, as monitoring data became available, it was determined that the vast majority of violations were in small systems serving populations of under 3,300 consumers. Because of financial constraints, these small systems have had difficulty achieving and maintaining compliance. With this in mind, the Agency developed a strategy which provides these systems with alternative approaches by which to pursue full compliance. The strategy focuses on monitoring to identify problems and their magnitude, assessing alternative means of obtaining compliance, and following up to require compliance whenever it is feasible to do so.

The priority given to small systems is largely responsible for the dramatic improvement in the compliance rates with microbiological standards among persistent violators. These violations decreased from 3% in 1980 to less than 1% in 1981. Persistent monitoring and reporting violations decreased by 50% from 17% in 1980 to 8.6% in 1981. Efforts to improve the rate of compliance remain the primary focus of the PWS program in order to further ensure the Nation of the safety of its drinking water.

Because of the high rate of delegations achieved in the PWS program and the State/EPA partnerships which were established and have been maintained, EPA expects to have the same success in delegating the Underground Injection Control program. By the end of 1982, four States had received primary enforcement responsibility. It is anticipated that an additional 23 States will be delegated the program in 1983. Twelve additional State programs are expected during 1984, bringing the number of fully delegated States to 39 by the end of the 1984 fiscal year.

Current priorities for the drinking water program are as follows:

1. Revise current health protection standards by streamlining the regulatory requirements, presenting a more flexible approach, and extending protection against currently unregulated contaminants (where needed).
2. Improve compliance with applicable drinking water standards.
3. Delegate the Underground Injection Control Program and begin Federal implementation where necessary.
4. Address ground water problems.

Revise Current Health Protection Standards

Currently, the drinking water program operates under the National Interim Primary Drinking Water Regulations (NIPDWR) in effect since 1977. These regulations require that delivered drinking water be routinely monitored and satisfy the standards for bacterial, inorganic, organic (for certain pesticides), and radionuclide contaminants as well as for turbidity. A standard for the control of trihalomethanes was promulgated in 1979. The Act mandates that the Interim Regulations will be supplanted by Revised NPDWRs which are to provide comprehensive health protection based on additional data. In developing these revised standards, EPA seeks to establish a firm scientific basis for each contaminant currently regulated as well as to develop standards, where needed, for contaminants not included in the Interim Regulations. This requirement also provides an opportunity to relieve regulatory burden through review of current requirements, to weed out unnecessarily cumbersome provisions, and to minimize the need for variances and exemptions. The requirement to review allows EPA to consider innovations, such as more flexibility in monitoring and reporting procedures, based on the continuing experience of the State program and the systems. In making revisions to the national standards, the Agency is required to make two determinations. First, EPA is required to set the level of contamination which precludes any adverse human health effects, called the Recommended Maximum Contaminant Level (RMCL). Upon establishing the RMCL, EPA then determines enforceable standards, called Maximum Contaminant Levels (MCLs), for the contaminants which can be achieved utilizing generally available technology (taking cost into consideration).

The complete revision of the national standards will progress in stages, by groups of contaminants. The first group to be addressed will be the Volatile Organic Contaminants (VOCs). Presently, this group is unregulated, but recent surveys of systems with ground water supplies have shown that these contaminants occur in drinking water supplies nationwide. Moreover, a growing number of contamination incidents involving these compounds are being discovered. The Agency is considering the need for establishing regulations for VOCs. Should it be determined that they pose a public health threat, we will propose RMCLs in mid-1983, with proposal of MCLs in early 1984 and promulgation to follow in late 1984. Concurrently, efforts will be made to complete the development of the revised regulations for existing standards by proposing RMCLs in early 1984, following with proposal of MCLs in late 1984. The Agency will also initiate revisions to the Interim Regulations for Trihalomethanes.

A major initiative proposed for 1984 is to review scientific data to determine the threat to public health posed by newly identified and characterized organic contaminants based on scientific data showing possible public health risks. Although the Agency has already expended considerable effort into the regulation of organic contaminants, it is evident that the larger portion of the total organic content of drinking water has not been characterized. This contamination is composed of non-volatile, higher molecular weight constituents which resist identification and measurement by any but the most sophisticated instruments. Because of the public concern regarding the possible health risks caused by these contaminants, the Agency feels that the drinking water program should establish the degree of hazard to public health by identifying and characterizing these contaminants, their health risks, and their exposure levels. This will provide the basis for possible regulatory action by the Agency.

The Office of Research and Development (ORD) program provides direct input into the regulatory development process by providing current data on the toxicity of the chemicals of concern. The program also pursues the longer term research needs to provide a more accurate basis for future decision-making. A major effort is being initiated to develop and apply methods, through observation or experience, which will establish specifically the toxicological potential of contaminants at low dosages and in combination, without resorting to large animal populations. ORD will support the regulatory program by assisting in developing estimates of health risks and participating in review and interpretation of assessments. ORD also is developing a methodology to address health risks associated with multiple compound exposure in drinking water. ORD will also provide data on the treatment technology, performance, and cost of removing organic contaminants and will maintain the program to assure the accuracy of water quality measurements.

Improve Compliance with Applicable Standards

Now that the institutional framework for the public water systems supervision programs is in place and compliance is the rule rather than the exception, emphasis will be directed toward achieving a greater degree of compliance among small systems. The Agency has developed a strategy which provides a suggested approach to achieving compliance through technical assistance and enforcement, including providing information on treatment methods and institutional arrangements which can reduce the cost of compliance.

The Research and Development program contributes towards this effort by studying and providing data on cost-effective treatment technology for small systems and by further expanding the quality assurance program for laboratory certification.

EPA enforces Primary Drinking Water Regulations in States that have not been delegated primary enforcement responsibility. This is done by investigating violations, issuing variances and exemptions to systems, and taking enforcement action against recalcitrant systems that refuse to comply with regulatory requirements.

Maximize UIC Delegations and Implement Federal Programs

The Underground Injection Control (UIC) program is designed to prevent the contamination of underground sources of drinking water caused by poor injection practices. Development of UIC programs in both primacy and non-primacy States will continue during 1983. Our strategy for implementation in non-primacy States is to establish programs in 1983 in those 18 States which have officially notified us of their intent not to assume primacy. To maximize the number of delegations, we will continue to work with those States that have not applied for program responsibility but are working toward it. Major objectives in implementing both State and Federal programs include the phase-out of all Class IV wells, which inject hazardous waste directly into underground sources of drinking water; mechanical integrity testing of the existing Class I-III wells (waste injection, oil and gas, and mining) as stipulated in the five year schedule in the regulations to assure that no contamination takes place due to faulty construction; and technical evaluations of permit applications for new Class I, II, and III wells, including the full implementation of the area of review requirements.

The drinking water enforcement program will concentrate on implementing a permitting and enforcement program for Underground Injection Control regulations in States that have not assumed program delegation. EPA will also help States develop compliance monitoring and permitting aspects of their programs as well as issue permits, initiate investigations, and take enforcement actions.

Address Ground Water Problems

The Agency is seeking to coordinate all existing authorities and resources as they relate to ground water, assess the extent of ground water contamination, assist the States in developing their own ground water strategies, develop a revised ground water monitoring strategy and a cross cutting guidance, and, where necessary, make regulatory modifications to achieve greater consistency in program decision-making.

The Agency also plans to establish a coordinated ground water research effort by expanding basic knowledge about ground water protection. The objective of the program is to understand the transport and fate of contaminants in the subsurface environment, to predict and estimate the movement, persistence, and/or transformation of plumes of contaminants in the subsurface environment, and to increase development of new technologies for use in detection, prevention, and remediation. Being able to anticipate the potential for harm will make strategies for preventing them much more efficient. Work is also underway on improving the means to investigate and monitor contamination. In addition, the health research program will continue to provide information on the health effects of contaminants found in ground water for Agency and State use in addressing ground water pollution.

DRINKING WATER

<u>Program Activities</u>	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs 1983</u>
Number of States with primacy enforcement responsibility					
Public Water Systems Supervision	50	50	51	51	0
Underground Injection Control	4	40	27	39	+12
Laboratories certified in PWS non-primacy States	125	125	125	125	0
Sole source aquifer designation	2	4	7	5	-2
Underground Injection Control permits issued by EPA in non-primacy States	0	215	215	295	+80

Research and Development

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DRINKING WATER

Drinking Water Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

Scientific Assessment						
Salaries & Expenses	\$10.7	\$84.4	\$84.4	\$193.6	\$109.2	
Research & Development		\$30.5	\$30.5	\$30.5		
TOTAL	\$10.7	\$114.9	\$114.9	\$224.1	\$109.2	
Technical Information & Liaison						
Salaries & Expenses	\$186.6	\$181.6				
Research & Development	\$11.0	\$100.0				
TOTAL	\$197.6	\$281.6				
Monitoring Systems & Quality Assurance						
Salaries & Expenses	\$910.4	\$1,020.5	\$1,219.8	\$1,437.5	\$217.7	
Research & Development	\$482.5	\$723.7	\$723.7	\$703.3	-\$20.4	
TOTAL	\$1,392.9	\$1,744.2	\$1,943.5	\$2,140.8	\$197.3	
Health Effects						
Salaries & Expenses	\$2,970.2	\$3,928.7	\$3,928.7	\$3,530.7	-\$398.0	
Research & Development	\$9,648.2	\$5,198.1	\$5,198.1	\$5,219.1	\$21.0	
TOTAL	\$12,618.4	\$9,126.8	\$9,126.8	\$8,749.8	-\$377.0	
Environmental Engineering & Technology						
Salaries & Expenses	\$2,938.2	\$3,153.3	\$3,153.3	\$2,722.8	-\$430.5	
Research & Development	\$8,888.2	\$3,726.4	\$4,226.4	\$2,827.4	-\$1,399.0	
TOTAL	\$11,826.4	\$6,879.7	\$7,379.7	\$5,550.2	-\$1,829.5	
Environmental Processes & Effects						
Salaries & Expenses	\$1,167.0	\$1,078.7	\$1,078.7	\$1,107.2	\$28.5	
Research & Development	\$3,699.6	\$3,679.6	\$3,679.6	\$3,127.7	-\$551.9	
TOTAL	\$4,866.6	\$4,758.3	\$4,758.3	\$4,234.9	-\$523.4	
TOTAL:						
Salaries & Expenses	\$8,183.1	\$9,447.2	\$9,464.9	\$8,991.8	-\$473.1	
Research & Development	\$22,729.5	\$13,458.3	\$13,858.3	\$11,908.0	-\$1,950.3	
Drinking Water Research	TOTAL	\$30,912.6	\$22,905.5	\$23,323.2	\$20,899.8	-\$2,423.4

DRINKING WATER

Drinking Water Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PERMANENT WORKYEARS

Scientific Assessment		1.0	1.0	3.0	2.0
Technical Information & Liaison	2.6	2.2			
Monitoring Systems & Quality Assurance	15.8	16.1	22.1	22.1	
Health Effects	44.7	43.6	43.6	49.6	6.0
Environmental Engineering & Technology	56.3	47.1	47.1	45.1	-2.0
Environmental Processes & Effects	23.1	22.3	22.3	22.3	
TOTAL PERMANENT WORKYEARS	142.5	132.3	136.1	142.1	6.0

TOTAL WORKYEARS

Scientific Assessment	.1	2.0	2.0	4.0	2.0
Technical Information & Liaison	3.0	4.2			
Monitoring Systems & Quality Assurance	18.0	19.1	24.8	25.1	.3
Health Effects	63.7	60.5	60.5	66.5	6.0
Environmental Engineering & Technology	73.0	59.3	58.3	57.3	-1.0
Environmental Processes & Effects	25.2	24.5	24.5	24.5	
TOTAL WORKYEARS	183.0	169.6	170.1	177.4	7.3

DRINKING WATER

Drinking Water Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Regulations.			
- Provide reports on international symposia on the health effects of drinking water disinfectants and disinfection by-products. (Health)	8/82		1/85
- Provide report which evaluates the validity of extrapolation models for tumor promoters and initiators. (Health)		6/86	6/86
- Prepare state-of-knowledge report on the removal of organic materials from drinking water. (Engineering)	2/87	2/87	2/87
Provide Health and Engineering Information to Assist States and Municipalities in Complying With Drinking Water Regulations.			
- Prepare annual reports summarizing the occurrence, cases and causes of waterborne disease outbreaks by year. (Health)	9/84	12/85	12/86
- Complete full scale evaluation of granular activated carbon treatment for solvent contaminated ground water (Engineering)		1/86	1/86
- Complete research report on small system bacteriological sampling frequency models. (Engineering)	1/86	1/86	1/86
- Prepare report on techniques for control of bromine-containing trihalomethanes. (Engineering)	2/86	2/86	2/86
- Provide report on candidate methods for tracing microbiological contamination in outbreak. (Health)	4/83		
- Prepare annual reports summarizing the occurrence, cases and causes of waterborne disease outbreaks by year. (Health)	9/82	9/83	9/84

DRINKING WATER

Drinking Water Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Produce report on maintaining microbial quality in distribution systems. (Engineering)	3/84	3/84	3/84
- Report on removal of volatile organic chemicals from drinking water by aeration. (Engineering)	3/84	3/84	3/84
Provide Scientific Methods and Data for Protection of Ground Water Resources.			
- Establish ground water research program for locating abandoned wells, fluid movement in injection wells, and modify and develop monitoring equipment and instrumentation (continuing). (Monitoring)	9/82	9/83	9/84
- Preliminary report on methods of locating abandoned wells (Env. Processes.)	9/83	9/83	
- Manual for the use of tracer technology in ground water investigation. (Env. Processes)		9/84	9/84
- Report on the characteristics and quantity of naturally-occurring organic materials in subsurface environments (Env. Processes)		9/84	9/84
- Report on the cost-effectiveness of various aquifer restoration methods (Env. Processes)	9/84	9/84	9/84
Provide Quality Assurance Support to Agency and State Drinking Water Laboratories.			
- Conduct 10 Regional Laboratory Certification performance evaluations. (Monitoring)		Ongoing	Ongoing
- Produce and distribute 52,000 quality control and performance evaluation samples. (Monitoring)	Ongoing	Ongoing	Ongoing

DRINKING WATER

Drinking Water Research

Budget Request

The Agency requests a total of \$20,899,800 and 142.1 permanent workyears for 1984, a decrease of \$2,423,400 and an increase of 6.0 permanent workyears from 1983. Included in this total is \$8,991,800 for Salaries and Expenses and \$11,908,000 for Research and Development, with a decrease of \$473,100 and \$1,950,300 respectively. The decrease primarily occurs in the environmental engineering and technology program element. In addition, the decrease reflects the transfer of \$1,904,300 in exploratory research funds to the Intermedia program.

Program Description

EPA's drinking water research program provides support to States and to the EPA Office of Drinking Water (ODW) in implementing the Safe Drinking Water Act (SDWA) in the areas of contaminant occurrence and health effects, analytical chemistry, and control technology and related costs. It also develops the pertinent information required to support the protection of our ground water resources. The following represents those objectives designed to implement this program.

Objective 1. Provide the Health, Monitoring and Engineering Data Necessary Develop and Revise Drinking Water Standards. This research supports ODW in developing revised regulations (including Health Advisory guides to States and suppliers) to control drinking water contaminants under Section 1412 of the SDWA by conducting research in the areas of scientific assessment, monitoring, health effects, and treatment technology. It also provides analytical procedures for use by the Agency, States, municipalities and operators of drinking water systems to monitor contaminants to assure that levels established under the SDWA are not exceeded and concentrations measured are accurate pursuant to Section 1401 of the SDWA.

Objective 2. Provide Quality Assurance Support to Agency and State Drinking Water Laboratories. This research develops systems performance procedures for on-site evaluation and certification of drinking water monitoring laboratories and makes possible mandatory quality assurance activities of all laboratories and offices involved with data collection. This ensures the production of accurate and reliable parameters in support of regulations and standards.

Objective 3. Provide Health and Engineering Information to Assist States and Municipalities in Complying With Drinking Water Regulations. Health research assists the States in ascertaining causes of waterborne infectious disease outbreaks and improving reporting of these incidences, as well as determining the hazard to humans from exposure to infectious agents through drinking water. In control technology, this research is directed toward the compliance and reporting problems of small systems. This work supports technical assistance to States and municipalities as required by Section 1442 of the SDWA.

Objective 4. Provide Scientific Methods and Data for Protection of Ground Water Resources. This research provides the scientific basis for the protection of underground drinking water sources as required to implement Sections 1421 and 1424 of the SDWA. The goals are to (1) reduce the cost of ground water contamination investigations; (2) improve the capability of predicting organic and microbiological contaminant behavior; (3) determine the appropriate level of protection; and (4) determine whether in-situ aquifer restoration is cost-competitive with other alternatives once ground water is contaminated.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$224,100 and 3.0 permanent workyears for this program, of which \$193,600 is for Salaries and Expenses and \$30,500 is for Research and Development. This reflects an increase of \$109,200 for Salaries and Expenses and 2.0 permanent workyears with no change for Research and Development. This increase reflects the need for additional resources to develop human health effects documentation under Section 1412 of the SDWA.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. Estimates of potential hazard to human health from exposure to chemical constituents in drinking water are necessary to support regulations and Health Advisory guidance. Revised primary drinking water regulations must be finalized by 1986. Health assessment documentation for five chemicals will be finalized and development initiated for six more contaminants.

1983 Program

In 1983, the Agency is allocating a total of \$114,900 and 1.0 permanent work-year to this program, of which \$84,400 is under the Salaries and Expenses appropriation and \$30,500 is for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. The initial drafts of health effects documents dealing with silver, 1,1-dichloroethane, and mercury are being prepared. After peer review, these documents will be revised and released to the public for comment in mid-1983.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$10,700 for this program, all of which was under the Salaries and Expenses appropriation.

Provide Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. Technical support was provided to the ODW. A report evaluating the disposition and toxicity of uranium was prepared including the estimation of safe drinking water levels.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$197,600 for this program, of which \$186,600 was under the Salaries and Expenses appropriation and \$11,000 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Inter-media program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$2,140,800 and 22.1 permanent workyears for the program, of which \$1,437,500 is for Salaries and Expenses, and \$703,300 is for

Research and Development. This reflects an increase of \$217,700 in Salaries and Expenses and a decrease of \$20,400 in Research and Development. This net increase reflects the strengthening of the drinking water quality assurance program by increasing the frequency of regional laboratory audits since these laboratories are responsible for quality assurance certification of State laboratories.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. This program is directed towards supporting the National Interim Primary Drinking Water Regulations and the SDWA. Standardization of cost-effective analytical methodologies is a critical component for substantiating regulatory actions. Because of this, research will be conducted to evaluate methods for measurement of radionuclides in drinking water, to evaluate sampling holding times for microbiological analysis of drinking water, and to assess alternate membrane filter media for analyzing total coliforms.

Provide Quality Assurance Support to Agency and State Drinking Water Laboratories. Research under this objective provides quality control procedures and guidelines to document data quality and systems performance, provides quality assurance support in radionuclides analysis of drinking water samples, and serves as referee laboratory. It also provides an overview of Agencywide mandatory quality assurance activities of all laboratories and offices involved with data collection for drinking water. In addition, the program produces and distributes quality control/ performance evaluation samples for chemical and microbiological analysis for the water supply laboratory certification program and develops and distributes radioactive standards and reference materials for radiochemistry analysis. In 1984, support for the State laboratory certification program will be expanded to include annual certification of EPA regional laboratories rather than the current certification of every three years. (EPA regional laboratories provide certification of State and supplier laboratories).

Provide Scientific Methods and Data for Protection of Ground Water Resources. Research under this objective is designed to evaluate and assess new methods or emerging technologies to protect our ground water resources. Work will be directed to assess well sampling equipment and instrumentation, and to assess non-contaminating submersible pumps for monitoring water supply wells. The use of fiber optics and laser technology to monitor ground water quality will be evaluated. Further work on the use of airborne and surface-operated instrumentation to locate abandoned wells will be addressed. The feasibility of mapping underground fluid movement from injection wells will be investigated.

1983 Program

In 1983, the Agency is allocating a total of \$1,943,500 and 22.1 permanent workyears for this program, of which \$1,219,800 is under the Salaries and Expenses appropriation and \$723,700 is for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. The program provides for the evaluation of methods for measurement of radionuclides, chemicals and microbiological analyses in drinking water. Evaluation of sample holding times for microbiological analysis of drinking water, and development of alternate membrane filter media for analyzing total coliforms is included.

Provide Quality Assurance Support to Agency and State Drinking Water Laboratories. This program provides quality assurance support in radionuclides, chemical and microbiological analyses of drinking water samples; serves as referee laboratory; and provides an overview of Agencywide mandatory quality assurance activities of all laboratories and offices involved with data collection for drinking water supplies. In addition, the program supports the production and distribution of quality control and performance evaluation samples for chemical and microbiological analysis for water supply laboratory certification, and develops and distributes radioactive standards and reference materials for radiochemistry analysis.

Provide Scientific Methods and Data for Protection of Ground Water Resources. The program provides for the assessment of well sampling equipment and non-contaminating pumps. The use of fiber optics and laser technology to monitor ground water quality is being evaluated. A report on the feasibility of using airborne and surface-operated instrumentation to locate abandoned wells is being evaluated. Alternate test procedures for chemistry, microbiology and radiochemistry are also being evaluated.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$199,300 results from the following action:

-Congressional Action. (+\$199,300) This increase includes +\$199,300 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,392,900 for this program, of which \$910,400 was under the Salaries and Expenses appropriation and \$482,500 was for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. This effort included the provision for developing precise, accurate, and reliable total measurement systems for monitoring drinking water supplies for official Agency use. The program provided criteria and procedures for on-site evaluation and certification of laboratories associated with drinking water monitoring and analysis, and provided evaluation of alternate test procedures.

Provide Quality Assurance Support to Agency and State Drinking Water Laboratories. This effort provided quality control procedures and guidelines to document data quality and systems performance; provided overview of Agencywide mandatory quality assurance activities of all laboratories and offices involved with data collection for drinking water; and provided support for the production and distribution of quality control and performance evaluation samples for radiochemical, chemical and microbiological analysis of drinking water supplies.

Provide Scientific Methods and Data for Protection of Ground Water Resources. The program provided support for conducting feasibility studies for a national program to locate abandoned wells, and investigated the feasibility for mapping underground movement from injection wells.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$8,749,800 and 49.6 permanent workyears for this program, of which \$3,530,700 is for Salaries and Expenses and \$5,219,100 is for Research and Development. This reflects a decrease of \$398,000 in Salaries and Expenses, and increases of \$21,000 in Research and Development and 6.0 permanent workyears. The decrease of \$398,000 in Salaries and Expenses results primarily from an accounting change. In-house research support contracts, formerly funded out of the Salaries and Expenses appropriation, will be funded in the Research and Development appropriation where it is more appropriately charged. The increase in Research and Development reflects an increased emphasis on disinfectants and disinfectant by-products, and it also reflects the transfer of exploratory research funds to the Intermedia program. The increase in permanent workyears reflects the consolidation of water-related health issues under the Drinking Water media.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. The health effects research program under this objective is designed: (1) to produce dose-response data on organic, inorganic,

and microbiological contaminants in drinking water which occur naturally or are caused by disinfection or the distribution system; (2) to develop improved test methods for developing such dose-response data; and (3) to develop methods for improving the ability to perform risk assessments.

Health research on selected contaminants such as chlorinated ethanes, vinyl chloride, chlorobenzene, asbestos, barium and fluoride will be completed this year. This research will help support ODW in evaluating contaminants for possible maximum contaminant levels (MCLs) or Health Advisories.

The relative hazards associated with the use of each of the following disinfectants and their by-products remains to be established. Health studies will be conducted on disinfectants such as chlorine, chloramine, and chlorine dioxide and on byproducts of the disinfection process. Short-term and *in vivo* bioassays will be applied to evaluate the carcinogenicity and mutagenicity of these chemicals as well as the potential for reproductive hazards.

Research will also be performed to improve methods for extrapolating health research data. The results of this research will help determine the most appropriate models to use for different chemicals in risk assessments, and, further, will contribute to resolving the controversial issues of extrapolating from high to low dose and between species. Since the majority of chemicals that occur in drinking water have not yet been identified and human exposure occurs in mixtures, research will also be conducted to assess the risks associated with simultaneous exposure to multiple chemicals in complex mixtures. This research is aimed at determining whether these as yet uncharacterized chemical mixtures pose a health risk.

Microbiological contaminants will also be investigated. This research is focused on development of methods for concentrating, isolating, and identifying infectious disease agents from drinking water and human samples to use in determining waterborne health hazards. Methods will be developed for bacteria, viruses, parasites, and newly recognized or known agents of waterborne disease.

Provide Health and Engineering Information to Assist States and Municipalities in Complying with Drinking Water Regulations. Section 1442 of the SDWA authorizes the Administrator to provide technical assistance to the States or publicly-owned water systems to assist in responding to and alleviating any emergency affecting public water systems which present a danger to public health. Health research under this objective will design the most cost-effective methods to identify and evaluate outbreaks of waterborne infectious diseases in order to aid States in improving their reporting. Assistance will be provided to the States to determine the cause of outbreaks, and remedial actions will be recommended. This activity will be conducted in conjunction with the Centers for Disease Control (CDC). Improved investigation and reporting methods will be developed and published in 1984, based on the results of specific projects undertaken in three states. A publication on the annual occurrence of waterborne infectious disease outbreaks will be produced describing the etiology of the outbreaks and the number of cases of disease.

1983 Program

In 1983, the Agency is allocating a total of \$9,126,800 and 43.6 permanent workyears to this program, of which \$3,928,700 is under the Salaries and Expenses appropriation and \$5,198,100 is for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. In 1983, emphasis is being placed on studying disinfectants and disinfectant by-products, methods to improve extrapolation of toxicological data, and investigations on the interactive effects of mixtures of known chemicals. With MCLs scheduled to be promulgated by 1984, chemical-specific

studies which directly support MCL development for volatile organic compounds are winding down, but chemical-specific studies to support Health Advisories are continuing. A report will be issued on the carcinogenic activity of chloroform in drinking water, based on dose-response data developed in long-term bioassays in rats and mice. This data is required for final promulgation of the trihalomethane standard.

Provide Health and Engineering Information to Assist States and Municipalities in Complying with Drinking Water Regulations. Surveillance and investigation of waterborne disease outbreaks in cooperation with CDC are continuing. Annual summaries of outbreaks and water system deficiencies are to be published. Pilot projects in three states for determining more effective and sensitive outbreak surveillance systems will be completed.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$12,618,400 for this program, of which \$2,970,200 was under the Salaries and Expenses appropriation and \$9,648,200 was for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. In 1982, toxicological studies focused on carcinogenicity, mutagenicity, and target organ toxicity for volatile organic compounds, e.g., trichloroethylene, tetrachloroethylene, 1,2-dichloroethane and 1,1,1-trichloroethane. The data will be used in MCL and Health Advisory development. Research on calcium, magnesium, lead, and cadmium was ongoing to evaluate the role of these inorganic chemicals found in drinking water for cardiovascular disease. Studies on the effects of lead on brain development were completed.

Provide Health and Engineering Information to Assist States and Municipalities in Complying with Drinking Water Regulations. Technical assistance and advice were provided to States and municipalities on a continuing basis. Health effects staff participated in on-site investigations of three waterborne disease outbreaks involving cases of viral gastroenteritis and cholera. Three studies were underway in Colorado, Vermont, and Washington to develop innovative approaches to improve surveillance of waterborne illness and provide better accounting of the actual incidence of outbreaks.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$5,550,200 and 45.1 permanent workyears for this program, of which \$2,722,800 is for Salaries and Expenses and \$2,827,400 is for Research and Development. This reflects a decrease of \$430,500 and \$1,399,000 respectively, and 2.0 permanent workyears. These reductions reflect the decision to stretch out completion dates for projects which are not needed in the near term in order to concentrate on more immediate issues related to near term revision of the National Primary Drinking Water Regulations (NPDWR). This also reflects a decision to transfer exploratory research funds to the Intermedia program.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. This research fulfills a continuing need to provide basic data on technology and cost to the ODW in support of developing and revising the National Interim Primary Drinking Water Regulations and their preparation of Health Advisories. Research will focus on removal of: (1) organics, particularly volatile organic compounds (VOC's) of industrial origin; (2) organics formed during treatment; and (3) naturally occurring organic compounds responsible for

producing trihalomethanes. Evaluation of those treatment processes still in the development stage for removal of organic and inorganic contaminants and investigation of existing technologies for making them more cost-effective will be addressed. Research will be initiated on removal of newly identified organics of concern in water supplies. Work on inorganics removal will concentrate on field testing of various treatment systems in different raw waters and under a range of flow capabilities. EPA will emphasize developing cost information for treatment processes where such data is inadequate, and will develop cost data for entire water systems. This will allow evaluation of tradeoffs in planning for rehabilitation of older water systems and enhance overall water utility planning and financing.

Provide Health and Engineering Information to Assist States and Municipalities in Complying With Drinking Water Regulations. This research addresses problems of small water utilities and assists States and municipalities in complying with MCLs. Research will evaluate treatment processes for removal of organic and inorganic contaminants. Work will address the removal of volatile organics from ground water. Evaluation, including costs, of package plants and processes such as reverse osmosis, ion exchange, filtration, and chemical coagulation for removing inorganic contaminants will also occur. Work on disinfection processes suitable for small systems will be emphasized. Research will also include evaluation of treatment processes for removal of disinfection by-products.

1983 Program

In 1983, the Agency is allocating a total of \$7,379,700 and 47.1 permanent workyears to this program, of which \$3,153,300 is under the Salaries and Expenses appropriation and \$4,226,400 is for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. Processes such as ion exchange, reverse osmosis, filtration and chemical coagulation are being evaluated for removing inorganics including nitrate, fluoride, arsenic, selenium, barium, and radium as well as turbidity and particulate matter. Studies are also being conducted to determine factors which contribute to corrosion of distribution system piping and to evaluate methods of corrosion control. Research on removal of microbiological contaminants is being directed to remove organisms by physical-chemical treatment processes.

Provide Health and Engineering Information to Assist States and Municipalities in Complying With Drinking Water Regulations. EPA is evaluating cost-effective treatment technologies adaptable to the needs of small systems. Progress is being made in providing alternate removal techniques for organic contaminants such as activated carbon adsorption, air stripping, coagulation, and oxidation. Pilot scale and field testing of processes for inorganic contaminants is continuing. Simple and effective disinfecting systems for use in small systems are being evaluated.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$500,000 results from the following action:

-Congressional Action. (+\$500,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports regulatory activities by evaluating existing/new techniques for Trihalomethane/Volatile Organic Compounds (THM/VOC) and radionuclides removal from drinking water.

1982 Accomplishments

In 1982, the Agency obligated a total of \$11,826,400 for this program, of which \$2,938,200 was under the Salaries and Expenses appropriation and \$8,888,200 was for extramural purposes under the Research and Development appropriation.

Provide the Health, Monitoring and Engineering Data Necessary to Develop and Revise Drinking Water Standards. Research in 1982 focused on high priority areas in support of new and revised drinking water regulations. This included evaluating data for control of industrial solvents found in drinking water and treatment technology for removal of disinfection by-products. Work also continued on developing standardized costing methodologies for drinking water treatment unit processes. Specific outputs included reports on control of trichloroethylene and other industrial solvents found in ground water and costs of treatment processes used for drinking water treatment.

Provide Health and Engineering Information to Assist States and Municipalities in Complying With Drinking Water Regulations. Research in 1982 emphasized the needs of small systems by providing data on the cost and efficiency of technology adaptable to their needs for meeting MCLs. A major effort was devoted to evaluating technology for removing volatile organic chemicals from ground water. Treatment processes for removing inorganic contaminants in a cost effective manner were also evaluated. A symposium on the problems of small systems in complying with MCLs was conducted and well attended.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$4,234,900 and 22.3 permanent workyears for this program, of which \$1,107,200 is for Salaries and Expenses and \$3,127,700 is for Research and Development. This reflects an increase of \$28,500 and a decrease of \$551,900, respectively, reflecting the transfer of exploratory research funds to the Intermedia program. Resources for ground water research remain approximately the same as 1983 levels.

Provide Scientific Methods and Data for Protection of Ground Water Resources. This research will focus on the following three areas: (1) improved methods for determining the transport and transformation of contaminants in the subsurface; (2) methods for predicting the behavior of pollutants in aquifers based on subsurface (site-specific) characteristics and on characteristics of the pollutants; and (3) evaluation of aquifer in-situ reclamation methods. Outputs will include preliminary field evaluation methods for determining the dispersion of contaminants in ground water and a manual on the use of tracer techniques to detect fluid migration around injection wells in specific hydrogeologic settings. Transport and fate research will integrate characteristics of contaminants and subsurface environments in order to predict the impacts of contamination on underground sources of drinking water. This work also will include more complete field evaluations of microcosms, models, and methods for determining dispersion, and will result in greater confidence in the predictive capability of these methods and models. Reports on cost-effectiveness of various technology and management alternatives in the aquifer restoration area will be produced in 1984 and on costs of incremental improvements in ground water quality in 1985.

1983 Program

In 1983, the Agency is allocating a total of \$4,758,300 and 22.3 permanent workyears to this program, of which \$1,078,700 is under the Salaries and Expenses appropriation and \$3,679,600 is for extramural purposes under the Research and Development appropriation.

Provide Scientific Methods and Data for Protection of Ground Water Resources. In the methods area, detection methods for parameters important to transport and fate (such as oxidation-reduction potential) will be evaluated. In the transport and fate area, which is directed toward prediction of contamination impacts on underground sources of drinking water, laboratory studies will continue to provide data on how organic chemicals and pathogens of concern behave in the subsurface. Research on sources of ground water contamination is being directed toward improving

the technology for detecting whether injection wells are contaminating aquifers and determining the impacts of particular injection wells. In 1982, research on in-situ aquifer reclamation determined the state-of-knowledge concerning practices that have been tried in the past. In 1983, methods and data are being developed to determine the costs and applicability of such practices.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982 the Agency obligated a total of \$4,866,600 for this program, of which \$1,167,000 was under the Salaries and Expenses appropriation and \$3,699,600 was for extramural purposes under the Research and Development appropriation.

Provide Scientific Methods and Data on Protection of Ground Water Resources.
The first International Conference on Ground Water Quality Research was held in October, 1981 at Rice University in Houston, Texas. In early 1982, the National Ground Water Information Center was opened to scientists, government officials, and the public, enabling computer-search access to the world's ground water literature through key ground water-related words. An article was published on an outbreak of gastroenteritis and infectious hepatitis, for the first time demonstrating the occurrence and effects of viruses in a ground water community water supply. Finally, a method was developed to determine gross microbiological activity in the subsurface, a first step in predicting the potential for biological degradation of chemicals in ground water.

Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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DRINKING WATER

Drinking Water Criteria, Standards & Guidelines

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

Criteria, Standards & Guidelines						
Salaries & Expenses	\$5,226.8	\$5,540.0	\$5,599.8	\$5,168.8	-\$431.0	
Abatement Control & Compliance	\$2,249.7	\$2,675.7	\$2,675.7	\$2,595.2	-\$80.5	
TOTAL	\$7,476.5	\$8,215.7	\$8,275.5	\$7,764.0	-\$511.5	
TOTAL:						
Salaries & Expenses	\$5,226.8	\$5,540.0	\$5,599.8	\$5,168.8	-\$431.0	
Abatement Control & Compliance	\$2,249.7	\$2,675.7	\$2,675.7	\$2,595.2	-\$80.5	
Drinking Water	TOTAL	\$7,476.5	\$8,215.7	\$8,275.5	\$7,764.0	-\$511.5
Criteria, Standards & Guidelines						
PERMANENT WORK YEARS						

Criteria, Standards & Guidelines	92.7	87.2	90.7	83.6	-7.1	
TOTAL PERMANENT WORKYEARS	92.7	87.2	90.7	83.6	-7.1	
TOTAL WORK YEARS						

Criteria, Standards & Guidelines	111.5	102.2	105.7	100.5	-5.2	
TOTAL WORKYEARS	111.5	102.2	105.7	100.5	-5.2	

DRINKING WATER

Criteria, Standards & Guidelines

Budget Request

The Agency requests a total of \$7,764,000 and 83.6 permanent workyears for 1984, a decrease of \$511,500 and 7.1 permanent workyears from 1983. Included in this total is \$5,168,800 for Salaries and Expenses and \$2,595,200 for Abatement, Control and Compliance, with decreases of \$431,000 and \$80,500, respectively.

Program Description

This activity represents the entire Headquarters component of the drinking water abatement & control program. This involves the following:

Regulations Development & Review: EPA has the responsibility to review and revise the existing National Primary Drinking Water Regulations (NPDWR) in light of latest scientific and field evidence and, as necessary, to augment existing regulations with standards for newly identified contaminants. This requirement also provides EPA an opportunity to consider innovations in current regulatory requirements to relieve the unwarranted administrative burden on State programs and the systems themselves. The information to be assembled and considered relates to occurrence of contaminants, their potential for adverse human health effects, relevant treatment technology, monitoring and reporting needs, and the economic impact of regulatory requirements. The NPDWRs contain quantitative limits for harmful contaminants, in the form of Maximum Contaminant Levels (MCLs), as well as rules for measuring and reporting contaminant levels.

The Safe Drinking Water Act prescribes a decision-making procedure for promulgating Revised NPDWR in which EPA must make two distinct determinations. Before an MCL may be set, EPA must determine by rule the level which precludes any adverse health effect, referred to as a "Recommended MCL" (RMCL). The enforceable MCL is then proposed and promulgated at a level which is as close to the RMCL as is feasible using generally available technology (taking costs into consideration).

Complementing enforceable primary drinking water standards are health advisories prepared by EPA. Health advisories are written for unregulated contaminants in response to situations such as spills or detection of contaminants. They are used principally by State and local health officials to determine the course of action to take in these potentially health-threatening situations. The health advisories contain a summary of scientific information on health risks posed by contaminants without MCLs but which may occur in some water supplies, as well as methods for identification and removal of contaminants.

Together, MCLs and health advisories serve as benchmarks for public health protection not only in regulating drinking water supplies but also in other environmental protection programs, notably those for managing hazardous waste disposal. Laboratory and technical support capacity is required for regulatory decision-making, helping to define monitoring requirements, conducting national sampling surveys essential to establishing national exposure patterns, and evaluating performance of treatment processes.

Finally, EPA has the responsibility for establishing Underground Injection Control program regulations for preventing contamination of underground drinking water sources by well injection of fluids. The SDWA prohibits all underground injection that has not been sanctioned by appropriate EPA or State regulations. Program regulations were promulgated in 1980 and 1982. EPA is now reviewing State applications for primacy and preparing to implement programs where the States cannot or decline to do so.

Implementation of PWS and UIC Programs: To assure that the ultimate objective of safe drinking water for the public is met, Headquarters must supervise implementation by EPA and the States of regulatory programs that apply NPDWRs and UIC regulations. This includes preparation of guidance for better, more effective implementation, guidance to States to incorporate regulatory changes, oversight of grant allocations, and collection of compliance data nationwide to measure environmental results. This also includes provision of central activities such as data management, allocation of State grants, and other financial management and program planning work.

Ground Water Protection: To develop a consistent effort to protect ground water, the Agency will reorient current programs to emphasize ground water protection goals, and work with States to develop their own ground water strategies. The Headquarters program will coordinate ground water activities within EPA, undertake analyses of current policies and regulations and recommend guidance on crosscutting issues for Agency decision-making, and work with Regions to develop effective support for States in strategy development.

In addition, States and communities frequently call upon the laboratory and technical services capacity maintained for the development of standards and regulations when drinking water supplies are put in jeopardy by contamination of water sources. This capacity helps identify, assess, and control contamination that poses a human health risk. As new work proceeds under the Hazardous Waste and Superfund programs to find and confine contamination sources, more threats to drinking water supplies will be discovered. This will increase the demand for such advisory services.

CRITERIA, STANDARDS AND GUIDELINES

1984 Program Request

The Agency requests a total of \$7,764,000 and 83.6 permanent workyears, of which \$5,168,800 will be for Salaries and Expenses and \$2,595,200 will be for Abatement, Control and Compliance. This represents decreases of \$431,000 and \$80,500 respectively from 1983. The reduction of \$80,500 in Abatement, Control, and Compliance reflects completion of gathering of background information for the revision of the National Primary Drinking Water Regulations. The decrease of 7.1 permanent workyears reflects the completion of certain standards development work and a reduction in national management oversight of the Public Water Systems Supervision program. The reduction of \$431,000 in Salaries and Expenses reflects the workyear reduction and decreased ADP contract costs.

Development of Revised National Primary Drinking Water Regulations to supplant standing Interim Regulations will be the centerpiece of regulatory development and review efforts in 1984. In the beginning of the fiscal year, RMCLs for inorganic, microbiological, and some pesticide contaminants will be ready for proposal. Simultaneous promulgation of RMCLs and proposals of enforceable MCLs (as required under SDWA) will occur by the autumn of 1984. The proposals will reflect measures to relieve the regulatory burden developed through national workshops. Similarly, promulgation of RMCLs and proposal of MCLs relating to volatile organic contaminants will occur during the year. Since EPA must proceed with development of RMCLs before it can address the official MCLs, final promulgation of both sets of regulations would occur in 1984-85.

This will leave regulatory provisions for radionuclides and organic contamination arising from disinfection to be reviewed and finally promulgated as Revised NPDWRs. This work will begin in 1984. Completion of the national occurrence survey in 1984 for inorganics and radionuclides will support consideration of radionuclide standards.

The last group of Interim standards to be reviewed for revision will be the Trihalomethane (THM) regulations, promulgated in 1979. It was recognized when these regulations were put into effect that THMs were only one kind of organic chemical by-product from disinfection. As such, THMs are only a small fraction of the total organic content found in drinking water, and the overall adverse human health potential remains largely undetermined. In reviewing whether the current MCL and monitoring requirements for THMs provide adequate protection, EPA must address the broader issue of health risks posed by both the higher molecular weight organic contaminants in finished drinking water and alternative disinfectants themselves. The regulatory review will begin its work in 1984 based on the current work of the Research and Development program's health research efforts. Proposal of revised regulations in all these categories will better define the list of chemicals for which health advisories will be necessary; preparation of further advisories will proceed.

Full UIC program primacy for an additional 12 States is expected to be granted in 1984, bringing the total number of UIC primacy States to 39. As the press to delegate UIC programs winds down, the emphasis will shift to providing the proper program guidance to the nationwide UIC program to ensure consistency of implementation. EPA will continue to encourage those remaining States without programs to assume primary enforcement responsibility. Compilation of nationwide compliance information will begin, providing the UIC program a baseline from which to consider changes to program technical requirements. The companion compilation for nationwide compliance with PWS program requirements will also continue, as will ongoing financial management, program planning, and policy direction.

Work to pursue a consistent approach to ground water protection will proceed. This will include development of guidance on cross-cutting regulatory issues related to protection of ground water resources, assembly of technical information to support State development of ground water management strategies, and preparation of a relevant research agenda.

1983 Program

The Agency is allocating a total of \$8,275,500 and 90.7 permanent workyears for this program, of which \$5,599,800 is for Salaries and Expenses and \$2,675,700 is for Abatement, Control and Compliance. Extramural funds are required for projects to assemble the latest toxicological information on contaminants of concern, to compile data on human exposure to waterborne contaminants supporting determination of new primary standards, to collect data on treatment technology performance and cost and the financial impact of regulatory requirements, and to provide analytic support and technical expertise to address ground water contamination issues.

An Advance Notice of Proposed Rulemaking for review and revision of Primary Drinking Water Regulations now in force will be issued in 1983, followed by the same kind of nationwide consultation employed in development of VOC regulations. EPA will seek from participants their ideas on innovations, such as more flexible monitoring and reporting requirements, that will meet the basic requirements of regular monitoring of delivered drinking water to assure its safety. Present standards cover inorganic, radionuclide, and microbiological contaminants, turbidity, and some organic contaminants (pesticides and THMs). A national survey to characterize radionuclide and other inorganic occurrences will be conducted in conjunction with the revision. Recommended MCLs for the group of VOCs will be ready for proposal during 1983. Preparation of health advisories and other general efforts to delineate potential health risk in water supplies will continue.

During 1983, one of the highest program priorities will continue to be processing State applications for UIC primacy. Twenty-three State program delegations are expected to be approved during the year. Another major effort will be the compilation of nationwide compliance data for public water systems for the previous year. The automated data reporting systems used to facilitate this will be refined

in light of the experience in previous years. Applications for sole source aquifers will continue to be reviewed as received. Management of State grant allocations and other financial management and program planning tasks will also continue.

During 1983, EPA will orient its programs to protect ground water supplies, prepare the ground work for State-developed protection strategies, and reinforce ground water research efforts.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$59,800 results from the following action:

-Congressional Action. (+\$59,800) This increase includes +\$59,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated \$7,476,500 for this program, of which \$5,226,800 was for Salaries and Expenses and \$2,249,700 was for Abatement, Control and Compliance. Regulations development and review activities involved consideration of new MCLs for particular volatile organic compounds (VOCs) found with considerable frequency in drinking water supplies from ground water sources. The formal process began with issuance of an Advance Notice of Proposed Rule Making in March 1982, starting a series of workshops to provide nationwide consultation on the full range of issues pertinent to key regulatory decisions. A nationwide survey of organic contamination in ground water source systems to establish specific chemical occurrence and levels was conducted. Settlement of the last legal challenge to the THM regulations resulted in a technical amendment to the regulation proposed in March 1982. This resolved uncertainties over engineering remedies which systems are expected to take to comply with the regulations.

Health advisories for 16 different compounds were prepared in 1982. In addition, EPA has responsibility to assure that substances added to drinking water either deliberately or inadvertently (i.e., from corrosion) do not pose a human health risk. Efforts were begun to arrange for a third party to perform assessments of the health risk of additives under EPA guidance.

The first priority in assuring national implementation of the UIC regulatory program in 1982 was to review UIC program applications received from States. The process was completed for four States in 1982, and 20 additional State applications were in various stages of review. Guidance documents for direct EPA implementation of the UIC program were also developed. Through compilation of compliance data for community water systems, EPA developed a baseline of drinking water quality provided by the Nation's systems by which to measure environmental results. A companion effort developed for UIC will proceed as the State and EPA programs are implemented. The drinking water program was also designated by the Office of Water to review the information requirements of all EPA water programs to streamline data collection.

A proposed approach to better coordinate the Agency's ground water activities was developed. Starting from the premise that States have the lead role, the approach reviewed what EPA can do to support the States and better implement EPA programs to protect the quality of ground water.

DRINKING WATER

Drinking Water State Program Resource Assistance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Public Water Systems Supervision Program Grants					
Abatement Control & Compliance	\$29,456.4	\$23,560.0	\$27,450.0	\$21,204.0	-\$6,246.0
TOTAL	\$29,456.4	\$23,560.0	\$27,450.0	\$21,204.0	-\$6,246.0
Underground Injection Control Program Grants					
Abatement Control & Compliance	\$6,379.9	\$5,540.2	\$7,074.5	\$6,094.2	-\$980.3
TOTAL	\$6,379.9	\$5,540.2	\$7,074.5	\$6,094.2	-\$980.3
Special Studies & Demonstrations					
Abatement Control & Compliance	\$1,822.5		\$1,900.0		-\$1,900.0
TOTAL	\$1,822.5		\$1,900.0		-\$1,900.0
Training					
Abatement Control & Compliance	\$191.1		\$169.0		-\$169.0
TOTAL	\$191.1		\$169.0		-\$169.0
Underground Injection Control Implementation Program					
Abatement Control & Compliance	\$21.4				
TOTAL	\$21.4				
TOTAL:					
Abatement Control & Compliance	\$37,871.3	\$29,100.2	\$36,593.5	\$27,298.2	-\$9,295.3
Drinking Water State Program Resource Assistance	TOTAL	\$37,871.3	\$29,100.2	\$36,593.5	\$27,298.2 -\$9,295.3

DRINKING WATER

State Program Resource Assistance

Budget Request

The Agency requests a total of \$27,298,200 for the Abatement, Control and Compliance appropriation, of which \$21,204,000 is for the Public Water Systems Supervision Program (PWS) and \$6,094,200 is for the Underground Injection Control Program (UIC). This figure represents a decrease of \$9,295,300 from 1983, resulting in a reduction of \$6,246,000 for PWS grants, \$980,300 for UIC grants, \$1,900,000 for the National Rural Water Association, and \$169,000 for the fellowship program. We are not requesting funds to support the National Rural Water Association or to continue the fellowship program.

Program Description

The intent of the Safe Drinking Water Act is that States should assume the primary role for implementing and enforcing the drinking water and the underground injection control regulations. Federal financial assistance, in the form of grants, is provided to States to develop and maintain these programs. To be eligible for grants, States must have primary enforcement responsibility.

Public Water System Supervision Program Grants -- This program provides grants to States which have been delegated primary enforcement authority for implementing a Federally approved PWS program. EPA may also use the funds allotted to a non-primacy State to defray the cost of Federal implementation of the program.

Underground Injection Control Grants -- This program supports State activities in implementing the Underground Injection Control program. As with the PWS program, should a State not accept program delegation, EPA may use the funds allotted to that State for program implementation.

Special Studies and Demonstrations -- This program has included resources for the National Rural Water Association for training and technical assistance to operators of small rural water systems.

Training -- This program has included funds for fellowships to State personnel in the drinking water field, in both public water systems supervision and underground injection control, and for academic grants.

PUBLIC WATER SYSTEMS SUPERVISION PROGRAM GRANTS

1984 Program Request

The Agency requests \$21,204,000 for Abatement, Control and Compliance for public water system supervision grants. This represents a decrease of \$6,246,000 from 1983. Greater State self-reliance may be expected for PWS programs since most States have had over four years of program primacy. States may offset these reductions by introducing user fees on water systems to pay for State costs for portions of the program. These funds will be used by the States or by EPA for implementation activities in all 57 States and Territories and on Indian lands. Because the States match Federal support almost dollar for dollar, the 23% reduction to the Federal portion of this program translates to approximately half of that reduction to the total State and Federal program.

These resources will fund State activities to improve compliance with drinking water regulations and to respond to incidents in which the safety of drinking water supplies is threatened. These include program and financial management, development of State annual reports, maintenance of emergency response plans, and granting of variances and exemptions. The Agency is considering the need for establishing regulations for volatile organic contaminants (VOCs). Should it be determined that VOCs

pose a health risk and regulations are developed, the States then will be required to initiate regulatory changes to include this requirement and to begin to certify State laboratories for conducting analyses required by this regulation. They will maintain inventories of public water systems and recordkeeping systems for compliance data. The States will also provide surveillance and technical assistance to public water systems by conducting sanitary surveys, collecting and analyzing samples, and reviewing sampling data submitted by the systems and laboratories. By developing expertise at the State level through training, the States are able to provide advice and assistance to public water systems regarding operation, maintenance, treatment, and quality control. This type of assistance will contribute to attaining full compliance.

1983 Program

The Agency is allocating \$27,450,000 for public water systems supervision grants to 57 States under Abatement, Control and Compliance. Changes were made to the Agency general grant, regulations to provide EPA the use of grant funds allotted to non-primacy States for direct implementation activities. Fifty-one primacy States are receiving grants, and the Regions are using the funds allotted to the remaining six non-primacy States for EPA implementation activities. The States continue to maintain their current programs by providing the necessary administrative functions requisite for smooth operation of the program such as program planning and management, compilation of annual compliance reports, and maintenance of an emergency response capability. They also assist in the event of waterborne communicable diseases and direct their efforts toward those instances where major health threats are involved.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$3,890,000 results from the following action:

-Congressional Action. (+\$3,890,000) The Congressional add-on to this activity of +\$3,890,000 to the Abatement, Control and Compliance appropriation was for the State drinking water grants programs.

1982 Accomplishments

The Agency obligated \$29,456,400 under Abatement, Control and Compliance to the 50 States and Territories which had assumed primary enforcement responsibility. During 1981 the compliance rate among the 59,000 community systems with the microbiological MCL was 91.5%. Of the systems not complying, less than 1% were persistent violators, a decrease of over 66% from 1980, when 3% of the systems were persistent violators. While the final figures for 1982 are not yet available, it is estimated that the compliance rate will continue to increase.

Maintaining compliance through surveillance and technical assistance was the major activity funded by the grants. Emphasis was also placed on conducting sanitary surveys in systems which proved to be persistent violators of bacteriological or turbidity requirements or violators of other MCL requirements. The States followed up to ensure compliance was achieved and, when necessary, initiated enforcement actions. A portion of the grant was devoted to ongoing management activities, which included coordination with other State and Federal programs and local institutions, preparation of regulatory changes required by State legislation or Federal regulatory amendments, administrative activities, and grants management.

Other major accomplishments included the assurance that systems were effectively monitoring for compliance with the trihalomethane (THM) regulations. These regulations were promulgated by the Agency in November 1979 and required that systems serving populations between 10,000 and 75,000 begin monitoring for THMs in 1982 with full enforcement of the regulations in 1983. By the end of 1982, 31 States had adopted the THM regulations.

UNDERGROUND INJECTION CONTROL PROGRAM GRANTS

1984 Program Request

The Agency requests \$6,094,200 for Abatement, Control and Compliance, a decrease of \$980,300, which reflects savings due to program reform, particularly by providing greater flexibility in program implementation and simplifying administrative requirements and State reporting requirements for the grants. The funds will support State and EPA implementation of the UIC program in all 57 States and Territories and on Indian Lands. States must have primacy to be eligible for funding. During 1984, an additional 12 States will achieve primacy, leaving 18 States and Territories and Indian lands where EPA must implement the program.

The States or EPA will initiate or continue permitting activities for new Class I (waste disposal), II (oil and gas), and III (mining) wells, conduct on-site inspection of Class I, II, and III wells to ensure that no contamination of underground drinking water sources occurs, monitor compliance reports, oversee mechanical integrity testing to ascertain whether or not wells are properly constructed to prevent possible contamination, and begin the closure of wells injecting hazardous waste into underground water sources. The States will also develop an emergency response program which will provide them with a greater response capability in the event of an emergency.

1983 Program

The Agency is allocating \$7,074,500 under Abatement, Control and Compliance for use in implementing Underground Injection Control programs. Grants will be awarded to the 39 States which either have primacy or are working toward primacy. EPA will use the funds allotted to the remaining States for direct implementation. At this time, States are at various stages of implementing the UIC programs. The primacy States will begin issuing permits for new Class I, II and III wells, conducting on-site surveillance inspections, and collecting and reviewing mechanical integrity testing data. In the remaining States which have indicated their intent to assume primacy, emphasis will be placed on program development activities such as completing the necessary regulatory and statutory revisions, conducting public hearings, developing primacy applications, conducting inventories, and completing aquifer mapping. Depending upon when these States apply for and receive primacy, a percentage of their grant could support the initiation of permitting and surveillance activities. EPA direct implementation activities will include developing State-specific regulations, publishing the proposed program in the Federal Register, starting the assessment of Class V (miscellaneous injection) wells, establishing procedures for review and issuance of permits, and reviewing and organizing data as well as establishing a data system to maintain inventory and compliance data.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,534,300 results from the following action:

-Congressional Action. (+\$1,534,300) The Congressional add-on to this activity of +\$1,534,300 to the Abatement, Control and Compliance appropriation was for the Underground Injection Control State grants program.

1982 Accomplishments

The Agency obligated a total of \$6,379,900 under Abatement, Control and Compliance to support implementation of the Underground Injection Control program in 57 States and Territories and on Indian Lands. Also in 1982 EPA obligated \$21,400 of Abatement, Control and Compliance funds for the UIC Implementation Program. Those activities have continued under the UIC Grants program element.

The major activity supported by the grants was the review of existing State laws and regulations, modification of these laws and regulations to conform with Federal requirements, development of primacy applications including conducting public hearings, completion of remaining aquifer mapping and well inventories, assessment of Class V wells, training of well operators, and assistance in emergencies. In direct implementation States, EPA funded support activities which are necessary to implement a Federal program, such as inventories, assessments, training, and public meetings.

SPECIAL STUDIES AND DEMONSTRATIONS

1984 Program Request

No funding is requested for 1984 because EPA believes that the National Rural Water Association has demonstrated the effectiveness of establishing grass-roots organizations to provide training and technical assistance to small water systems. EPA has allotted \$9.4 million to this effort since 1977 to improve compliance with the SDWA among small rural water systems. The Agency believes that the State associations should be able to move toward self-sufficiency through the use of dues and training fees.

1983 Program

The Agency is allocating through a Congressional add-on a total of \$1,900,000 under the Abatement, Control and Compliance appropriation for this program. These funds continue to support the efforts of the National Rural Water Association to improve compliance with the SDWA among small rural water systems. The program is being expanded to include two additional State associations, bringing the total of States participating to 33. With this support, it is estimated that approximately 400 workshops will be held by the States to train operators of the small systems in the requirements of the SDWA. Five States continue their training program specifically for Indian lands. Approximately 15,000 operators will benefit from these courses. The State associations are expected to provide technical assistance to an estimated 10,000 cases.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,900,000 results from the following action:

-Congressional Action. (+\$1,900,000) The Congressional add-on to this activity of +\$1,900,000 to the Abatement, Control and Compliance appropriation was for the State rural water training and technical assistance programs.

1982 Accomplishments

During 1982, the Agency obligated a total of \$1,822,500 from the Abatement, Control and Compliance appropriation to support activities of the National Rural Water Association. During this time, the NRWA provided funds to 31 State associations. With this support, the States were required to conduct at least 12 workshops at which small rural water system operators were trained in all facets of water system operations, maintenance, and management. The goal of this training program is to improve the compliance rate among these small rural systems. Over 10,000 operators representing over 7,500 water systems received this on-site training. The Association also initiated similar training programs designed to meet the needs of system operators on Indian lands in five States. The NRWA also provided technical assistance in over 8,000 instances.

TRAINING

1984 Program Request

There is no request because EPA believes that there are sufficient opportunities for State personnel to obtain further training in environmental and public health fields without Federal support.

1983 Program

The Agency is allocating through a Congressional add-on a total of \$169,000 under the Abatement, Control and Compliance appropriation. These funds will continue to support the fellowship program for State agency personnel in areas relating to the public water systems supervision and underground injection control programs. This assistance will also provide for academic grants to universities.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$169,000 results from the following action:

-Congressional Action. (+\$169,000) The Congressional add-on to this activity of +\$169,000 to the Abatement, Control and Compliance appropriation was for academic training.

1982 Accomplishments

In 1982, the Agency obligated \$191,100 under the Abatement, Control and Compliance appropriation. These funds were used to provide academic training to 73 State agency personnel involved in public water system supervision programs and in ground water management.

DRINKING WATER

Drinking Water Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						

PROGRAM						

Public Water Systems Supervision Program Assistance						
Salaries & Expenses	\$5,353.3	\$4,698.2	\$5,018.3	\$4,992.9	-\$25.4	
Abatement Control & Compliance	\$781.3		\$34.3		-\$34.3	
TOTAL	\$6,134.6	\$4,698.2	\$5,052.6	\$4,992.9	-\$59.7	
Underground Injection Control Program						
Salaries & Expenses	\$2,776.1	\$3,974.4	\$3,831.6	\$4,286.7	\$455.1	
Abatement Control & Compliance	\$42.2					
TOTAL	\$2,818.3	\$3,974.4	\$3,831.6	\$4,286.7	\$455.1	
TOTAL:						
Salaries & Expenses	\$8,129.4	\$8,672.6	\$8,849.9	\$9,279.6	\$429.7	
Abatement Control & Compliance	\$823.5		\$34.3		-\$34.3	
Drinking Water Management	TOTAL	\$8,952.9	\$8,672.6	\$8,884.2	\$9,279.6	\$395.4
PERMANENT WORKYEARS						

Public Water Systems Supervision Program Assistance	145.1	128.1	128.1	119.1	-9.0	
Underground Injection Control Program	73.7	82.2	90.6	90.6		
TOTAL PERMANENT WORKYEARS	218.8	210.3	218.7	209.7	-9.0	
TOTAL WORKYEARS						

Public Water Systems Supervision Program Assistance	158.9	142.5	142.3	132.4	-9.9	
Underground Injection Control Program	91.8	110.8	118.6	120.8	2.2	
TOTAL WORKYEARS	250.7	253.3	260.9	253.2	-7.7	

DRINKING WATER

Drinking Water Management

Budget Request

The Agency requests a total of \$9,279,600 and 209.7 permanent workyears for 1984 for Salaries and Expenses. This represents an increase of \$429,700 in Salaries and Expenses and decreases of \$34,300 in Abatement, Control and Compliance and 9.0 permanent workyears from 1983.

Program Description

This subactivity, composed of two programs, includes EPA Regional efforts to prevent and control the contamination of drinking water supplies and their sources. The Public Water Systems Supervision program (PWS) relates to applying primary drinking water regulations to water supplies to assure safe drinking water. The Underground Injection Control program (UIC) regulates a potential threat to underground drinking water sources, and also covers two complementary efforts: designation and scrutiny of sole source aquifers and, in the near future, support to State strategy efforts to protect ground water from contamination.

Both programs involve three general functions. The first is direct implementation of regulatory provisions in States not delegated primary enforcement responsibility and on Indian lands. The second involves a cooperative effort with primacy States to develop and maintain programs in light of regulatory and technical developments and to assure that the Federal mandates are being fully implemented. The third function involves those responsibilities intrinsic to a Regional presence, including program management and support, close consultation with other Federally mandated waste management programs, and advisory services for State and local officials.

Public Water Systems Supervision -- This program includes Regional activities related to implementing drinking water regulations. The Regional Offices support States in administering PWS programs and implement programs in those States which do not have primacy and on Indian lands, where States do not have civil jurisdiction. The Regions assist States where specific problems are identified, evaluate State programs, and administer PWS grants.

Underground Injection Control -- This program includes Regional activities related to the implementation of the UIC program, such as assistance to States in developing acceptable programs and administering State-specific programs as part of EPA's implementation responsibility. The Regions also review sole source aquifer designation petitions and Federally financed projects in the area of designated sole source aquifers. Grant awards are also administered by the Regions.

PUBLIC WATER SYSTEMS SUPERVISION PROGRAM ASSISTANCE

1984 Program Request

The Agency requests \$4,992,900 for Salaries and Expenses and 119.1 permanent workyears. This represents a decrease of \$59,700 and 9.0 permanent workyears from 1983 and reflects a reduced workload attributable to the high rate of delegations and increasing State familiarity with and ability to implement the program. The high rate of program delegations in the PWS program is a direct result of the Regions' full and active participation with the States in developing their programs and the guidance and assistance the Regions continue to provide after States have received primary enforcement responsibilities. The Agency's grant

regulations allow EPA to use non-primacy State grant funds for direct implementation activities. While the Regions continue to encourage the assumption of primacy by the remaining six States, they will also be responsible for the direct implementation of the Public Water Systems Supervision program in these six non-primacy States/Territories and on Indian lands and for overview of primacy States.

In non-primacy States, monitoring compliance with primary regulations among the community systems and working with small systems to increase the rate of compliance will be emphasized. The Regions will initiate formal enforcement actions against systems with persistent violations. The Regions will continue to maintain an inventory of all non-community water systems and to deliver materials on self-monitoring and self-compliance to ensure these systems are fully aware of the requirements in the drinking water regulations. In assuring compliance the Regions will also be responsible for providing advice and guidance on removal and future prevention of ground water contamination of public water supplies. In addition, the Regions will follow up on suspected well water contamination and assess the health risk posed from continued use. In their efforts to assure the accuracy of sampling procedures and analysis, the Regions will implement a quality assurance program for State principal laboratories and commercial laboratories based on the satisfactory analysis of performance evaluation samples. In laboratories where there is evidence of performance evaluation problems, the Regions will follow up with on-site visits.

To increase compliance in primacy States, the Regions will encourage States to develop enforcement strategies directed at small systems, particularly those where health risks are identified. They will also evaluate the effectiveness of the State programs by conducting mid-year reviews and following up with the States in areas where specific problems were detailed. In the grants management area, the Regions will award grants to the primacy States, prepare guidance for the upcoming grant year, and review draft applications. Negotiations will be held between the State and EPA on program plans. They will also implement a laboratory certification program for State principal laboratories to include analysis for all new regulatory requirements.

In the Regional management area, the Regions will be responsible for planning, implementing, and evaluating Regional program activities, providing input into the development of National policies and regulations, and responding to Congressional inquiries and citizen complaints. The Regions will assess underground and surface water contamination incidents which have an impact on public water supplies, advise programs on precautions necessary to protect public health, and coordinate activities with Superfund and other emergency response programs at the Regional, State, and local levels. They will work with the National program in providing health advice on the toxicology of unregulated contaminants identified in public water supplies. The Regions will also coordinate with other relevant programs to provide maximum benefits from Agency resources to protect ground waters which supply sources for public water systems. They will, for example, verify concentration levels in suspected incidents of contamination and follow up as required.

1983 Program

In 1983 the Agency is allocating a total of \$5,052,600 and 128.1 permanent workyears, of which \$5,018,300 is for Salaries and Expenses and \$34,300 is for Abatement, Control, and Compliance. Region VII will place special emphasis on completing the transfer of compliance duties back to Iowa, ensuring that no interruption in regulatory coverage occurs. The Regions with non-primacy States will continue to work with them to assume primacy. One additional Territory, Northern Marianas, assumed primacy on December 4, 1982, bringing the total to 51.

In the remaining six non-primacy States and on Indian Lands, Regional activities will continue to focus on assuring compliance among small systems. The Regions will emphasize compliance efforts in those systems which persistently refuse to monitor or that pose serious health threats. They will conduct sanitary surveys, which are the primary means of technical assistance to systems with water quality problems. When violations are detected, the Regions will issue warnings

and initiate formal follow up. They will also maintain and analyze data on compliance for input into the annual report. They will assist community systems with Maximum Contaminant Level (MCL) violations in an effort to help solve individual problems. Guidance and assistance will be provided as necessary.

Regional overview efforts in primacy States will focus on State program accountability to assess the manner in which the program and management activities relate to the statutory goals of the Safe Drinking Water Act, to allow for an information and feedback exchange between the Federal and State governments which will provide insight into the progress of the programs as well as problems, and to prevent the duplication of efforts at both the State and Federal levels. They will continue grants administration activities, assuring that the State applications comply with the pertinent grant regulations, conducting audits and closing out grants when audits are complete, and reviewing draft applications for the upcoming grant year. Another major activity will be conducting State evaluations. These evaluations provide valuable feedback to the States as well as information to the Regions and to Headquarters on the effectiveness of the implementation of regulatory requirements by the States. Following completion of the State evaluations, the Regions will follow up to ensure areas with consistent problems have been acted on.

Regional management activities include the administrative and compliance support needed in both primacy and non-primacy States. The activities include responding to Congressional inquiries and citizen complaints, analyzing compliance data for inclusion into annual reports, and assisting States in their efforts to plan and implement programs which provide increased compliance. They will assist the States in revising their programs to include any regulatory updates. Efforts will also be made to expand the coordination of the public water system supervision program with other related programs at the Regional and State levels to ensure adequate protection of drinking water sources in the event of a contamination incident.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$354,400 results from the following actions:

-Congressional Action. (+\$14,000) This increase includes +\$14,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$340,400) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$306,100 to the Salaries and Expenses appropriation and a net increase of +\$34,300 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

During 1982, the Agency obligated \$6,134,600, of which \$5,353,300 was for Salaries and Expenses and \$781,300 was for Abatement, Control and Compliance. These funds supported Regional programs in implementing the Public Water Systems Supervision program in non-primacy States, overview of primacy State activities, and program management to ensure efficient operation of the programs. One additional State, Iowa, which relinquished primacy in late 1981 primarily because of budget constraints, reassumed primacy, bringing the total to 50. The Region also worked closely with the Northern Mariana Islands to promote their assumption of primary enforcement responsibility.

In non-primacy States, the Regions focused on improving the compliance rate by issuing formal warnings for violations, issuing variances or exemptions with compliance schedules to those systems which could not comply with the regulatory

requirements, and initiating formal follow-up in community systems which failed to meet regulatory requirements. The Regions also continued to expand their laboratory certification program to include analysis required by the recently promulgated trihalomethane regulations. The Regions continued to maintain the inventory data and to prepare the annual report. The Regions assisted in emergency situations and also followed up on instances of ground water contamination which had the potential to contaminate public water systems' source waters by providing analytical services to quantify the extent of the problem and advice on containment, treatment, and other potential responses.

Regional activities in primacy States focused on overview of the State activities, including a mid-year evaluation of the individual programs which served as an indicator of the overall effectiveness of the public water system supervision program. They also maintained and analyzed compliance data to assure that the high level of compliance was continued and provided guidance and assistance in instances where compliance was not easily attained. A series of seminars which demonstrated techniques to be applied in verifying compliance data was held in all ten Regions and attended by over 40 States. Another high priority Regional activity associated with primacy States has been the administration of the grants program. The Regions performed program planning, provided input into national program policies, and coordinated policies and activities with other related programs to establish consistent procedures for protecting drinking water.

UNDERGROUND INJECTION CONTROL PROGRAM

1984 Program Request

The Agency requests \$4,286,700 in Salaries and Expenses and 90.6 permanent workyears, an increase of \$455,100 over 1983. The increase is attributable to increased workyear costs primarily due to Commissioned Corps benefits and Medicare.

It is estimated that an additional 12 States will receive full primacy for a total of 39. The Regions will continue to work with the remaining non-primacy States in an effort to achieve complete delegation of the program. In these non-primacy States and Territories and on Indian Lands, the Regions will continue to maintain the inventories of injection wells, will perform technical evaluations of permit applications for new Class I, II, and III wells, and will review testing data and operator reports to ensure compliance with the regulations. Compliance data will be compiled into State annual reports and transmitted to Headquarters for review to determine the effectiveness of the program requirements and the need for regulatory change.

The Regions will conduct on-site inspections on the construction and testing of injection wells and will continue the assessment of Class V (miscellaneous injection) wells to determine their number and contamination potential. Following this review, and similar assessments by the primacy States, the Agency will consider whether Class V wells need to be regulated by rule or other means as appropriate. EPA will also provide technical review and evaluate permit applications for new and existing wells as well as follow up on compliance through phone calls, letters, and visits. Similar activities will be conducted on Indian Lands.

Regional support to primacy States will include guidance and advice relating to regulatory and technical issues and response to State inquiries. As part of the grants management function, they will assure that the States comply with applicable grant regulations, track grant expenditures and withdrawals, conduct a review of the State financial status report, and audit and close out grants. In their efforts to determine the effectiveness of the UIC regulatory requirements, the Regions will collect and analyze State annual report data as well as conduct a mid-year evaluation of State programs.

Continuing with their efforts to prevent the contamination of aquifers, the Regions will review and process petitions for the designation of sole source aquifers and, when resources are available, review proposed Federally financed projects in the area of a designated aquifer to assure that they will not present any contamination potential.

The Regions will assist States in assessing their own ground water protection needs and developing and implementing State ground water strategies. When appropriate, the Regions will facilitate discussions between States to promote interstate coordination. With the expertise available in the Regions, they will provide ground water management advice to the States and other Federal agencies on such issues as tracking plumes of contaminated ground water to prevent contamination of major drinking water sources. The Regions will also play a major role in coordinating EPA's program efforts for protection of ground water.

1983 Program

In 1983 the Agency is allocating a total of \$3,831,600 under Salaries and Expenses and 90.6 permanent workyears for this program.

The Regions are making a concerted effort to accelerate delegation of the UIC program. It is anticipated that an additional 23 States will achieve full primacy for a total of 27. Two additional States will receive delegations for their oil and gas programs only, and one additional State will receive delegation for the non-oil and gas programs. The Regions will continue to review program plans and legislative authority and will also provide grants which will enable these States to initiate the beginning phases of their programs, such as permitting and compliance follow up. The Regions also provide assistance in emergency situations.

In non-primacy States, the Regions continue to develop and begin to implement the Federal program. This includes developing regulations for each State, proposing the program in the Federal Register, conducting public hearings, reviewing data and establishing a system for data collection, and beginning the assessment of Class V wells.

The Regions continue their review and processing of sole source aquifer designation petitions. It is anticipated that seven additional petitions will be approved during 1983, bringing the total to 17. They are responsible for reviewing any proposed Federally financed project in the area of a designated aquifer to determine if there is any contamination potential.

The Regions continue to work with the States in developing their ground water protection activities. Emphasis is placed on assisting States in determining the extent of their ground water problems and making full use of existing State and Federal programs to address them. The Regions provide advice on such issues as plume tracking and assist Headquarters in developing the Agency's approach to ground water protection. The Regions continue to expand their efforts to coordinate the ground water program with other related programs to enhance their ability to better respond to contamination of ground water supplies.

Other activities include basic program management activities such as Congressional response, data management, program planning, and information requests.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$142,800 results from the following actions:

-Congressional Action. (+\$191,100) This increase includes +\$191,100 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$333,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$333,900 to the Salaries and Expenses appropriation.

1982 Accomplishments

During 1982, the Regions obligated \$2,818,300, of which \$2,776,100 was for Salaries and Expenses and \$42,200 was for Abatement, Control and Compliance. Regional efforts focused on promoting delegation of the Underground Injection Control (UIC) program to the States. The Regions worked closely with the States in developing their primacy applications by reviewing existing programs, legislation, regulations, and draft applications. The Regions conducted the initial review of the final applications and then forwarded them for Headquarters review and the Administrator's approval. By the end of 1982, four States had assumed full primary enforcement responsibility for all aspects of the UIC program; two States were granted program delegation for the oil and gas program only; and one State received delegation for its non-oil and gas program. The Regions also awarded and monitored underground injection control grants and provided assistance in emergency situations.

For States that indicated their unwillingness or inability to assume primacy, the Regions began establishing the institutional framework and information base needed to implement the program. Such activities included completing aquifer mapping, developing an inventory of injection wells, developing State-specific program plans, and establishing an emergency response capability.

The Regions conducted technical reviews of sole source aquifer designation petitions. By the end of 1982, a total of 10 aquifers had been designated as sole or principal sources of drinking water, of which two were approved in 1982. The Regions also reviewed Federally financed projects in the area of designated aquifers to assure the prevention of possible contamination.

The Regions coordinated their ground water activities under the Drinking Water program with other related programs such as Hazardous Waste, Superfund, and Toxics in an effort to better utilize the Agency's resources and to provide the necessary expertise when contamination incidents occur. They also conducted general program management activities such as program planning, response to Congress and public inquiries, and input into National policy development.



Enforcement

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DRINKING WATER

Drinking Water Enforcement

		ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)						
PROGRAM						

Drinking Water Enforcement						
Salaries & Expenses		\$685.4	\$856.1	\$882.1	\$1,114.3	\$232.2
	TOTAL	\$685.4	\$856.1	\$882.1	\$1,114.3	\$232.2
TOTAL:						
Salaries & Expenses		\$685.4	\$856.1	\$882.1	\$1,114.3	\$232.2
Drinking Water Enforcement	TOTAL	\$685.4	\$856.1	\$882.1	\$1,114.3	\$232.2
PERMANENT WORKYEARS						

Drinking Water Enforcement		20.3	25.7	25.7	29.7	4.0
TOTAL PERMANENT WORKYEARS		20.3	25.7	25.7	29.7	4.0
TOTAL WORKYEARS						

Drinking Water Enforcement		21.2	25.7	25.7	29.7	4.0
TOTAL WORKYEARS		21.2	25.7	25.7	29.7	4.0

DRINKING WATER

Drinking Water Enforcement

Budget Request

The Agency requests a total of \$1,114,300 and 29.7 permanent workyears for 1984, an increase of \$232,200 and 4.0 workyears from 1983. All of this amount is for Salaries and Expenses. This program element includes both Headquarters and Regional resources.

Program Description

The Safe Drinking Water Act provides for State assumption of the drinking water program and requires EPA to implement the program in States that have not been delegated enforcement responsibility. The Act includes significant self-reporting mechanisms as its major enforcement activity. EPA Regions must fulfill the enforcement responsibilities for non-primacy jurisdictions, which relate to the program support to legal actions against violators of statutory provisions. These include the following: developing technical documentation for cases referred for prosecution, collecting supplementary field data through site inspections and sampling to support enforcement actions; providing for expert testimony; and participating in negotiations with violators. The Public Water Systems Supervision (PWS) enforcement responsibility also entails developing critical data relating to taking emergency action in the face of imminent health endangerments under Section 1431.

The Underground Injection Control regulations provide that EPA delegate programs to States that are able and willing to assume primacy for the UIC program. The Agency projects that 39 States will be delegated primacy by the end of 1984. Enforcement program activities include approving of the enforcement sections of primacy applications for State UIC programs, issuing UIC permits in non-primacy States, working with the UIC drinking water program in establishing a Federal UIC program in non-primacy States, initiating enforcement action against violators of the regulations, and responding to emergencies when necessary.

DRINKING WATER ENFORCEMENT

1984 Program Request

The Agency requests a total of \$1,114,300 and 29.7 permanent workyears for this program, all of which will be for the Salaries and Expenses appropriation. This is an increase of \$232,200 and 4.0 permanent workyears from 1983 and reflects the need for EPA to issue UIC permits in non-primacy States and Territories and on Indian lands. Technical assistance and support will be provided to the Office of Legal and Enforcement Counsel in the development of warranted civil and criminal referrals for PWS and UIC activities.

During 1984, the drinking water enforcement program will continue to supply the technical program support to legal actions taken against violators of PWS and UIC provisions in jurisdictions where States have not assumed primacy enforcement responsibility. This will include developing technical information for cases referred to EPA's Office of Enforcement Counsel and ultimately to the Department of Justice, collecting supplementary field data for active cases, providing for expert testimony, and participating in negotiations with violators. EPA will also provide such services for cases referred by State authorities if they choose to pursue violations under Federal law.

Regional enforcement programs will perform the administrative aspects of UIC permitting in non-primacy jurisdictions. This entails the distribution and receipt of permit applications, the administrative review of the proposal for permitting (including close consultation with the Regional technical experts for inputs to permit provisions), conduct of a formal hearing, and issuance of a final permit. The enforcement program will also participate in the review of the remaining UIC primacy applications.

1983 Program

In 1983, the Agency is allocating \$882,100 and 25.7 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. A PWS compliance assurance program will continue to be implemented in six non-primacy States and Territories and on Indian lands. A Federal enforcement program is being developed and implemented in those States that choose not to implement their own UIC program. EPA will issue UIC permits in these 18 non-primacy States. Draft and final State UIC program approval applications will be reviewed. All resources associated with case development and legal activities have been transferred to the Office of Legal and Enforcement Counsel.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$26,000 results from the following actions:

-Congressional Action. (+\$2,000) This increase includes +\$2,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$24,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$24,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$685,400 for this program, all of which was for the Salaries and Expenses appropriation. During 1982, EPA referred nine civil actions for violations of the Safe Drinking Water Act to the Department of Justice for filing and prosecution.

Drinking water enforcement activities also included participation in development activities for the Federal UIC program and review of draft and final UIC State program approval applications from 24 States.

Hazardous Waste

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HAZARDOUS WASTE

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

APPROPRIATION

Salaries & Expenses	\$27,188.6	\$31,700.4	\$32,826.3	\$35,038.6	\$2,212.3
Abatement Control & Compliance	\$61,426.1	\$53,926.1	\$63,028.0	\$58,150.4	-\$4,877.6
Research & Development	\$21,963.7	\$17,717.2	\$20,697.2	\$16,923.7	-\$3,773.5
TOTAL, Hazardous Waste	\$110,578.4	\$103,343.7	\$116,551.5	\$110,112.7	-\$6,438.8
PERMANENT WORKYEARS	586.1	557.0	643.1	625.8	-17.3
TOTAL WORKYEARS	737.9	740.1	821.9	830.0	8.1
OUTLAYS	\$123,514.0	\$124,857.6	\$115,722.0	\$114,192.0	-\$1,530.0
AUTHORIZATION LEVELS	\$120,000.0				

HAZARDOUS WASTE

OVERVIEW AND STRATEGY

Hazardous wastes, including organic chemicals, pesticides, acids, caustics, flammables, and explosives, are generated in the United States at the rate of nearly 50 million metric tons each year. They are the subject of substantial environmental concern by government, industry, and the public. Improper management of these wastes can cause a variety of health and environmental damages, the most frequent being ground water and surface water contamination, poisoning through the food chain and direct skin contact, fire, and explosions. Such damages and subsequent remedial actions could eventually cost hundreds of millions of dollars.

The major goal of the hazardous waste program is to reduce future risks to public health and the environment by ensuring environmentally-sound management of the ever growing amount of hazardous wastes. The regulatory development and program implementation components of the EPA hazardous waste program, supported by the research and development and enforcement functions, constitute a comprehensive program to facilitate proper nationwide attention to this environmental problem.

Abatement and Control

Subtitle C of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, provides the legislative mandate for Federal development of effective national programs for regulation of hazardous wastes from generation, through transportation, storage, or treatment, to disposal. RCRA also imposes significant civil and criminal penalties for failure to comply with Federal requirements. Through regulatory development, implementation, enforcement, and research and development activities, the Agency translates Federal concern for this environmental problem into a comprehensive national hazardous waste management program.

The Agency's strategy for its hazardous waste regulatory program is to implement the existing program through the States and Regions; review and reassess the current hazardous waste regulations to enhance their cost-effectiveness; and conclude an even, comprehensive hazardous waste program by developing standards for selected wastes which remain outside of, or are inappropriately covered by, the existing RCRA Subtitle C regulations.

The Agency promulgated the core RCRA regulations between May 1980 and July 1982. The regulations establish lists and characteristics of hazardous waste (§3001); generator and transporter requirements (§§3002 and 3003); financial responsibility, interim status and technical permitting standards for new and existing storage, treatment, and disposal facilities (§3004); and requirements for State programs and permits (§§3005 and 3006).

With promulgation of the core RCRA regulations complete, implementation of RCRA can be undertaken in earnest at both the Federal and State level. One of the Agency's highest RCRA program priorities in 1983 and 1984 is the authorization of States to operate their own hazardous waste programs in lieu of the Federal regulatory program. State programs are authorized in phases: Phase I - manifest and interim status standards; Phase IIA - permitting tanks, containers, and piles; Phase IIB - permitting incinerators; and Phase IIC - permitting land disposal facilities and surface impoundments. The Agency has already granted Interim Authorization to 35 States and Territories whose programs provide substantially equivalent coverage to that of the RCRA regulations.

State programs become eligible for Full Authorization in January 1983. In accordance with RCRA requirements, Interim Authorization will expire in January 1985. States with Interim Authorization will need to receive Full Authorization by that date or the hazardous waste program will revert to the Agency. The Agency, therefore, emphasizes assistance to States in upgrading program capabilities to equivalence, guidance on development of applications for Full Authorization, and approval of State applications as rapidly as possible. By the end of 1984, almost all States are expected to either be Fully Authorized or have an application under Agency review.

In addition to program development guidance, the Agency will continue to provide financial assistance to States to encourage them to work toward authorization and to begin implementing their own hazardous waste program, as RCRA envisions. To the extent that States are not Interim or Fully Authorized, the Agency must administer the RCRA program. However, since Agency policy encourages State participation even prior to authorization, Cooperative Arrangements allow States to operate parts of the RCRA program on behalf of the Agency and to receive financial assistance.

The issuance of environmentally-sound permits is another RCRA implementation priority. The ultimate implementation of RCRA rests on national progress in permitting treatment, storage, and disposal facilities. In 1982, the Agency, in cooperation with Interim Authorized States, began permitting facilities for storage and treatment of hazardous wastes in tanks, containers, and piles. The Agency and States are giving priority to permitting both incinerators and land disposal facilities beginning in 1983 and continuing until these types of facilities of greater environmental concern are permitted. The Agency will also initiate a class permit approach for storage and treatment facilities designed to reduce application requirements and permit issuance time for many storage and treatment facilities.

As part of its regulatory reform effort, the Agency is reviewing and reassessing the core RCRA §3004 technical standards for landfills, surface impoundments, land treatment facilities, incinerators, tanks, containers, and waste piles, as well as the facility location and financial responsibility requirements. Regulatory impact analyses of these regulations, which will be completed in 1983, are intended to identify potential areas for increased program effectiveness and for more cost-effective achievement of environmental results.

The Agency has also embarked on an intensive effort to finalize the hazardous waste regulatory program. Gaps exist in the coverage of the RCRA hazardous waste program. Listings and delistings of additional hazardous wastes under RCRA §3001 and RCRA §3004 management standards for certain wastes will, by 1985, reduce instances of over and underregulation of industries or wastestreams. Earmarked for regulatory attention during 1983 and 1984 are additional organic chemical wastes, waste oil, boilers burning hazardous waste, restricting certain wastes from land disposal, and air emissions from hazardous waste facilities. The Agency will also re-examine two specific provisions in the regulations: the small quantity generator exclusion and the requirements for the reuse, recycling, and reclamation of hazardous waste. In the regulatory analyses process, the Agency will apply a degree-of-hazard approach to evaluate waste management standards based upon the inherent characteristics of the waste, the management technique being used to handle the waste, and the environmental setting.

Enforcement

The Agency's strategy for implementing the national hazardous waste compliance monitoring and enforcement program establishes a balance between the promotion of voluntary compliance with and the discovery and remedy of violations of RCRA regulatory and statutory requirements. Compliance monitoring inspections will concentrate on those major handlers (treatment, storage, and disposal facilities; generators; and transporters) whose operations pose the greatest concern to public health and the environment.

In 1984, ground water monitoring facilities, incinerators, facilities permitted in 1983 and certain generators will receive inspection priority based on such criteria as compliance history and type of waste handled. Enforcement actions such as informal letters of warning; RCRA §3008 Compliance Orders; RCRA §3013 monitoring, testing, and analysis Administrative Orders; and RCRA §7003 imminent hazard Administrative Orders will be issued where appropriate to bring violators back into compliance with the regulatory and statutory requirements. RCRA technical enforcement activities complement Agency legal activities in developing Federal judicial actions for major violations of Subtitle C requirements.

To ensure national consistency and equivalence of RCRA statutory and regulatory requirements, the Agency will review and evaluate States' compliance monitoring and enforcement programs. Joint oversight inspections will be conducted to evaluate State personnel and capabilities in authorized and Cooperative Arrangement States. In addition, technical assistance such as expert witnesses and laboratory testing and analysis will be provided to States to support their enforcement actions.

Research and Development

The 1984 Research and Development program will support the hazardous waste regulatory program by developing the scientific and technical data required for issuing facility permits and confirming the validity of the regulations. Research results will also form part of the basis for revising the RCRA regulations, where appropriate, by justifying their being made either more or less stringent, depending on the degree of hazard associated with specific pollutants under specific conditions. Environmental engineering activities will focus on providing a sound underpinning for existing regulations through such efforts as determining the reliability of both synthetic and natural landfill liners. Monitoring and quality assurance protocols and guidelines are being developed to detect, identify and measure hazardous wastes for purposes of ensuring that permitted facilities are complying with regulation requirements and detecting the presence of specific wastes in the environment. Health, scientific assessments and environmental processes research are all focused on determining the risks associated with specific hazardous wastes for purposes of listing and delisting wastes as hazardous and modifying the regulations.

HAZARDOUS WASTE

Program Activities	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase+ Decrease- 1984 vs. 1983
RCRA Standards Proposals and Promulgations.....	2	14	11	15	+ 4
Supplemental Rules and Technical Amendments to Phase I and II Promulgations.....	30	25	27	17	- 10
Section 3001 Delistings.....	150	140	150	150	0
Regulatory Impact Analyses Produced...	--	5	5	5	0
Program Implemen- tation Guidances....	12	25	20	25	+ 5
States with Hazardous Waste Grant/Coopera- tive Arrangements...	53	56	53	53	0
States with Authorization:					
Phase I only	29	28	15	7	- 8
Phase I and II	5	11	31	25	- 6
Final.....	--	--	1	18	+ 17
EPA Facility Compli- ance Monitoring Inspections.....	1,650	2,950	688*	1,085	+397
Nationwide Facility Permitting:					
Call-ins.....	926	--	325	325	0
Permits in Process.....	972	--	650	500	-150
Permit Actions..	4	1,020**	750	575	-175

Footnotes

* - States will conduct an additional 12,000 inspections.

** - EPA permit actions only.

Research and Development

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HAZARDOUS WASTE

Hazardous Waste Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Scientific Assessment						
Salaries & Expenses	\$489.9	\$938.8	\$938.8	\$960.9	\$22.1	
Research & Development	\$225.3	\$304.9	\$604.9	\$550.9	-\$54.0	
TOTAL	\$715.2	\$1,243.7	\$1,543.7	\$1,511.8	-\$31.9	
Technical Information & Liaison						
Salaries & Expenses	\$177.2	\$182.4				
Research & Development	\$1.7	\$90.0				
TOTAL	\$178.9	\$272.4				
Monitoring Systems & Quality Assurance						
Salaries & Expenses	\$2,408.2	\$3,521.2	\$3,620.9	\$2,986.5	-\$634.4	
Research & Development	\$4,326.1	\$3,662.1	\$3,662.1	\$4,029.9	\$367.8	
TOTAL	\$6,734.3	\$7,183.3	\$7,283.0	\$7,016.4	-\$266.6	
Health Effects						
Salaries & Expenses	\$57.3	\$376.5	\$376.5	\$381.2	\$4.7	
Research & Development	\$1,275.1	\$691.9	\$691.9	\$586.9	-\$105.0	
TOTAL	\$1,332.4	\$1,068.4	\$1,068.4	\$968.1	-\$100.3	
Environmental Engineering & Technology						
Salaries & Expenses	\$2,486.2	\$4,524.9	\$4,900.2	\$3,684.7	-\$1,215.5	
Research & Development	\$14,444.3	\$10,408.4	\$13,178.4	\$9,567.1	-\$3,611.3	
TOTAL	\$16,930.5	\$14,933.3	\$18,078.6	\$13,251.8	-\$4,826.8	
Environmental Processes & Effects						
Salaries & Expenses	\$1,664.4	\$2,318.2	\$2,417.9	\$2,452.3	\$34.4	
Research & Development	\$1,691.2	\$2,559.9	\$2,559.9	\$2,188.9	-\$371.0	
TOTAL	\$3,355.6	\$4,878.1	\$4,977.8	\$4,641.2	-\$336.6	
TOTAL:						
Salaries & Expenses	\$7,283.2	\$11,862.0	\$12,254.3	\$10,465.6	-\$1,788.7	
Research & Development	\$21,963.7	\$17,717.2	\$20,697.2	\$16,923.7	-\$3,773.5	
Hazardous Waste Research	TOTAL	\$29,246.9	\$29,579.2	\$32,951.5	\$27,389.3	-\$5,562.2

HAZARDOUS WASTE

Hazardous Waste Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PERMANENT WORKYEARS					

Scientific Assessment	10.1	14.5	14.1	14.1	
Technical Information & Liaison	2.6	2.1			
Monitoring Systems & Quality Assurance	21.5	22.0	25.0	25.0	
Health Effects	1.7	4.0	4.0	4.0	
Environmental Engineering & Technology	41.4	59.0	70.3	60.0	-10.3
Environmental Processes & Effects	28.5	28.4	30.8	30.8	
TOTAL PERMANENT WORKYEARS	105.8	130.0	144.2	133.9	-10.3
TOTAL WORKYEARS					

Scientific Assessment	15.8	21.0	20.1	20.6	.5
Technical Information & Liaison	4.5	3.7			
Monitoring Systems & Quality Assurance	30.3	32.0	34.0	35.0	1.0
Health Effects	1.7	4.0	4.0	4.0	
Environmental Engineering & Technology	57.6	79.9	90.6	77.0	-13.6
Environmental Processes & Effects	38.3	48.1	50.5	50.5	
TOTAL WORKYEARS	148.2	188.7	199.2	187.1	-12.1

HAZARDOUS WASTE

Hazardous Waste Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimated 1984</u>
Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities			
- Hazard profiles for unusual chemicals (Scientific Assessment)	9/82	9/83	9/84
- Improvement and standardization of detection limits of analytical methods (Monitoring)	Ongoing	Ongoing	Ongoing
Develop Technical Data Necessary to support RCRA Treatment, Storage and Disposal Regulations			
- Development of methods for assessing health effects and exposures to complex hazardous waste (Scientific Assessment)	9/82	9/83	9/84
- Development of a containment/soil interaction protocol (Engineering)	9/84	9/84	9/84
- Development of liner specifications and testing of systems (Engineering)	4/83	7/83	9/86
- Development of a model for movement of hazardous wastes in the subsurface (Env. Processes)	6/83	6/83	
Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities			
- Development of field screening methodologies for quick qualitative analyses (Monitoring)	9/84	9/84	9/84
- Development of data on thermal decomposition of hazardous compounds (Engineering)	9/83	9/83	9/86
- Development of a hydrogeological protocol for determining the suitability of a site for land disposal (Env. Processes)	8/83	8/83	
Develop Techniques and Procedures to prevent and Contain Hazardous spills			
- Development of prevention, compliance and response studies (all programs)	9/82	9/83	9/84
Provide Quality Assurance to the Hazardous Waste Program			
- Development of standard reference materials for complex matrices, and performance evaluations of contractors (Monitoring)	Ongoing	Ongoing	Ongoing

HAZARDOUS WASTE

Hazardous Waste Research

BUDGET REQUEST

The Agency requests a total of \$27,389,300 and 133.9 permanent workyears for 1984, a decrease of \$5,562,200 and 10.3 permanent workyears from 1983. Included in this total is \$10,465,600 for Salaries and Expenses and \$16,923,700 for Research and Development, with decreases of \$1,788,700 and \$3,773,500 respectively. This decrease primarily occurs in the environmental engineering and technology program element. In addition, the decrease reflects the transfer of \$2,403,700 in exploratory research funds to the Intermedia program.

PROGRAM DESCRIPTION

The Resource Conservation and Recovery Act (RCRA) authorizes a regulatory program to identify those wastes which pose substantial hazard to human health and the environment, and to establish management standards sufficient to prevent such harm. Research in this program provides the scientific and engineering basis for characterizing and determining the extent of problems and for formulating controls. The Clean Water Act of 1977 and its amendments also mandate some of the research conducted in this program, specifically, the spills related efforts. The following objectives support these missions.

Objective 1. Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Section 3001 of RCRA requires that the Agency designate hazardous wastes and the characteristics of waste which cause them to be hazardous. The objective in this area is to develop analytical procedures and techniques required to characterize a waste and assess the hazards posed from their exposure in support of defensible listing/delisting decisions.

Objective 2. Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Section 3004 of RCRA requires the Agency to promulgate regulations and establish performance standards for the treatment, storage and disposal of hazardous waste as may be necessary to protect human health and the environment. The purpose of this program is to develop the engineering and technical data necessary to support the Agency in the development and revision of hazardous waste regulations.

Objective 3. Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Section 3005 of RCRA requires that all hazardous waste treatment, storage, and disposal be conducted in accordance with operating permits. Sections 3007 and 3008 provide access for inspections and for Federal enforcement of hazardous waste regulations. To ensure that RCRA is implemented in a cost-effective manner, the purposes of this objective are to provide the necessary data and techniques for permit writers to assess permit applications and provide enforcement officials with legally defensible sampling and analysis procedures and information to ensure compliance with permits and agreements.

Objective 4. Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. This research supports Section 311 of the Clean Water Act, which mandates that Spill Prevention, Control and Countermeasure (SPCC) plans be prepared for all facilities engaged in the production, storage, refining, processing and distribution of hazardous materials, and that the Agency maintain an emergency support program.

Objective 5. Provide Quality Assurance to the Hazardous Waste Program. This objective supports the major requirement for the provision of a scientific data base of known quality to support RCRA regulatory activities.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$1,511,800 and 14.1 permanent workyears for this program, of which \$960,900 is for Salaries and Expenses and \$550,900 is for Research and Development. This reflects an increase of \$22,100 and a decrease of \$54,000, respectively.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Health hazard profiles will be provided to support the Agency's listing of hazardous wastes under Section 3001. This is a continuing program which covers new chemicals each year as well as updating information on chemicals considered earlier.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Methods are being developed for assessing human health effects and exposure to complex hazardous wastes. Additional factors will be considered in formulating more comprehensive versions of methods developed in 1983. These methods will be used to prepare detailed assessments for chemicals already listed in 40 CFR 261, Appendix VIII and refine RCRA regulations where appropriate. Other assessments and technical reviews will be completed for use in developing national guidance on permitting and monitoring of disposal operations and on site-specific control issues that will arise in permitting.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. Chemical-specific health summaries will be prepared to assist in evaluating hazardous spill containment alternatives. This project continues from 1983 to cover additional chemicals of commercial significance.

1983 Program

In 1983, the Agency is allocating a total of \$1,543,700 and 14.1 permanent workyears to this program, of which \$938,800 is under the Salaries and Expenses appropriation and \$604,900 is for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Health hazard profiles are being prepared on approximately 20 chemicals not previously considered. Approximately 40 existing profiles are being updated based on additional scientific information.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. A set of first generation methods is being developed for evaluating the health hazards resulting from multiple media exposure to chemical mixtures. Health effects assessments are being prepared for 100 chemicals from 40 CFR 261, Appendix VIII. Current estimates are that approximately six additional site-specific assessments will be requested and completed to refine RCRA regulations where applicable.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. The 1983 Hazardous Spills Program was transferred to the Hazardous Waste Program from the Municipal Wastewater Program. Chemical-specific health summaries are being prepared on approximately 75 chemicals to assist in the evaluation of spill containment alternatives.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$300,000 results from the following action:

-Congressional Action. (+\$300,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports exposure assessments for listing/delisting decisions.

1982 Accomplishments

In 1982, the Agency obligated a total of \$715,200 for this program, of which \$489,900 was under the Salaries and Expenses appropriation and \$225,300 was for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Activities. A total of ten new health hazard profiles were provided to OSW as documentation to support the listing of hazardous wastes under RCRA Section 3001. An additional 38 existing profiles were updated to include recent scientific data.

Develop Technical Data Necessary to Support RCRA Treatment, Storage, and Disposal Regulation. A total of eight technical reviews were completed to assist OSW in preparing guidance on permitting issues and site-specific control problems.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$178,900 for this program, of which \$177,200 was under the Salaries and Expenses appropriation and \$1,700 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into Intermedia Programs in 1983. Thus, Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$7,016,400 and 25.0 permanent workyears for this program of which \$2,986,500 is for Salaries and Expenses and \$4,029,900 is for Research and Development. This reflects a decrease of \$634,400 and an increase of \$367,800 respectively. The decrease results from the completion of one-time laboratory equipment purchases. The increase will help strengthen our RCRA quality assurance program. The increase also reflects the transfer of exploratory research funds to the Intermedia program.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. If the RCRA program is to be implemented and administered in a cost-effective manner, there must be procedures for efficiently characterizing particular wastes and criteria and tests for determining if a waste constitutes a potential hazard. Analytical methods will be developed to provide more cost effective techniques for characterizing wastes while improving data quality. A protocol will be prepared and tested to determine the precision, accuracy, sensitivity, and reliability of advanced methods when applied to highly toxic hazardous wastes. Methods will be developed for detection of organics in the ambient air of waste disposal facilities. Research will continue on methods for determining the volatility and reactivity of wastes.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Monitoring research will explore more cost-effective and reliable field monitoring methods. Guidelines for post-closure monitoring of ground water and investigation of other effective techniques for monitoring soils, air, and biota will be accomplished. Further examination of geophysical techniques for hazardous waste landfill monitoring and development of an extraction procedure for use in determining the leachability of cyanide in wastes will be accomplished.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Research on the Dioxin Monitoring Program will focus on validation of cost-effective methods for use by States. Screening methods and biological monitoring methods will be developed for use in identifying hazardous wastes at permitted sites. Remote monitoring techniques will be investigated for use in issuing permits and for enforcement activities.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills.

Technology and related remote monitoring techniques required to support regional compliance programs and methods necessary to provide data to on-scene coordinators in emergency situations will be developed. Centralized data gathering and interpretation facilities will apply methods and techniques to analyze aerial photos. Satellite imagery, thermal and multispectral techniques will be investigated to identify spills, spill movement, and to assist in cleanup operations.

Provide Quality Assurance to the Hazardous Waste Program. The research, evaluation and distribution of standard reference materials will continue. On-site laboratory performance evaluations started last year will increase, and include preparation of many performance samples for submission to the analytical laboratories. The Agency's Dioxin Monitoring Program will be expanded to ensure that the data collected by the Program and regional offices are of known quality. Quality assurance support on methods listed in the Office of Solid Waste's manual "Test Methods for Evaluating Solid Wastes" will be provided in order to evaluate the hazardous waste properties defined in Section 3001 of the RCRA.

1983 Program

In 1983, the Agency is allocating a total of \$7,283,000 and 25.0 permanent work years for this program, of which \$3,620,900 is under the Salaries and Expenses appropriation and \$3,662,100 is for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Evaluation of analytical methods for determining their precision, accuracy, and reliability is continuing. Studies are being performed to identify instrument operating conditions and quality assurance requirements for the analysis of wastes. The method for the evaluation of hexavalent chromium in hazardous waste streams is continuing to be developed. Analysis of non-volatile organic compounds listed in 40 CFR, Appendix VIII is being initiated.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Research is being conducted on the development of techniques to detect contamination before it gets to the water table. Geophysical techniques to detect leachates are being evaluated. Research is being conducted on monitoring of leachates resulting from ruptured synthetic and natural liners. Emphasis is on early and continuous detection and development of an extraction procedure for organic wastes.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. The program continues to improve the methods for dioxin detection and provides technical assistance to regional and State enforcement officials. Methods are being developed to provide screening of waste samples in the field and to determine corrosivity, ignitability, reactivity, and flash points of wastes.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. The 1983 Hazardous Spills Program was transferred to the Hazardous Waste Program from the Municipal Wastewater Program. Remote sensing of spills by providing overhead aerial support and interpretation for EPA's Spill Prevention, Containment and Control (SPCC) Program, and for river spill contingency planning is being accomplished.

Provide Quality Assurance to the Hazardous Waste Program. This program is developing, evaluating, and providing standard reference materials in support of RCRA waste characterization. Maintenance of a repository of standard reference materials containing priority pollutants and hazardous substances which will serve as a single, traceable source of known purity standards for monitoring activities is being continued. Support is being provided to the OSW in the areas of methods validation, development of quality assurance criteria for analytical data and continued research on dioxin and dibenzofuron monitoring.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$99,700 results from the following action:

-Congressional Action. (+\$99,700) This increase includes +\$99,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982 the Agency obligated a total of \$6,734,300 for this program, of which \$2,408,200 was under the Salaries and Expenses appropriation and \$4,326,100 was for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. The program identified the various qualitative procedures for characterizing hazardous wastes found in 40 CFR 261, Appendix VIII. Initial efforts in hazardous waste characterization employed the best available sampling and analytical methods. These methods were evaluated for application to the problems of waste characterization and for development of quality assurance procedures. Analytical methods were evaluated for analysis of environmental samples of hazardous wastes. Evaluation of hexavalent chromium identification methodologies was initiated.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. The search for effective technologies that ensure public protection is complicated by the fact that different wastes have different storage, treatment, and disposal requirements. Consequently, multimedia techniques for monitoring in the vicinity of waste disposal facilities were investigated. Research associated with the techniques to monitor for ground water contamination at hazardous wastes sites was conducted. An extraction procedure was evaluated to determine its usefulness as a method for determining the leachability of toxic components of solid wastes.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Activities to support this objective included: (1) research on a rapid field-screening methodology for enforcement actions; (2) guidance for evaluation of closure/post-closure monitoring proposals; (3) development of remote sensing techniques for waste site characterization; and (4) guidance to permit writers in evaluating the adequacy of monitoring proposals contained in permit applications. Assessments were conducted on the validity and appropriateness of information contained in disposal permit applications. Chemical composition information and proposed monitoring plans were specifically addressed.

Provide Quality Assurance to the Hazardous Waste Program. Two standard reference materials were developed for analysis of complex materials. An interim procedure for conducting the Ames test for toxicity was completed. Evaluation of protocol procedures for obtaining and analyzing hazardous waste samples were evaluated. Intercomparison studies were conducted on the performance of contract laboratories.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$968,100 and 4.0 permanent workyears for this program, of which \$381,200 is for Salaries and Expenses and \$586,900 is for Research and Development. This reflects an increase of \$4,700 and a decrease of \$105,000 respectively. The decrease reflects the transfer of exploratory research funds to the Intermedia program.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. The goal of this program is to provide an inexpensive and rapid qualitative screening protocol (prescreen) for use in characterizing the health hazards of RCRA regulated substances. The research program will focus on

developing a biological testing battery of short term tests to determine potential adverse human health effects. These tests will emphasize exposure to complex mixtures. Once completed, these tests will support listing/delisting decisions as well as permitting and enforcement activities.

1983 Program

In 1983, the Agency is allocating a total of \$1,068,400 and 4.0 permanent work-years to this program, of which \$376,500 is under the Salaries and Expenses appropriation and \$691,900 is for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Short-term test systems for use in evaluating the health effects of exposure to complex hazardous waste mixtures are being developed. These test systems are state-of-the-art for testing single compounds but require development and validation for use on complex mixtures.

1983 Explanation of Change from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,332,400 for this program, of which \$57,300 was under the Salaries and Expenses appropriation and \$1,275,100 was for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Development of a neurological field testing system to determine the adverse effects of exposure to hazardous wastes on human behavior was completed and is being validated. A normative data base was developed to determine human sensory, cognitive, and motor performance capabilities. This effort provided a battery of tests to rapidly identify health problems in workers at hazardous waste sites. The tests will also be used during permitting, compliance monitoring and cleanup operations.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$13,251,800 and 60.0 permanent workyears for this program, a decrease of \$4,826,800 and 10.3 permanent workyears from 1983. Included in this total is \$3,684,700 for Salaries and Expenses and \$9,567,100 for Research and Development, with decreases of \$1,215,500 and \$3,611,300 respectively. This decrease primarily reflects the transfer of \$1,561,000 in exploratory research funds to the Intermedia program; the completion of spill control technology development projects where a reservoir of techniques have been provided, \$949,500; the completion of initial testing for advanced thermal technologies, \$960,900; and the completion of technical manuals for storing hazardous wastes, \$846,600.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Section 3004 of RCRA requires the Agency to promulgate regulations establishing performance standards for both new and existing facilities that treat, store, and dispose of hazardous wastes. In order for regulations of such a comprehensive nature to be effective without over regulating, a thorough understanding is required of the operational characteristics of different kinds of treatment and disposal available as well as the scientific and technical principles they employ. Therefore, analytical methods to determine incinerator destruction efficiency and a methodology for continuous control technology monitoring will be developed to support regulations. Research will focus on development of methodologies for measurement protocols. Landfilling will remain the predominant method

of hazardous waste storage and disposal for the foreseeable future. Research will focus on the study of synthetic and natural liners to determine their expected service life and their abilities to retain and/or retard the movement of hazardous pollutants. Research on containment systems will be conducted to provide sound, reliable information for policy guidance to State agencies and in determining whether regulations are adequate or excessive.

Design, operation, and closure procedures for surface impoundments of hazardous wastes will be developed to minimize environmental and health impacts. Research to establish a better understanding of emissions from stored volatile organic compounds, locating and repairing damaged liners, and the performance of existing impoundments will provide guidance for improved cost effective regulations and design. Land treatment research will be directed toward determining optimum techniques for using the assimilative capacity of the land for application of hazardous wastes, providing guidance on leachate control, site selection, fate and transport, and establishing waste loading rates commensurate with organic degradation.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Hazardous waste regulations provide broad design and operating standards necessary to protect human health and the environment from the mismanagement of hazardous wastes. These regulations, however, do not provide the detailed technical data necessary for permitting and enforcement officials to review and make technical evaluations to determine whether a proposed facility will meet the performance standards stated in the regulations. Technical Resource Documents (TRDs) will be updated for disposal facilities to provide more detailed, up-to-date guidance to the Regions and State agencies responsible for permitting hazardous waste disposal facilities and enforcing applicable regulations. The TRDs will document procedures for design, operation, maintenance, and closure of facilities and the extent to which these procedures will minimize the release of pollutants to the environment.

Research will focus on the assessment of incinerator performance and other high temperature processes which may be used in the destruction of hazardous wastes. The research is divided into four areas: laboratory scale incineration, pilot scale incineration, high temperature industrial processes, and field performance assessment of full scale incinerators. Laboratory scale research will focus on the development of destruction efficiency and by-products formation data of selected hazardous compounds when exposed directly to a flame and to elevated temperatures in the absence of a flame. To allow verification of industry sponsored trial burn data and to provide the basis for a methodology needed to evaluate full scale facility performance on new wastes or under varying operating conditions, pilot scale research will develop data on destruction efficiencies of two types of incinerators for listed hazardous wastes as well as special wastes of specific interest to the Regions and States. In addition, data on air emissions by-product formation and monitoring requirements will be developed to assist the Agency Permit Assistance Team.

The destruction of hazardous wastes in high temperature industrial processes will be investigated. A series of guidance documents and an engineering data base will be prepared on the disposal of these wastes by their combustion as a fuel. The research on full scale incinerator facilities will concentrate on assessing the performance of various incinerators and other combustion facilities being used by industry for combustion of hazardous wastes. Special attention will be devoted to dioxins, polychlorinated biphenyls and furans. Evaluation of the technologies available for treating, storing and disposing of these chemicals will be provided in manual form.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. Reports will be issued summarizing research on the evaluation of specialized equipments and techniques for preventing, controlling, removing, and disposing of hazardous materials spills. Technical support to the program offices, Regions and States will be provided.

1983 Program

In 1983, the Agency is allocating a total of \$18,078,600 and 70.3 permanent workyears for this program, of which \$4,900,200 is under the Salaries and Expenses appropriation and \$13,178,400 is for extramural purposes under the Research and Development appropriation.

Develop Technical Data Necessary to Support RCRA Treatment, Storage and Disposal Regulations. Research is being conducted on process measurement and the development of improved sampling and analysis protocols which can be used to routinely test incinerators being used to dispose of hazardous wastes to ensure they maintain their destruction efficiency.

Research to assess and optimize the component performance of landfills and surface impoundments of hazardous wastes is developing user manuals to provide technical assistance to State and local governments. Manuals addressing minimizing moisture infiltration and leachate generation, chemical stabilization of wastes, evaluation of liner materials for hazardous waste landfills, and evaluation of techniques for assessing pollutant release from in-place wastes and contaminated soils are being prepared.

Land treatment of hazardous waste is being evaluated on a pilot scale as a potential cost effective means of treatment and disposal. Percolation rates, microbiological degradation rates, soil changes, management techniques, site closure procedures, loading rates, nutrient balances, metals uptake, "pre-treatment" requirements, are being developed and evaluated.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Technical Resource Documents representing Best Engineering Judgment for the design, operation and closure of hazardous waste disposal facilities are being prepared. Laboratory and pilot scale research is being conducted to better define the operating conditions required for the destruction of hazardous wastes and to simulate full scale incineration conditions. This includes research on destruction efficiencies, by-product formation and air emission characteristics to allow scale-up to full scale incinerators.

Research is being conducted to obtain emission and performance data at full scale industrial facilities for the combustion of hazardous wastes mixed with conventional fuels in industrial boilers, wet and dry cement kilns, and in lime kilns. Research is being conducted to evaluate advanced hazardous waste treatment technologies including studies on advanced biological conversion processes, super-critical solvents and metals recovery using adapted metallurgical techniques.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. The 1983 Hazardous Spills Program was transferred to the Hazardous Waste Program from the Municipal Wastewater Program. Research is being conducted to evaluate improved methods and technology for determining spill cleanup priorities, evaluating alternative cleanup techniques, and restricting the movement of spilled material by containment and confinement devices. Specialized equipment and techniques from different industries are being evaluated for adaptation to spills removal. Manuals are being prepared for State and local governments and private spill cleanup managers.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$3,145,300 results from the following actions:

-Congressional Actions. (+\$3,145,300) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$375,300) This increase includes +\$375,300 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(+\$2,500,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports land disposal regulations and guidance documents (+\$2,000,000) and the feasibility of using land treatment for various hazardous waste streams (+\$500,000).

(+\$270,000) Congress directed an increase of +\$270,000 to the Research and Development appropriation for the Phosphate Rock Study.

1982 Accomplishments

In 1982, the Agency obligated a total of \$16,930,500 for this program, of which \$2,486,200 was under the Salaries and Expenses appropriation and \$14,444,300 was for extramural purposes under the Research and Development appropriation.

Develop Technical Data Necessary to Support Treatment, Storage and Disposal Regulations. Research was initiated to develop sampling and analysis protocols to routinely test incinerators to ensure they maintain their destruction efficiency. Test methodologies were developed for determining movement of selected metals in various soils. An initial assessment of synthetic liners was completed. A computer program to aid landfill planners and designers by simulating hydrologic characteristics of landfill operations was completed.

The "Two Dimensional Subsurface Drainage Model" was developed in order to provide technical support information for establishment of performance standards and formalization of a regulatory support tool for evaluating landfill designs. A mathematical model was developed for predicting volatile organic compound emissions from landfills and impoundments.

A Technical Resource Document titled "Hazardous Waste Land Treatment" was completed. Industrial wastes on the Standard Industrial Code list were reviewed and a report was published which listed the hazardous wastes that are viable candidates for land treatment.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Eight Technical Resource Documents were prepared representing best engineering judgement for the management of hazardous wastes by land disposal, land treatment, and surface impoundments.

Engineering assistance was provided to develop engineering, cost and performance models for a range of incineration systems. Innovative technologies for treatment, destruction and recycling of hazardous waste streams were evaluated. Technical support for the At-Sea-Incineration program was provided. Construction of the Combustion Research Facility was completed and pilot-scale testing of a rotary kiln incinerator was initiated. Thermal decomposition profiles for 15 hazardous compounds were completed in laboratory scale equipment.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$4,641,200 and 30.8 permanent workyears for this program, of which \$2,452,300 is for Salaries and Expenses and \$2,188,900 is for Research and Development. This reflects an increase of \$34,400 and a decrease of \$371,000 respectively. This decrease reflects from the transfer of exploratory research funds to the Intermedia program.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. Research will focus on the development of methods and data for determining the potential biological impacts of wastes proposed for listing/delisting under Section 3001 of RCRA. Screening methods and data for assessing the environmental mobility and subsequent impact of wastes on human health or the environment will be provided and the feasibility of using aquatic dose/response data to indicate potential mammalian toxicity will be assessed.

Develop Technical Data Necessary to Support RCRA Treatment, Storage, and Disposal Regulations. In order to implement regulations which are both cost-effective and environmentally safe, research supporting the assessment of cost-effective regulatory alternatives will produce multimedia methods for predicting the potential impacts and risks to human health from various regulatory (mainly disposal) options. In addition, a two dimensional ground water model and microcosm technology will be field-evaluated to determine both the suitability for predicting what actually happens in the environment and to determine the environmental and chemical-specific factors that control hazardous waste behavior in ground water.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Criteria developed in 1983 for selecting and evaluating sites for land disposal facilities will be evaluated in several hydrogeological settings in 1984 jointly by EPA and USGS. The research will provide improved guidelines for permittees to evaluate sites based on the potential for migration of pollutants in the subsurface environment.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. The program will evaluate and correlate bioassay, analytical and statistical procedures to be used in measuring and predicting the potential ecological impact of spills or releases of hazardous materials. The results of field evaluations, bioassays and laboratory analyses of field samples will be correlated and recommendations made which specify which test or combination of tests provides the most valid and cost-effective tool for predicting the ecological impacts of spills and release of hazardous materials.

1983 Program

In 1983, the Agency is allocating a total of \$4,977,800 and 30.8 permanent workyears to this program, of which \$2,417,900 is under the Salaries and Expenses appropriation and \$2,559,900 is for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Waste for Listing and Other RCRA Regulatory Activities. Activities supporting the objective of determining the hazards posed from exposure include developing cost-effective, standardized procedures for predicting environmental mobility and subsequent biological impacts of hazardous waste and devising predictive systems for use in prescreening RCRA materials to rapidly determine the potential health and environmental effects of those materials.

Develop Technical Data Necessary to Support RCRA Treatment, Storage, and Disposal Regulations. Ongoing research supporting the analysis of alternative treatment and disposal options includes development of a two-dimensional ground water model for predicting movement of wastes and development of multimedia methods to predict the impacts of wastes that escape into the environment.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. Efforts are proceeding to develop hydrogeologic criteria for evaluating the suitability of proposed sites for disposal of hazardous wastes in coordination with the USGS. These criteria will be used by permit writers to accept or reject applications for treatment, storage, or disposal facilities. The criteria will be field evaluated jointly with USGS.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills. The 1983 Spills Program was transferred to the Hazardous Waste Program from the Municipal Wastewater Program. Currently, the reliability of bioassays for describing or predicting actual field conditions is unknown. The objective of the program is to develop the capability to correlate new or existing bioassay procedures and analytical results with quantifiable field conditions.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$99,700 results from the following action:

-Congressional Action. (+\$99,700) This increase includes +\$99,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,355,600 for this program, of which \$1,664,400 was under the Salaries and Expenses appropriation and \$1,691,200 was for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Characterize Wastes for Listing and Other RCRA Regulatory Activities. A protocol for evaluation of waste leachate toxicity (both acute and chronic) using *Daphnia Magna* was provided for standardization. A methodology was developed for determining, on a mass balance basis, rates of uptake and excretion of potentially hazardous organic chemicals by fish (for comparison with mammalian data). A multi-elemental method for analysis of suspended minerals in hazardous wastes by inductively coupled plasma spectroscopy was provided for cost-comparison with other methods.

Develop Technical Data Necessary to Support RCRA Treatment, Storage, and Disposal Regulations. A review was published related to modeling of chemical reactions and transport in ground water systems. A description of methods available for predicting leachate plume migration was published.

Develop Technical Data and Methods Necessary to Support RCRA Permitting and Enforcement Activities. A number of technical assistance requests related to the use of ground water models as they apply to permits for hazardous waste sites under RCRA were completed.



Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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HAZARDOUS WASTE

Waste Management Regulations, Guidelines & Policies

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Regulations, Guidelines & Policies						
Salaries & Expenses	\$6,623.0	\$6,559.0	\$6,833.7	\$6,928.3	\$94.6	
Abatement Control & Compliance	\$14,851.1	\$17,160.0	\$17,282.0	\$13,664.0	-\$3,618.0	
TOTAL	\$21,474.1	\$23,719.0	\$24,115.7	\$20,592.3	-\$3,523.4	
TOTAL:						
Salaries & Expenses	\$6,623.0	\$6,559.0	\$6,833.7	\$6,928.3	\$94.6	
Abatement Control & Compliance	\$14,851.1	\$17,160.0	\$17,282.0	\$13,664.0	-\$3,618.0	
Waste Management Regulations, Guidelines & Policies	TOTAL	\$21,474.1	\$23,719.0	\$24,115.7	\$20,592.3	-\$3,523.4
PERMANENT WORKYEARS						

Regulations, Guidelines & Policies	123.2	116.8	123.4	116.4	-7.0	
TOTAL PERMANENT WORKYEARS	123.2	116.8	123.4	116.4	-7.0	
TOTAL WORKYEARS						

Regulations, Guidelines & Policies	161.4	157.7	164.3	155.9	-8.4	
TOTAL WORKYEARS	161.4	157.7	164.3	155.9	-8.4	

HAZARDOUS WASTE

Waste Management Regulations, Guidelines, And Policies

Budget Request

The Agency requests a total of \$20,592,300 and 116.4 permanent workyears for 1984. This is a decrease of \$3,523,400 and 7.0 permanent workyears from 1983. Included in this total is \$6,928,300 for Salaries and Expenses and \$13,664,000 for Abatement, Control, and Compliance. The decrease is primarily associated with the completion of data collection activities for the regulatory impact analyses of the core hazardous waste regulations.

Program Description

The Agency's hazardous waste regulatory, guidance, and policy making activities are carried out under this program. Activities include providing national guidance and oversight to the Regions and States for implementation and enforcement of the hazardous waste regulatory program, reviewing and revising existing hazardous waste regulations, and completing the development of the hazardous waste program to fill in key regulatory gaps.

Regulations, Guidelines, and Policies -- This program provides for the management of the national Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste program. Included are the promulgation and refinement of the criteria and regulations for identification, tracking, management, and disposal of hazardous wastes; technical studies; regulatory impact and economic analyses; and assessments of control options and technologies necessary for regulatory decision-making. Activities also include issuing guidance to the Regions and States for nationally consistent administration of the Subtitle C regulations and developing and evaluating implementation policies.

REGULATIONS, GUIDELINES, AND POLICIES

1984 Program Request

The Agency requests a total of \$20,592,300 and 116.4 permanent workyears for this program, of which \$6,928,300 is for the Salaries and Expenses appropriation and \$13,664,000 is for the Abatement, Control, and Compliance appropriation. The \$94,600 increase to Salaries and Expenses results from increased payroll costs. For Abatement, Control, and Compliance, the decrease of \$3,618,000 results from completion of data collection activities associated with the regulatory impact analyses of the core hazardous waste regulatory program.

Under this program, the Agency will provide guidance and assistance to the Regions and States on State authorization and permitting activities. This includes timely review of authorization applications and guidance and assistance to the Regions and States to help States meet authorization requirements. Permitting activities will focus on developing guidance to permit writers and applicants for incinerator and land disposal facilities. Permit assistance teams will be available to advise on technically difficult permits, particularly land disposal, in order to ensure national consistency of initial permits.

This program also includes developing and distributing national guidance for and evaluation of compliance monitoring and technical enforcement programs in the Regions and States.

The final component of the Regulations, Guidelines, and Policies program is regulation development. In 1984, the Agency will continue to review and reassess the existing RCRA regulations. The Agency will propose restricting certain wastes

from land disposal and will promulgate amendments for the definition of solid waste, the hazardous waste mixture rule, and for class permits for containers and tanks.

The Agency will also address new regulatory efforts which are designed to bring under regulation those wastes and processes not currently covered, or inadequately covered, under the existing RCRA regulations. Regulations to be proposed to fill in these key regulatory gaps will cover waste oil, burning of hazardous wastes in boilers, and organic chemical wastes. The Agency will also continue work on regulatory activities for small quantity generators.

The industry studies program will focus on RCRA §3001 generic listings for the organic chemicals industry. The Agency will propose listings for several classes of chemicals including chlorinated aromatics, organic bromines, and carbamates and will examine the plastics and synthetic rubber industries in order to support future RCRA §3001 listing decisions.

The Agency will also be developing technical legislative changes dealing with the adequacy and workability of the Post-Closure Liability Trust Fund and proposing financial responsibility requirements rules for corrective actions.

The Agency will conduct regulatory impact analyses for its regulatory efforts. As part of this effort, the Agency will apply the degree-of-hazard model to analyze and compare the costs, risks and benefits of different waste management strategies in order to develop a comprehensive assessment of the regulatory effects on industry and the environment.

1983 Program

In 1983, the Agency is allocating a total of \$24,115,700 and 123.4 permanent workyears to this program, of which \$6,833,700 is for Salaries and Expenses and \$17,282,000 is for extramural purposes under the Abatement, Control, and Compliance appropriation.

The Agency will provide guidance to Regions and States on State authorizations and permitting. In addition, permit assistance teams will provide expert technical and procedural assistance for the development of initial facility permits. The Agency will also schedule the first annual RCRA program reviews to assess Regional and State performance.

Compliance monitoring and enforcement guidance will be provided to the Regions and the States to assure State accountability and national consistency with RCRA requirements.

The Agency will continue to review existing RCRA regulations. The interim final land disposal standards promulgated in 1982 will become effective. Five regulatory impact analyses of the core RCRA §3004 technical facility standards promulgated in 1981 and 1982 will be conducted. In addition, the Agency will propose and/or develop minor technical amendments and clarifications to earlier RCRA regulations, including the hazardous waste mixture rule, the definition of solid waste, and the definition of monofill wastes.

The Agency will continue its review of interim status ground water monitoring requirements with the analysis of facility sites that were sampled.

The Agency is also beginning to develop regulations and conduct regulatory impact analyses for wastes and/or processes not currently covered by the hazardous waste standards. Regulations being developed include waste oil, burning of hazardous wastes in boilers and air emissions from facilities. The Agency will also begin examining regulatory requirements for small quantity generators. Data collection activities are planned to define existing practices for these wastes or processes and to identify areas where regulation is needed.

The Agency will continue the industry studies program to identify hazardous wastes that are currently not regulated and establish a comprehensive data base for the RCRA §3001 waste listings decisions. The pesticides, dyes and pigments, and industrial organic chemicals industries are being examined. The Agency will propose a generic listing for chlorinated aliphatics.

As a part of the paperwork reduction efforts, the Agency is planning revisions to annual reporting requirements and will promulgate the national uniform manifest and develop class permits for containers and tanks.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$396,700 results from the following actions:

-Congressional Action. (+\$233,700) The Congressional add-on to this activity of +\$122,000 to the Abatement, Control and Compliance appropriation was for the academic training program.

(+\$111,700) This increase includes +\$111,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$163,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$163,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$21,474,100 for this program including \$6,623,000 for Salaries and Expenses and \$14,851,100 for Abatement, Control, and Compliance.

The Agency provided guidance and training to the Regions and States on RCRA implementation policies and requirements. The annual RCRA guidance on State program development, manuals on Interim and Full Authorization and initial permit call-in strategies were developed. Training to Regional and State permit writers was also provided.

The Agency promulgated revisions to the RCRA §3004 interim final regulations requiring liability insurance and financial assurance for closure and post-closure by hazardous waste facilities. Interim final RCRA §3004 standards for existing and new land disposal facilities were promulgated in 1982. The Agency also announced its decision not to suspend the RCRA §3004 existing incinerator regulations promulgated in 1981.

Consistent with the requirements of Executive Order 12291, the Regulatory Flexibility Act, the Paperwork Reduction Act and the President's Task Force on Regulatory Relief, five regulatory impact analyses for the RCRA §3004 regulations promulgated in 1981-82 were initiated. These analyses were directed towards land disposal, storage (containers and tanks), incineration, location (seismic and floodplains), and financial responsibility. Related activities such as degree-of-hazard model development and paperwork reduction analyses were also continued in 1982. The Agency initiated its review of RCRA interim status requirements, focusing primarily on the effectiveness of interim status ground water monitoring requirements now in place. Phase I of this review, which examines past and present practices, was completed.

In addition, the Agency continued the industry studies to establish a comprehensive data base for RCRA §3001 waste listings decisions. The pesticides, dyes and pigments, and industrial organic chemicals industries were examined. These industries generate high volumes of wastes, have high concentrations of toxic products, and/or high persistence and mobility of products in wastestreams.

HAZARDOUS WASTE

Financial Assistance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Hazardous Waste Management Financial Assistance To States Abatement Control & Compliance	\$42,344.8	\$35,136.6	\$44,068.0	\$42,500.0	-\$1,568.0
TOTAL	\$42,344.8	\$35,136.6	\$44,068.0	\$42,500.0	-\$1,568.0
Resource Recovery Local Financial Assistance Abatement Control & Compliance	\$268.9				
TOTAL	\$268.9				
TOTAL: Abatement Control & Compliance	\$42,613.7	\$35,136.6	\$44,068.0	\$42,500.0	-\$1,568.0
Financial Assistance TOTAL	\$42,613.7	\$35,136.6	\$44,068.0	\$42,500.0	-\$1,568.0

HAZARDOUS WASTE

Financial Assistance

Budget Request

The Agency requests a total of \$42,500,000 for this program in the Abatement, Control, and Compliance appropriation for 1984. This is a decrease of \$1,568,000 from 1983.

Program Description

This program provides financial assistance to State governments for developing and implementing the hazardous waste management programs under Subtitle C of the Resource Conservation and Recovery Act.

Hazardous Waste Management Financial Assistance to States -- This program provides financial assistance to States to develop, implement, and enforce programs that monitor and control hazardous wastes from cradle to grave, including generation, transportation, storage, treatment, and disposal.

Resource Recovery Local Financial Assistance -- This program, until 1982, provided assistance to grantees undertaking projects leading to implementation of resource and energy recovery systems in their communities. Funding was not requested or appropriated in 1982 or 1983.

HAZARDOUS WASTE MANAGEMENT FINANCIAL ASSISTANCE TO STATES

1984 Program Request

The Agency requests a total of \$42,500,000 for this program in the Abatement, Control, and Compliance appropriation. The decrease of \$1,568,000 reflects the increasing ability of the States to fund their own hazardous waste programs.

States awarded grants must either be operating a substantially equivalent hazardous waste program under Interim Authorization or working toward Interim Authorization through a Cooperative Arrangement. State grant targets are allocated on a formula basis that accounts for a State's population, land area, number of hazardous waste generators and amount of hazardous waste. The grant amount is negotiated based on the target, but depends on the portion of the Federal program the State is operating.

States will use these funds to make significant progress toward authorization. States will submit applications for Full Authorization and work to ensure that their programs are equivalent to the Federal program. Approximately 32 applications for Full Authorization will be submitted to the Agency and be under review by the end of the fiscal year.

States will also play a strong role in national permitting efforts. As in 1983, almost half of the State resources will be earmarked for permit activities. In order to expedite the processing of permits for new or expanding facilities, States will devote sufficient permitting resources to respond to all anticipated applications from these facilities. Authorized States will be responsible for processing as many as 345 permits in 1984. However, the States may not complete processing on all of these permits to the point of issuance or denial in 1984 because of the lengthy timetable required to fully process permits.

In conjunction with the Federal enforcement program, States will perform approximately 10,000 compliance monitoring inspections. This number encompasses 100 percent of facilities permitted by States in 1983, 100 percent of major hazardous waste handlers (interim status facilities with ground water monitoring requirements, incinerators, and selected generators and transporters), 25 percent of non-major facilities, and 10 percent of the remaining generators and transporters. In addition, the States will issue, as necessary, administrative enforcement actions, convene administrative hearings, and provide technical support for the development of State civil actions.

1983 Program

In 1983, the Agency is allocating \$44,068,000 to State financial assistance under the Abatement, Control, and Compliance appropriation. States are using these funds to continue working toward Interim and Full Authorization and to continue operating the Federal program for unauthorized phases through Cooperative Arrangements.

Based on the Agency's promulgation of the land disposal regulations in July 1982, Phase IIC (permitting of land disposal facilities) and Full Authorization will be available effective January 1983. By the close of fiscal year 1983, 47 States and Territories will be in some phase of authorization as a result of their progress in developing satisfactory hazardous waste management programs.

States with Phase II will be expected to focus 50 percent of their resources on permitting new and expanding facilities and major facilities, i.e., incinerators and land disposal facilities. Cooperative Arrangement States will be eligible, based on Region and State negotiations, to technically evaluate permit applications, however, EPA retains responsibility for making the final permit decision of issuance or denial.

State compliance monitoring and enforcement efforts, in partnership with Federal activities, will concentrate on establishing an enforcement presence in the regulated community. State compliance monitoring activities will focus on implementation of the uniform manifest system, financial responsibility requirements, and treatment and storage facility permit application call-in's. Compliance monitoring inspections are planned for approximately 12,000 facilities and generators. This level of effort represents 100 percent of major hazardous waste handlers; 50 percent of non-major facilities, especially those that will become eligible for a class permit in 1984; and 10 percent of the remaining generators and transporters. Appropriate enforcement actions will be taken as warranted.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$8,931,400 results from the following action:

-Congressional Action. (+\$8,931,400) The Congressional add-on to this activity of +\$8,931,400 to the Abatement, Control and Compliance appropriation was for the State hazardous waste financial assistance program.

1982 Accomplishments

In 1982, the Agency obligated \$42,344,800 for this program under the Abatement, Control, and Compliance appropriation. The grant funds supported continued development of substantially equivalent legislation and regulations required for Interim Authorization, implementation of those programs, and operation of delegated aspects of the Federal program (manifest, compliance monitoring, permit evaluation) through Cooperative Arrangements.

States were eligible to apply for Interim Authorization for Phase I, Phase IIA (permitting of tanks, containers and piles), and Phase IIB (permitting of incinerators). By the end of fiscal year 1982, 34 States had been Interim Authorized for Phase I and five of these States were also Interim Authorized for Phase IIA/B.

Grant funds also supported Cooperative Arrangements for 19 States to operate selected aspects of the Federal program. States negotiated with Regions the tasks they performed while working toward Interim Authorization. After final negotiation of the grants, both for Interim Authorized and Cooperative Arrangement States, funds which the States could not expend were used by the Region to provide contractor support for implementation of the Federal hazardous waste program.

Compliance monitoring and enforcement activities, in conjunction with the Federal enforcement program, concentrated on those handlers which posed the greatest potential for environmental problems, such as ground water monitoring facilities. States conducted over 14,000 compliance monitoring inspections and initiated enforcement actions as necessary.

RESOURCE RECOVERY LOCAL FINANCIAL ASSISTANCE

1984 Program Request

The Agency is requesting no resources for this program.

1983 Program

The Agency is allocating no resources to this program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

The Agency obligated \$268,900 for Resource Recovery Local Financial Assistance under the Abatement, Control, and Compliance appropriation. The grant funds provided support for projects in three States: the Northeast Maryland Solid Waste Disposal Authority; the Blue Plains Treatment Facility, District of Columbia; and the West Virginia Solid Waste Disposal Authority.

These resources were used to phase-out community development activities associated with these projects.

HAZARDOUS WASTE

Waste Management Strategies Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Hazardous Waste
Management Regulatory
Strategies
Implementation
Salaries & Expenses
Abatement Control &
Compliance

	\$6,900.9	\$11,382.9	\$11,352.6	\$14,135.2	\$2,782.6
	\$2,602.3	\$1,629.5	\$1,678.0	\$1,986.4	\$308.4
TOTAL	\$9,503.2	\$13,012.4	\$13,030.6	\$16,121.6	\$3,091.0

Solid Waste
Management Program
Implementation
Salaries & Expenses

	\$53.2
TOTAL	\$53.2

TOTAL:

Salaries & Expenses	\$6,954.1	\$11,382.9	\$11,352.6	\$14,135.2	\$2,782.6
Abatement Control & Compliance	\$2,602.3	\$1,629.5	\$1,678.0	\$1,986.4	\$308.4

Waste Management
Strategies
Implementation

TOTAL	\$9,556.4	\$13,012.4	\$13,030.6	\$16,121.6	\$3,091.0
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PERMANENT WORKYEARS

Hazardous Waste
Management Regulatory
Strategies
Implementation

185.7	264.1	305.4	305.4
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Solid Waste
Management Program
Implementation

1.0

TOTAL PERMANENT WORKYEARS

186.7	264.1	305.4	305.4
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TOTAL WORKYEARS

Hazardous Waste
Management Regulatory
Strategies
Implementation

221.1	342.3	383.0	411.6	28.6
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HAZARDOUS WASTE

Waste Management Strategies Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
Solid Waste Management Program Implementation	1.0				
TOTAL WORKYEARS	222.1	342.3	383.0	411.6	28.6

HAZARDOUS WASTE

Waste Management Strategies Implementation

Budget Request

The Agency requests a total of \$16,121,600 and 305.4 permanent workyears for 1984, an increase of \$3,091,000 from 1983. Included in this total is \$14,135,200 for Salaries and Expenses and \$1,986,400 for Abatement, Control, and Compliance with increases of \$2,782,600 and \$308,400, respectively.

Program Description

This program includes the hazardous waste implementation program which supports the Regional activities necessary to oversee, and operate when required, the RCRA-mandated hazardous waste program. Also included, through 1982, was the solid waste program which involved Regional activities that enabled States to implement Subtitle D.

Hazardous Waste Management Regulatory Strategies Implementation -- This program supports the Regional activities necessary to provide guidance and technical assistance to authorized States and to operate the Federal hazardous waste program in unauthorized States. Regions assist the States in developing substantially equivalent hazardous waste management programs to qualify for Interim Authorization and fully equivalent programs to qualify for Full Authorization which will be available in January 1983.

Solid Waste Management Program Implementation -- This program included Regional activities designed to enhance the ability of the States to implement solid waste management programs under Subtitle D of the Resource Conservation and Recovery Act. The Regions guided State procedures for conducting solid waste disposal site inventories and assisted in the development of comprehensive Solid Waste Management Plans.

HAZARDOUS WASTE MANAGEMENT REGULATORY STRATEGIES IMPLEMENTATION

1984 Request

The Agency requests a total of \$16,121,600 and 305.4 permanent workyears for this program of which \$14,135,200 is for Salaries and Expenses and \$1,986,400 is for the Abatement, Control, and Compliance appropriation. This increase reflects the heavy near-term workload facing the Agency for both State authorizations and facility permitting.

The Regions' highest priority activity in 1984 is State program development. Aggressive delegation efforts will ensure that a substantial number of States achieve Interim Authorization, particularly for Phases IIB and IIC which enable States to permit incinerators and land disposal facilities, and Full Authorization before January 1985. The statute intends for the States to have full responsibility for operating a Federally equivalent hazardous waste program. State programs will be eligible for Full Authorization beginning in January 1983. The statute requires the States to receive Full Authorization by January 1985 or the Agency must operate the hazardous waste program. However, this deadline does not preclude States from continuing to develop their own programs and attaining Full Authorization at a later date.

This request will enable the Regions to assist States in the development of both their authorization applications and their program capabilities. The Regions will review Interim and Full Authorization applications against substantial equivalence and full equivalence criteria, approve applications in a timely manner, and negotiate State grants and Cooperative Arrangements.

As a result of this investment, the Agency anticipates that by the end of 1984, 18 States will be Fully Authorized and 32 States will have applications under review. States with Full Authorization applications pending by the end of the year will either be operating under Interim Authorization or working under Cooperative Arrangements for portions of the program.

The Regions' second priority is the preparation and processing of permits for new and expanding hazardous waste management facilities, existing incinerators, and existing land disposal facilities in unauthorized States. These facilities will be a high permitting priority due to their greater potential for adverse environmental impacts and the inadequacy of their interim status standards to protect and maintain the quality of the environment. The Agency will complete processing of 195 permits in 1984. In addition, the Regions will call in 205 facilities in order to maintain a timely and effective program to permit facilities of the most environmental concern.

In authorized States, Regions will review 30 percent of the State permit actions to ensure national consistency. Regional review of the initial State-processed permits will provide to the States increased technical knowledge and understanding and will result in a stronger and more effective State permitting process.

1983 Program

In 1983, the Agency is allocating a total of \$13,030,600 and 305.4 permanent workyears to the program of which \$11,352,600 is for Salaries and Expenses and \$1,678,000 is for extramural purposes under the Abatement, Control, and Compliance appropriation.

The Regions are negotiating, awarding, and administering grants and Cooperative Arrangements based on the individual State's authorization status and acceptance of delegated activities. The Regions operate all manifest activities and technical evaluations of permit applications not delegated to Cooperative Arrangement States.

The Regions are focusing on delegating the various phases of program authorization. Regions are assisting States to develop application packages, design and strengthen their programs, and ensure that all Interim Authorized programs meet substantial equivalence requirements. In addition, the Regions review applications for Full Authorization and ensure that the State programs meet full equivalence requirements. By the end of 1983, the Agency anticipates that 46 States will have at least Phase I Interim Authorization, of which 31 States will also possess one or more components of Phase II Interim Authorization, and at least one State will be Fully Authorized.

The second critical implementation task is completing the processing of 322 permits. The permitting of additional storage and treatment facilities after 1983 will generally be deferred in favor of those facilities which pose a more significant threat to human health and the environment. An exception to this plan will be made, however, when the Agency promulgates class permit regulations in 1984. Class permits rely on a set of standard, nationwide permit conditions for all facilities defined by the Agency as a class. This approach will reduce the application requirements and permit issuance time for most of the remaining storage and treatment facilities.

The Regions retain responsibility for permit issuance in all Cooperative Arrangement States. Since 1983 is the first year of permit development by Interim Authorized States, the Regions will review all incinerator permits and ten percent of storage and treatment permits processed by authorized States.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$18,200 results from the following actions:

-Congressional Action. (+\$494,200) This increase includes +\$494,200 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$476,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$524,500 to the Salaries and Expenses appropriation and a net increase of +\$48,500 to the Abatement, Control and Compliance appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$9,503,200 for this program, including \$6,900,900 for Salaries and Expenses and \$2,602,300 for Abatement, Control, and Compliance.

The Regions focused on assisting States to achieve various phases of authorization. As of September 1982, 34 States had achieved Phase I Interim Authorization and five of these States had also received Phase IIA/B Interim Authorization.

The Agency called-in and initiated the permit process for 771 storage and treatment facilities and incinerators. In addition, the Regions processed four permits for new or expanding facilities whose owners or operators submitted applications voluntarily.

SOLID WASTE MANAGEMENT PROGRAM IMPLEMENTATION

1984 Request

The Agency requests no resources for this program.

1983 Program

The Agency is allocating no resources to this program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$53,200 for this program in the Salaries and Expenses appropriation.

The Regions provided limited guidance to the States on implementation of their Solid Waste Management Plans. Effective Regional and State coordination during development of the Plans minimized the need for Agency management at the onset of plan implementation.

HAZARDOUS WASTE

Technical Assistance

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Technical Information

Development

Abatement Control & Compliance	\$47.5
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TOTAL	\$47.5
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Solid Waste Technology

Assistance Delivery

Headquarters

Abatement Control & Compliance	\$50.0
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TOTAL	\$50.0
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TOTAL:

Abatement Control & Compliance	\$97.5
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Technical Assistance	TOTAL	\$97.5
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HAZARDOUS WASTE

Technical Assistance

Budget Request

No resources are requested for this program. Consistent with the minimal Federal role in guidance and support for State and local solid waste and resource recovery activities and the increased responsibility of States for Subtitle D implementation, technical assistance in these areas will not be necessary.

Program Description

This program enabled the Agency to provide State and local governments, as well as Federal agencies, with comprehensive technical assistance on hazardous and solid waste management and resource conservation and recovery.

Technical Information Development -- This program managed hearings, meetings, and other public participation activities under RCRA §7004(b) in the development of all regulations, guidelines, and programs under RCRA.

Solid Waste Technology Assistance Delivery -- This program provided national program management including the Agency's establishment of Regional level-of-effort contracts for technical assistance and management of an evaluation reporting system on technical assistance. Administration and monitoring of peer matching technical assistance grants was also included.

TECHNICAL INFORMATION DEVELOPMENT

1984 Program Request

The Agency requests no resources for this program.

1983 Program

In 1983, the Agency is allocating no resources to this program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$47,500 for this program under the Abatement, Control, and Compliance appropriation. The funds were used to phase-out the Agency's participatory public education and information program on hazardous waste management technical issues.

SOLID WASTE TECHNOLOGY ASSISTANCE DELIVERY

1984 Program Request

The Agency requests no resources for this program.

1983 Program

In 1983, the Agency is allocating no resources to this program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$50,000 for this program under the Abatement, Control, and Compliance appropriation. The funds were used to phase-out Regional contracts for technical assistance and administration of peer matching technical assistance grants.

HAZARDOUS WASTE

Uncontrolled Hazardous Waste Sites

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				

PROGRAM

Uncontrolled Hazardous
Waste Sites

Abatement Control & Compliance \$882.8

TOTAL \$882.8

TOTAL:

Abatement Control & Compliance \$882.8

Uncontrolled Hazardous TOTAL \$882.8
Waste Sites

HAZARDOUS WASTE

Uncontrolled Hazardous Waste Sites

Budget Request

The Agency requests no funds in 1984 for this budget activity. Since 1982, activities previously funded under this budget activity are being funded by the Hazardous Substance Response Trust Fund appropriation created by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980.

Program Description

This activity was an interim program to address hazardous substance release problems in a limited way before passage of "CERCLA."

Uncontrolled Hazardous Waste Sites -- This program addressed the worst known problems associated with uncontrolled hazardous waste sites. The interim strategy encompassed site discovery actions, investigations to determine the most serious sites, emergency assistance at those sites eligible under §311 of the Clean Water Act of 1977, and development of enforcement actions under the provisions of the Resource Conservation and Recovery Act (RCRA). The Hazardous Substance Response Trust Fund appropriation is now providing the necessary funding and authority to intensify efforts to undertake planning and implementation of containment measures.

UNCONTROLLED HAZARDOUS WASTE SITES

1984 Program Request

The Agency requests no funds for this program in 1984.

1983 Program

In 1983, the Agency is allocating no funds for this program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$882,800 under the Abatement, Control, and Compliance appropriation for hazardous waste site response (feasibility studies and analysis at the Arkansas City Dump and the LiPari Landfill) and Superfund implementation activities. These were the remainder of the funds provided in the \$14 million 1981 supplemental for pre-Superfund site planning and remedial activities.



Enforcement

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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HAZARDOUS WASTE

Hazardous Waste Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Hazardous Waste Permit
Issuance

Salaries & Expenses	\$3,191.5				
TOTAL	\$3,191.5				

Hazardous Waste
Enforcement - Office of
Solid Waste & Emergency
Response

Salaries & Expenses	\$3,136.8	\$1,896.5	\$2,385.7	\$3,509.5	\$1,123.8
Abatement Control & Compliance	\$378.7				
TOTAL	\$3,515.5	\$1,896.5	\$2,385.7	\$3,509.5	\$1,123.8

TOTAL:

Salaries & Expenses	\$6,328.3	\$1,896.5	\$2,385.7	\$3,509.5	\$1,123.8
Abatement Control & Compliance	\$378.7				

Hazardous Waste Enforcement	TOTAL	\$6,707.0	\$1,896.5	\$2,385.7	\$3,509.5	\$1,123.8
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PERMANENT WORKYEARS

Hazardous Waste Permit
Issuance

86.5

Hazardous Waste
Enforcement - Office of
Solid Waste & Emergency
Response

83.9 46.1 70.1 70.1

TOTAL PERMANENT WORKYEARS	170.4	46.1	70.1	70.1
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TOTAL WORKYEARS

Hazardous Waste Permit
Issuance

108.8

Hazardous Waste
Enforcement - Office of
Solid Waste & Emergency
Response

97.4 51.4 75.4 75.4

TOTAL WORKYEARS	206.2	51.4	75.4	75.4
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HAZARDOUS WASTE

Hazardous Waste Enforcement

Budget Request

The Agency requests a total of \$3,509,500 for Salaries and Expenses and 70.1 permanent workyears for 1984, an increase of \$1,123,800 from 1983.

Program Description

This program serves to ensure compliance with the Resource Conservation and Recovery Act (RCRA). The principle objectives are to monitor and evaluate hazardous waste generator, transporter, and facility compliance with the statutory and regulatory requirements of RCRA; encourage and promote voluntary compliance by hazardous waste handlers; take appropriate administrative, civil, and criminal enforcement actions when necessary; and to assist and evaluate program implementation in the States.

Hazardous Waste Permit Issuance -- This program is part of the comprehensive effort required by RCRA to manage hazardous wastes. The Act prohibits treatment, storage, or disposal of hazardous waste except in accordance with an EPA or approved State issued permit. Since 1983, resources for this effort have been requested in the Hazardous Waste Management Regulatory Strategies Implementation program.

Hazardous Waste Enforcement -- Pursuant to RCRA §3006, States may receive authorization to operate and enforce a hazardous waste program in lieu of the Federal RCRA Subtitle C regulatory program. States which lack authorization may enter into Cooperative Arrangements with the Agency to conduct some portions of the program. Where States do not implement this program, the Agency is required to operate and enforce the Federal regulatory program. Specific activities in all instances include compliance monitoring of interim status facilities, permitted facilities, and hazardous waste generators and enforcing against violators of RCRA or its regulations. The Agency's strategy establishes a balance between the promotion of voluntary compliance and the discovery and remedy of violations.

The Agency is also responsible for evaluating programs in authorized and Cooperative Arrangement States to assess their progress in conducting their hazardous waste compliance monitoring and enforcement activities. This is done to ensure national consistency and equivalence to RCRA statutory and regulatory requirements.

HAZARDOUS WASTE PERMIT ISSUANCE

1984 Program Request

In 1984, the Agency is requesting resources for the hazardous waste permit program under the Hazardous Waste Management Regulatory Strategies Implementation and Regulations, Guidelines, and Policies program elements.

1983 Program

In 1983, the Regional program resources and functions were combined with the Hazardous Waste Management Regulatory Strategies Implementation program. Headquarters resources and functions were combined with the Regulations, Guidelines, and Policies program.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$3,191,500 for this program in the Salaries and Expenses appropriation.

The program emphasized the review and approval of State submissions for authorization under RCRA §3006. The Agency continued development and implementation of the strategy to provide program development support to the States and Regional offices. As part of that process, a series of workshops were held to provide State and Regional personnel with guidance on hazardous waste facility permitting policy and procedures. The Agency processed permits for those facilities that voluntarily submitted permit applications. Teams of experts were established to assist Regional and State permit writers in drafting RCRA permits.

HAZARDOUS WASTE ENFORCEMENT

1984 Program Request

The Agency requests a total of \$3,509,500 and 70.1 permanent workyears for this program for Salaries and Expenses. This represents an increase of \$1,123,800 over 1983 to provide for more extensive travel to support State oversight activities, a national system of automated reporting of State enforcement data, and higher salary costs. This level reflects Regional technical enforcement resources only.

The 1984 Hazardous Waste Enforcement Program reflects the growing role of the States in implementing the program as well as the increasing number of facilities receiving Federally issued permits. Although 50 States/Territories are expected to have some level of authorization in 1984, three will not be participating while three others will be operating under Cooperative Arrangements. As a result of the Federal role in Cooperative Arrangement and non-participating States, the Agency will be required to conduct approximately three percent of the nationwide compliance monitoring and enforcement program for generators and interim status facilities. The highest priority for compliance monitoring inspections is given to facilities required to comply with ground water monitoring requirements, incinerators, and selected generators and transporters because their operations potentially pose the most significant threats to public health and the environment.

This request will enable the Agency to complete 292 Federal compliance inspections. This total represents the Federal share of the national inspection program which calls for inspections at 100 percent of the major hazardous waste handlers, 25 percent of non-major interim status facilities and 10 percent of the remaining generators. This level of effort represents a strong and firm commitment to an effective enforcement strategy. The Agency will conduct an additional 793 inspections to monitor compliance of all facilities receiving Federal permits in 1983 to ensure they are complying with their permit conditions.

In the event inspections reveal violations, the Agency will issue RCRA §3008 Compliance Orders, RCRA §3013 Administrative Orders requiring monitoring and analysis of sites which may present a substantial threat to human health or the environment, and RCRA §7003 Administrative Orders to handlers posing imminent and substantial endangerment. In addition, the Agency will develop the technical aspects of civil and criminal actions under the authority of RCRA §§7003 and 3008.

As part of State evaluation efforts, the Agency will conduct 487 joint oversight inspections with State personnel and review the compliance monitoring and enforcement programs in all authorized and Cooperative Arrangement States. In

addition, the Agency will support State enforcement actions by providing technical support, such as expert witnesses, sampling and laboratory analysis, and other technical expertise not normally found in State governments.

1983 Program

In 1983, the Agency is allocating \$2,385,700 and 70.1 permanent workyears to this program, all for Salaries and Expenses. This level reflects only technical enforcement resources in the Regions.

The 1983 program will reflect the increase in both permitting activities and the role of States in conducting their programs. As more States are authorized, the Agency role will shift away from implementation of compliance monitoring and enforcement programs and will focus on State oversight activities. Because of the close scrutiny born by facilities applying for permits in 1983, compliance monitoring inspections will not be conducted at those facilities. However, in States without authorization, the Agency will conduct compliance monitoring inspections of 100 percent of designated major handlers, 25 percent of other interim status facilities, and 10 percent of selected generators and transporters for a total of 688 inspections. To return violators to compliance, the Agency will issue RCRA §3008 Compliance Orders, RCRA §3013 monitoring and analysis Administrative Orders, and, where practices present an imminent and substantial endangerment, RCRA §7003 Administrative Orders. Technical support for the development of civil actions and criminal investigations will be provided.

In its State oversight role, the Agency will conduct 487 joint inspections with State personnel. Technical support in the areas of expert witnesses, laboratory and sampling support, and other technical expertise will continue to be provided.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$489,200 results from the following actions:

-Congressional Action. (+\$637,500) This increase includes +\$637,500 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$148,300) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$148,300 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$3,515,500 for this program, of which \$3,136,800 was for Salaries and Expenses and \$378,700 was for Abatement, Control, and Compliance. This level reflected the combined legal and technical enforcement resources in Headquarters and the Regions.

The Agency focused on compliance monitoring and enforcement program development as well as interim status compliance inspections and appropriate enforcement actions. The Agency conducted compliance monitoring inspections of those hazardous waste handlers whose operations potentially pose the most significant threat to public health and the environment. When warranted, RCRA §3008 Compliance Orders, RCRA §3013 monitoring and analysis Administrative Orders, and RCRA §7003 Administrative Orders were issued.

In support of authorized States, the Agency monitored and evaluated the implementation of State compliance monitoring and enforcement programs. In addition, the Agency provided technical assistance in such areas as expert witnesses, laboratory and sampling support, and other technical expertise.



Pesticides

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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PESTICIDES

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

APPROPRIATION					
Salaries & Expenses	\$31,168.0	\$28,139.4	\$28,501.0	\$31,435.2	\$2,934.2
Abatement Control & Compliance	\$24,410.9	\$20,534.4	\$22,318.9	\$19,634.4	-\$2,684.5
Research & Development	\$2,234.7	\$2,108.2	\$2,108.2	\$1,673.0	-\$435.2
TOTAL, Pesticides	\$57,813.6	\$50,782.0	\$52,928.1	\$52,742.6	-\$185.5
PERMANENT WORKYEARS	765.3	660.9	662.2	652.7	-9.5
TOTAL WORKYEARS	828.3	744.5	745.8	736.9	-8.9
OUTLAYS	\$61,435.0	\$57,244.4	\$53,074.0	\$53,430.0	+\$356.0
AUTHORIZATION LEVELS					

PESTICIDES

OVERVIEW AND STRATEGY

In 1981, nearly 1.2 billion pounds of pesticide active ingredients - roughly one quarter of the world's total - were used in the United States. These products create major social benefits, such as increased agricultural productivity, lower domestic food prices, a more favorable balance of payments due to increased agricultural exports, and control of human and animal diseases spread by insects and rodents. However, pesticides are designed to be bioactive and are deliberately introduced into the environment for that purpose. Furthermore, most of these products are used on human or animal food crops, making some human exposure unavoidable.

The Environmental Protection Agency regulates the use of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended, and Sections 402, 406, 408, and 409 of the Federal Food, Drug, and Cosmetic Act (FFDCA). FIFRA authorizes the Agency, through a variety of mechanisms, to achieve the goal of ensuring that pesticides registered for sale and use in the United States will achieve their intended function without unreasonable adverse effects on human health and environmental quality.

Overall, the Agency's efforts focus on three broad program areas to achieve environmental results. These programs include registration of new products and review and reregistration of existing pesticide products; enforcement of pesticide use rules; and research and development to reinforce the Agency's ability to evaluate risks and benefits of pesticides. Several areas of emphasis are evident throughout these programs that reflect the continued importance of improving the review processes in the pesticides regulatory program.

Registration Activities

FIFRA and FFDCA provide for Agency control of the terms and conditions under which pesticides can be legally used through the issuance of registrations to permit marketing of pesticide products or their use under special conditions. Registration standards are being established by the Agency to facilitate pesticide registrations and reregistrations as expeditiously as possible, in accordance with the FIFRA mandate.

Special Reviews (formerly Rebuttable Presumption Against Registration - RPAR) are conducted on pesticides which have triggered established risk criteria and thus are suspected of causing unreasonable adverse health or environmental effects.

Pesticides Enforcement

The pesticide enforcement program monitors and enforces compliance with FIFRA requirements largely through cooperative agreements with State and Territorial agencies, to which the Agency provides enforcement grants. Compliance and enforcement activities are mainly intended to ensure that pesticide users comply with the label directions and that pesticide producers and sellers comply with registration, classification, and labeling requirements. The Agency also provides funds to the U.S. Department of Agriculture (USDA) to help support training for applicators of restricted use pesticides, primarily farmers, and grants to States and Territories to defray the costs of certifying applicators.

Research and Development

EPA's pesticides research program is designed to establish and maintain a sound scientific basis for pesticide compliance and registration activities. The program's focus is on increasing our understanding of how pesticides interact with

man's activities in the environment to a degree that will ensure that the regulatory process will maximize pest control and minimize adverse damage to human health and the environment. The research effort will reduce uncertainties in regulatory decisions and will improve the quality of exposure, hazard, and risk assessments.

Program Improvements Continue

In 1984, the Agency will continue to reap the benefits of regulatory reforms initiated in 1982. These include: maintenance of backlogs at or near zero in the registration, special registration and tolerance programs; the reduction of time and effort required to review registration applications, special registration requests, and tolerance petitions; and improvement in both the quality of science used in reviews and in the efficiency of these reviews to achieve sound and timely scientific judgments on FIFRA issues. This will result in reduced costs for both the Agency and the industry.

In addition to fees already collected for tolerance setting, EPA will seek to assess fees for direct Agency services provided to registrants in registering pesticides. This would cover registration activities on new chemicals, new biorationals, old chemicals, amended registrations and experimental use permits. These fees could go directly to the U.S. Treasury and consequently would have no impact on EPA budget needs.

Exempting selected types of pesticide products or chemicals from the full application of FIFRA regulations will be emphasized, wherever possible, on the basis of adequate public health protection. Examples include minor use and relatively safe pesticides.

An improved working relationship with the industry will be maintained through increased consultation with registrants and applicants during the review processes, early screening of data to identify problems for timely resolution, greater effort to achieve negotiated settlements rather than the use of rigid administrative approaches with respect to pesticides suspected of posing unreasonable risks, and closer industry involvement in the development of registration standards guidance packages. These actions will cut time and costs to EPA and producers.

In the establishment of registration standards, early review of pesticides characterized by high volume production, high exposure, and high potential hazard will be ensured through continued use of the clustering and ranking strategy.

Streamlined review processes will be maintained to obtain: (1) strict adherence to statutory and administrative deadlines; (2) improved monitoring of decision processes; (3) more efficient reviews of clusters of chemicals with similar uses; (4) elimination of non-essential reviews; (5) reduced scope and increased selectivity of literature searches; (6) greater use of high quality reviews made by other United States and foreign organizations; and, (7) revised criteria for triggering special reviews to reflect likely risk more closely.

PESTICIDES

Program Activities	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
Registration standards guidance packages established.....	18	15	22	35	+ 13
Special Review (formerly RPAR) decisions.....	16	6	13	10	- 3
Laboratory data audits...	13	18	18	18	--
New chemical and biora- tional reviews.....	221	130	250	250	--
Old chemical reviews....	11,993	6,000	8,500 ^{1/}	8,500 ^{1/}	--
Amended registration reviews..... ^{2/}	23,727	18,000	20,300 ^{1/}	20,300 ^{1/}	--
New use reviews.....	--	--	--	150 ^{3/}	--
Emergency exemption reviews.....	752	400	770	770	--
Experimental use permit reviews.....	499	490	475	475	--
24(c) State registration reviews.....	1,656	1,100	1,100	1,100	--
Temporary tolerance petitions.....	167	140	175	175	--
5(f) State experimental use permit reviews	--	--	100	100	--
Tolerance petition reviews..	599	400	640	640	--
Inert ingredient request reviews.....	58	35	50	50	--
Producer establishment inspections..... ^{4/}	2,604	2,285	2,863	2,360	- 503
Use/reentry and experimental use observations..... ^{4/}	14,264	9,221	11,538	9,344	-2,194
Market place inspections.. ^{4/}	16,091	6,326	7,915	6,402	-1,513
Import inspections..... ^{4/}	489	80	80	80	--
State applicator license and record inspections..	14,005	9,530	11,912	9,530	-2,382
State dealer record inspections.....	11,967	6,049	7,561	6,049	-1,512
Federal laboratory inspections.....	13	40	40	40	--

^{1/} 1983 and 1984 outputs, compared with 1982 outputs, reflect a reduction in the average number of reviews per chemical and the elimination of the backlog.

^{2/} Amended registration reviews include amendments to current pesticide labels, administrative amendments, and supplemental registrations.

^{3/} Included in earlier years under Old Chemical Reviews and Amended Registration Reviews.

^{4/} Includes both Federal and State enforcement activities.



Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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PESTICIDES

Pesticides Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS) -----					
PROGRAM -----					
Scientific Assessment					
Salaries & Expenses	\$313.6	\$264.0	\$337.1	\$382.9	\$45.8
Research & Development	\$9.9	\$15.5	\$15.5	\$27.5	\$12.0
TOTAL	\$323.5	\$279.5	\$352.6	\$410.4	\$57.8
Technical Information & Liaison					
Salaries & Expenses	\$59.7	\$21.2			
TOTAL	\$59.7	\$21.2			
Monitoring Systems & Quality Assurance					
Salaries & Expenses	\$519.2	\$484.5	\$484.5	\$470.9	-\$13.6
Research & Development	\$51.2	\$235.0	\$235.0	\$408.0	\$173.0
TOTAL	\$570.4	\$719.5	\$719.5	\$878.9	\$159.4
Health Effects					
Salaries & Expenses	\$1,691.5	\$1,260.0	\$1,260.0	\$1,389.0	\$129.0
Research & Development	\$308.0	\$1,240.9	\$1,240.9	\$1,049.3	-\$191.6
TOTAL	\$1,999.5	\$2,500.9	\$2,500.9	\$2,438.3	-\$62.6
Environmental Processes & Effects					
Salaries & Expenses	\$2,293.0	\$2,330.9	\$2,330.9	\$2,146.8	-\$184.1
Research & Development	\$1,865.6	\$616.8	\$616.8	\$188.2	-\$428.6
TOTAL	\$4,158.6	\$2,947.7	\$2,947.7	\$2,335.0	-\$612.7
TOTAL:					
Salaries & Expenses	\$4,877.0	\$4,360.6	\$4,412.5	\$4,389.6	-\$22.9
Research & Development	\$2,234.7	\$2,108.2	\$2,108.2	\$1,673.0	-\$435.2
Pesticides Research TOTAL	\$7,111.7	\$6,468.8	\$6,520.7	\$6,062.6	-\$458.1

PERMANENT WORKYEARS

Scientific Assessment	5.6	4.5	6.7	6.7	
Monitoring Systems & Quality Assurance	6.6	6.0	6.0	7.0	1.0
Health Effects	28.0	17.0	17.0	18.7	1.7
Environmental Processes & Effects	45.6	44.2	43.8	38.3	-5.5
TOTAL PERMANENT WORKYEARS	85.8	71.7	73.5	70.7	-2.8

PESTICIDES

Pesticides Research

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
TOTAL WORKYEARS					

Scientific Assessment	8.5	5.5	7.7	7.7	
Technical Information & Liaison	1.6				
Monitoring Systems & Quality Assurance	7.7	7.1	7.1	8.1	1.0
Health Effects	36.1	29.2	29.2	31.2	2.0
Environmental Processes & Effects	62.8	61.5	61.1	55.3	-5.8
TOTAL WORKYEARS	116.7	103.3	105.1	102.3	-2.8

PESTICIDES

Pesticides Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Define the Environmental and Health Endpoints of Pesticides to Determine Possible Future Test Method Development			
- Report on viral effects on immune responses in mammalian cells (Health)	9/83	9/84	9/84
Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Programs			
- Report on improved and validated methodology for measurement of human exposure (Health)		10/85	10/85
- Report on biological control agent testing procedures (Env. Processes)	9/82	12/85	12/85
- Report on field studies to assess pesticide effects on wildlife (Env. Processes)		9/84	9/84
Develop Methodologies That Improve the Agency's Risk Assessment Capability under FIFRA			
- Report on pesticide accumulation by selected aquatic animals in the field (Env. Processes)		11/84	11/84
Develop and Validate Techniques That Assess Human and Environmental Exposure to Pesticides for FIFRA Registration and Enforcement Program			
- Final report on acute toxicity of 14 granular pesticides to avian species (Env. Processes)		9/83	
Conduct and Review Risk Assessments in Support of FIFRA Decision-Making			
- Provide human health related risk assessments (Scientific Assessment)	9/82	9/83	9/84

PESTICIDES

Pesticides Research

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Provide Quality Assurance Assistance and Support for the Pesticides Repository Program, Regional/State Laboratories and other FIFRA Activities	.		
- Provide high purity chemicals and comparison samples (Monitoring)	9/82	9/83	9/84
- Report on the effects of toxic exposure during selected critical development periods on sexual dimorphisms (Health)	6/84	6/84	6/84

PESTICIDES

Pesticides Research

Budget Request

The Agency requests a total of \$6,062,600 and 70.7 permanent workyears for 1984, a decrease of \$458,100 and of 2.8 permanent workyears from 1983. Included in this total is \$4,389,600 for Salaries and Expenses and \$1,673,000 for Research and Development, with decreases of \$22,900 and \$435,200, respectively. The decrease primarily occurs in the environmental processes and effects program element. In addition, the decrease reflects the transfer of \$280,000 in exploratory research funds to the Intermedia program.

Program Description

The Environmental Protection Agency is required by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetics Act (FFDCA) to regulate the use of pesticides in a manner which will not result in unreasonable adverse effects to the public health and to the environment. The pesticides research focuses on increasing our understanding of how pesticides interact with man's activities and the environment, to assure that their use can minimize damage from pests, while maximizing the protection of man's food and fiber and the environment from unreasonable adverse effects. An understanding of pesticides effects and their proper usage will lead to less burdensome and more cost effective regulations.

Objective 1. Define the Environmental and Health Endpoints of Pesticides to Determine Possible Future Test Method Development. The purpose of this objective is to identify the toxic effects of pesticides with which the Agency should concern itself. The current approach of this research is two-fold: (1) to determine if there are toxic effects (i.e., endpoints) that we should be concerned about that occur as a result of the use of biological pesticides; and (2) to examine how pesticides affect children, as developing organisms, differently from adults. Once the appropriate effects of concern are identified in these areas, research results can be utilized to determine likely candidates for test method development.

Objective 2. Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Programs. This research effort will supply validated environmental and health assay methods for use by industry. Research under this objective is needed to develop valid test protocols to meet pesticide registration requirements and enforcement responsibilities under Sections 3 and 26 of FIFRA.

Objective 3. Develop and Validate Techniques That Assess Human and Environmental Exposure to Pesticides for the FIFRA Registration and Enforcement Program. Health research will find a suitable animal model and conduct related field studies for developing exposure data to be used for setting field re-entry standards for susceptible populations. This research will help determine the conditions under which the young, elderly, pregnant, and malnourished may be more susceptible to toxicant exposure than the general population, and will enable the Office of Pesticide Programs to set re-entry intervals to protect susceptible populations for certain classes of pesticides on treated fields and premises. In the environmental area, research develops field validated exposure assessment models to define the concentration of pesticides for use by OPP in anticipating pesticide impacts in populations. These models simplify the data gathering requirements imposed on industry in order to register pesticides.

Objective 4. Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. This activity develops and validates new or improved environmental and public health risk assessment methods. The risk assessments methods represent an improved capability for the Office of Pesticide Programs (OPP) to analyze and aggregate the data submitted by the pesticide industry to determine the risks and benefits resulting from pesticide usage. This research is essential for reviewing and evaluating data to determine whether a pesticide can be used without reasonable adverse risk to public health and the environment, pursuant to Sections 3, 4, 5, and 24 of FIFRA.

Objective 5. Conduct and Review Risk Assessments in Support of FIFRA Decision Making. This research prepares human health related risk assessments for carcinogenic, mutagenic, and/or reproductive effects of candidate pesticide products. This work will assist in identifying research priorities and in designing research initiatives to support data and methodological needs that become apparent as a result of the conduct of the risk assessment program. The guidelines proposed in 1981 for assessment of mutagenic risk will also be revised, taking into account public comments. The cancer guidelines will be updated to consider mutagenicity for selecting appropriate models for cancer risk evaluations and work will be initiated to develop guidelines for reproductive effects, including teratogenicity and male and female infertility.

Objective 6. Provide Quality Assurance Assistance and Support for the Pesticides Repository Program, Regional/State Laboratories, and Other FIFRA Activities. The activity maintains a repository of high purity chemicals that serves as standards for internal quality control to ensure that data in support of pesticides registration is accurate, precise and reliable. In addition, the program provides quality assurance support to the Office of Pesticide Programs contract laboratories in their analytical efforts. The latter task is to provide specific quality control chemicals and unknown samples to laboratories for the purpose of ensuring that their analyses are conducted and reported at the required level of precision and accuracy.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$410,400 and 6.7 permanent workyears for this program, of which \$382,900 is for Salaries and Expenses and \$27,500 is for Research and Development. This reflects increases of \$45,800 and \$12,000, respectively, which will enhance support required to prepare health risk assessments needed by the Office of Pesticide Programs.

Conduct and Review Risk Assessments in Support of FIFRA Decision-Making Responsibilities. In 1984, the Scientific Assessment Program will provide the following outputs for use by the Office of Pesticide Programs: carcinogenicity and mutagenicity risk assessments; adverse reproductive effects risk assessments; and exposure assessments. The Scientific Assessment program will review and then defend these assessments before the Agency's Science Advisory Panel and in legal proceedings. The program will also revise and update risk assessment guidelines.

1983 Program

In 1983, the Agency is allocating a total of \$352,600 and 6.7 workyears to this program, of which \$337,100 is under the Salaries and Expenses appropriation and \$15,500 is for extramural purposes under the Research and Development appropriation.

Conduct and Review Risk Assessments in Support of FIFRA Decision-Making. In 1983, the program will continue to provide health and risk assessments for carcinogenicity, mutagenicity and adverse reproductive effects of those chemicals identified by the Office of Pesticide Programs. Exposure assessment guidelines will be completed. Assessments will be defended before the Agency's Science Advisory Panel.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$73,100 results from the following action:

-Congressional Action. (+\$73,100) This increase includes +\$73,100 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated a total of \$323,500 for this program, of which \$313,600 was under the Salaries and Expenses appropriation and \$9,900 was for extra-mural purposes under the Research and Development appropriation.

Conduct and Review Risk Assessments in Support of FIFRA Decision-Making. In 1982 accomplishments included the preparation of health documents on lindane, inorganic arsenic, ethylene dibromide, chloroform and carbon tetrachloride for mutagenic and carcinogenic risk assessments; review of documents on estimating pesticide exposure from air blast application; development of draft guidelines for the preparation of exposure assessments; and a handbook for performing exposure assessments.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$59,700 for this program, all of which was under the Salaries and Expenses appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$878,900 and 7.0 permanent workyears for this program, of which \$470,900 is for Salaries and Expenses and \$408,000 is for Research and Development. This reflects a decrease of \$13,600 and an increase of \$173,000, respectively. This net increase represents an expanded custom synthesis effort to provide pesticide chemicals no longer commercially available from any source in the United States. These chemicals are required for sensitive and confirmatory analyses of pesticide content in soil, plant and animal tissues.

Provide Quality Assurance Assistance and Support for the Pesticide Repository Program, Regional/State Laboratories and Other FIFRA Activities. This program maintains the Pesticide Repository of high purity chemicals which are used by over 1,400 laboratories in the United States and foreign countries. These are used as standard analytical reference samples for internal quality control to ensure that test data is accurate, precise and reproducible. In addition, interlaboratory comparison samples are prepared and used to assist contractor laboratories of the Office of Pesticide Programs in their analytical efforts. An expanded synthesis program will be initiated to prepare various chemicals which were once produced in the United States, which are no longer produced, but which are still regulated by the Environmental Protection Agency and other Federal agencies such as the Department of Agriculture and the Food and Drug Administration. For example, DDT and its degradation products are often found in small amounts in soils or animal or plant tissue. Without authentic reference samples for comparison, it is difficult or even impossible to perform analyses of the required degree of accuracy.

1983 Program

In 1983, the Agency is allocating a total of \$719,500 and 6.0 permanent work-years for this program, of which \$484,500 is under the Salaries and Expenses appropriation and \$235,000 for extramural purposes under the Research and Development appropriation.

Provide Quality Assurance Assistance and Support for the Pesticide Repository Program, Regional/State Laboratories and Other FIFRA Activities. In 1983, this program will maintain the Pesticide quality assurance activities in support of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) registration and enforcement. The funds will be used to support the pesticide repository which distributes standard analytical reference samples to Environmental Protection Agency and other Federal laboratories as well as State, local, university and industrial laboratories. The major activity of the repository is the distribution of over 28,000 samples to over 1,400 laboratories. These chemicals are used for internal quality control purposes to ensure that their data are accurate, precise and reproducible. In addition, interlaboratory comparison samples are prepared and distributed to the Office of Pesticide Program's contract laboratories for use in their analytical work.

1983 Explanation of Changes from Budget Estimate

There were no changes to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$570,400 for this program, of which \$519,200 was under the Salaries and Expenses appropriation and \$51,200 was for extramural purposes under the Research and Development appropriation.

Provide Quality Assurance Assistance and Support for the Pesticides Repository Program, Regional/State Laboratories and Other Federal Insecticide, Fungicide, and FIFRA Activities. During 1982, this program continued quality assurance activities in support of FIFRA regulatory decisions and enforcement. A major part of this effort was the maintenance of the pesticide repository of chemicals which are materials used by over 1,400 EPA, other Federal, State, local, university and industrial laboratories.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$2,438,300 and 18.7 permanent workyears for this program, of which \$1,389,000 is for Salaries and Expenses and \$1,049,300 is for Research and Development. This reflects an increase of \$129,000 and a decrease of \$191,600, respectively. The increase will expand the in-house capability to develop methods to extrapolate data from animal test systems to humans. The decrease in extramural funds results from a reduction in methods development research and the shift in emphasis to validation of these methods and a transfer of exploratory research funds to the Intermedia program.

Define the Environmental and Health Endpoints of Pesticides That Determine Possible Future Test Method Development. This work will continue to define the critical public health effects pertaining to biological pesticides. Accordingly, we will provide data on the immunological effects of biological pesticides on mammalian cells. Additionally, although human health effects are generally well defined for adults, more research is needed for developing effects information for children. This work is required to safeguard public health under Sections 3, 4, 5 and 24 of FIFRA.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for FIFRA Registration and Enforcement Programs. This research effort will continue to supply validated health assay methods for industry to use to produce a reliable data base that OPP can use to estimate the risk to humans. We will develop seven additional test methods in the areas of reproduction/teratology, mutagenesis/ carcinogenicity (genotoxic effects) and neurotoxicology. Research under this objective is needed to develop validated test protocols to meet pesticide registration requirements and enforcement responsibilities under Sections 3 and 26 of FIFRA.

Develop Methodologies That Improve the Agency's Risk Assessment Capabilities Under FIFRA. The 1984 program will improve methods that assess exposure of children to pesticides that have been applied in fields. We will also provide models for evaluating human risks to pesticides on the basis of laboratory studies; one model will extrapolate animal data to children.

Provide Quality Assurance Assistance and Support for the Pesticides Repository Program, Regional/State Laboratories and Other FIFRA Activities. A computerized data management and analysis system for mutagenic/carcinogenic testing of pesticides will continue to be developed. Development of such a data base will permit the timely evaluation of developmental test systems for the detection and confirmation of potential carcinogenicity and mutagenicity by making appropriate correlations and statistical analyses. These data will identify chemicals which are structurally similar to a known chemical, thereby providing reliable toxicology data.

1983 Program

In 1983, the Agency is allocating a total of \$2,500,900 and 17.0 permanent workyears to this program, of which \$1,260,000 is under the Salaries and Expenses appropriation and \$1,240,900 is for extramural purposes under the Research and Development appropriation.

Define the Environmental and Health Endpoints of Pesticides That Determine Possible Future Test Method Development. This work will define the critical public health effects pertaining to biological pesticides. Also, human health endpoints are currently generally well defined for adults, but additional work is needed for developing endpoints for children. This work is required to safeguard public health under Sections 3, 4, 5 and 24 of FIFRA.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Programs. This research effort will work on validated health assay methods in the areas of reproduction /teratology, mutagenesis/carcinogenesis (genotoxic effects) and neurotoxicology for industry to use to produce a reliable data base that OPP can use to estimate the risk to humans.

Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. Research is continuing on methods that improve the Agency's ability to assess human exposure to pesticides. Research also continues to work on models to extrapolate animal data to humans.

Provide Quality Assurance Assistance and Support for the Pesticide Repository Program, Regional/State Laboratories and Other FIFRA Activities. A computerized data management and analysis system for mutagenic/carcinogenic testing of pesticides will be developed. Development of such a data base will permit the timely evaluation of developmental test systems for the detection and confirmation of potential carcinogenicity and mutagenicity by making appropriate correlations and statistical analyses.

1983 Explanation of Changes from Budget Estimate

There are no changes to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,999,500 for this program, of which \$1,691,500 was under the Salaries and Expenses appropriation and \$308,000 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Program. Research support is provided to the Office of Pesticide Programs and the Regions in developing and validating improved test protocols for inclusion in the pesticide guidelines and in developing procedures for extrapolating from animal data to human effects.

Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. Research worked on methods to improve the Agency's ability to assess human exposure to pesticides. Research also worked on models to extrapolate animal data to humans.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$2,335,000 and 38.3 permanent workyears for this program, of which \$2,146,800 is for Salaries and Expenses and \$188,200 for Research and Development. This reflects a decrease of \$184,100 and \$428,600, respectively, which results from an overall program consolidation; a reduction in toxicity testing and test method development to reflect the completion of some projects and the shift to validation of these methods and a transfer of long-term exploratory research resources to the Intermedia program.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for FIFRA Registration and Enforcement Programs. This research will develop and validate predictive techniques to estimate effects of biological control agents and chemical pesticides on biota in aquatic and terrestrial environments. It includes ecosystem effects, ecological functions and related processes and behavioral aspects of non-target organisms within ecosystems. Environmental effects findings will be validated within the context of mathematical model development utilizing field work where necessary.

Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. This activity will continue to develop and validate new or improved environmental risk assessment methods for organisms. Methodologies will be developed to perform environmental risk assessments by integrating exposure and effects information and utilizing data from: (1) identified hazards in critical ecosystems hazards; (2) validated fate, exposure, and effects models; (3) existing methodology for quantifying risks; and (4) other valid information. This research will supply basic mechanisms upon which predictive risk assessments can be established. Programmatic emphasis will be upon use of terrestrial and aquatic field validated data derived from laboratory work, with the data utilized in appropriate mathematical models. The Pesticide Environmental Exposure Assessment Team (PEEAT) will provide technical support in the interpretation and conduct of assessments.

Develop and Validate Techniques that Assess Human and Environmental Exposure to Pesticides for the FIFRA Registration and Enforcement Program. The research in this objective will continue to develop and validate mathematical and other predictive or descriptive techniques to estimate adverse pesticide exposure in aquatic (freshwater and marine) and terrestrial environments. Such determinations will include pesticide distribution and exposure levels in ecosystems and in such physical habitats as soil and sediment chemical conditions and sorption kinetics. Studies will also include the field validation of exposure models.

Pesticide concentrations, environmental placements, and duration of exposure to biota contribute incrementally to the environmental change and assessment. Validation of such field exposure levels provides crucial information for regulatory hazard and risk assessment processes.

1983 Program

In 1983, the Agency is allocating a total of \$2,947,700 and 43.8 permanent workyears to this program, of which \$2,330,900 is under Salaries and Expenses appropriation and \$616,800 is for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Programs. Laboratory and field validation research will be conducted to assess the hazards/effects of pesticides on organisms. The research will supply mathematical methods to identify sensitive ecosystem stress points, laboratory toxicity testing as required, organism culturing and bioassay method improvements, studies on biological control agents, and field validation studies in natural sites where pesticide problems may be most prevalent.

Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. Methodologies will be improved to perform predictive environmental risk assessments and to provide direct research support for exposure assessments in response to the regulatory office needs. This research will integrate pesticide fate, exposure, and effects information of pesticide impacts utilizing (1) laboratory research data, (2) existing or new methodology for quantifying risks and (3) information from validated fate and effect models. Research under this program will progress to field applicability testing for single and multimedia pesticide exposure assessment models and concurrent development, application and evaluation of these methods for use in risk assessments.

Develop and Validate Techniques That Assess Human and Environmental Exposure to Pesticides for the FIFRA Registration and Enforcement Program. Predictive techniques are being developed, improved and validated through field studies to estimate the transport, exposure and fate of pesticides in the marine, freshwater and terrestrial environments. This includes determining pesticide distribution in ecosystems, mass conversion and movement, interrelationships in ecological functions and processes and physical parameters which affect the fate process.

1983 Explanation of Changes from Budget Estimate

There are no changes to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$4,158,600 for this program of which \$2,293,000 was under the Salaries and Expenses appropriation and \$1,865,600 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify Health and Environmental Effects of Pesticides for the FIFRA Registration and Enforcement Program. Laboratory research addressed the application of methods and techniques used in defining the role of pesticides effects on non-target single species and selected populations under controlled conditions for several priority biocides including biological control agents.

Develop Methodologies That Improve the Agency's Risk Assessment Capability Under FIFRA. Research was conducted to develop pesticide exposure data and predictive mathematical models that could be applied by the regulatory office in conducting risk assessments.

Develop and Validate Techniques That Assess Human and Environmental Exposure to Pesticides for the FIFRA Registration and Enforcement Program. Research emphasis focused on the generation of exposure estimates of pesticide levels which estuarine/marine, freshwater and terrestrial organisms and ecological processes may experience. Additionally, two media and multimedia exposure models were assembled or expanded incorporating the research exposure estimates or information from previously existing data bases. These investigations considered such factors as transport, fate, sorption, degradation and biomagnification and the physical/chemical properties of the pesticides and the systems under study. Pertinent information was transferred to the regulatory user community.



Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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PESTICIDES

Registration, Special Registration & Tolerances

		ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)						
PROGRAM						

Registration						
Salaries & Expenses		\$8,242.5	\$7,224.6	\$7,464.6	\$8,916.3	\$1,451.7
TOTAL		\$8,242.5	\$7,224.6	\$7,464.6	\$8,916.3	\$1,451.7
Special Registration						
Salaries & Expenses		\$1,948.7	\$2,227.7	\$2,327.7	\$2,569.4	\$241.7
TOTAL		\$1,948.7	\$2,227.7	\$2,327.7	\$2,569.4	\$241.7
Tolerances						
Salaries & Expenses		\$2,086.0	\$2,390.2	\$2,440.2	\$2,713.4	\$273.2
TOTAL		\$2,086.0	\$2,390.2	\$2,440.2	\$2,713.4	\$273.2
TOTAL:						
Salaries & Expenses		\$12,277.2	\$11,842.5	\$12,232.5	\$14,199.1	\$1,966.6
Registration, Special	TOTAL	\$12,277.2	\$11,842.5	\$12,232.5	\$14,199.1	\$1,966.6
Registration &						
Tolerances						

PERMANENT WORKYEARS

Registration	202.7	183.5	183.5	183.5
Special Registration	47.6	57.8	57.8	57.8
Tolerances	81.1	62.4	62.4	62.4
TOTAL PERMANENT WORKYEARS	331.4	303.7	303.7	303.7

TOTAL WORKYEARS

Registration	213.7	203.0	203.0	203.0
Special Registration	50.9	63.5	63.5	63.5
Tolerances	82.4	74.1	74.1	74.1
TOTAL WORKYEARS	347.0	340.6	340.6	340.6

PESTICIDES

Registration, Special Registration and Tolerances

Budget Request

The Agency requests a total of \$14,199,100 all of which is in the Salaries and Expenses appropriation and 303.7 permanent workyears. This request represents an increase of \$1,966,600 and no change in permanent workyears.

Program Description

The goal of these activities is to facilitate a steady flow of environmentally safe products to the marketplace. The Agency evaluates all pesticides under a "no unreasonable adverse effects" standard, taking into account the economic, social, and environmental risks and benefits of the use of any pesticide.

Registration -- FIFRA Section 3 requires that a pesticide be registered by EPA before it can legally be sold, distributed, or made available for use. Under the registration program, new pesticide products are registered and current registrations are amended to add uses and/or new formulations. This registration is accomplished by: (1) reviewing formulation and use information and supporting data to ensure that the use of the products will not result in "unreasonable adverse effects" to man or the environment taking into account the economic, social, and environmental risks and benefits of the use of any pesticide; (2) ensuring that public health products (e.g., hospital disinfectants) are effective for their proposed uses; (3) limiting the risks associated with use through label precautions, special packaging requirements, application direction and, where necessary, restriction of use to trained applicators; and (4) providing incentives, such as expediting reviews, for environmentally preferable pesticides (those which pose a low level of environmental concern). These include products such as biorational pesticides and pesticides which provide safer alternatives to cancelled products.

Special Registration -- The special registration program performs an auxiliary function to the registration process and contributes to agricultural production and public health by: (1) issuing experimental use permits -- allowing experimentation with nonregistered products or uses to develop data needed for registration; (2) approving temporary tolerances -- establishing safe pesticide residue (tolerance) levels for food or feed use crops to be marketed following the application of experimental use pesticides; (3) granting emergency exemptions -- permitting the use of unregistered pesticides or the use of registered pesticides for sites and pests not included in their registration to meet pest emergencies when the benefits of such use exceed the risk; (4) reviewing State registrations of pesticides distributed and used only within the registering State for special local needs, to determine if proper tolerances have been established and if the chemicals involved have not been suspended or cancelled; and, (5) reviewing State Experimental Use Permit plans and permits necessary to develop data for State special local need registrations. These functions are required by Sections 5, 18, and 24 of FIFRA and Section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA).

Tolerances -- The tolerance program protects the public health while giving appropriate consideration to the production of an adequate, wholesome, and economical food supply. This is achieved through the following actions: (1) ensuring that the maximum residue levels likely to be found in foods are safe for human consumption through a careful review and evaluation of residue chemistry and toxicology data; (2) subsequently, establishing tolerance levels for both active and inert ingredients, or exemptions from the requirement of a tolerance, for pesticide residues in or on raw agriculture commodities and processed foods, including establishing tolerance levels for import commodities and rotational crops and responding to minor use petitions and Federal, State and local government petitions; and, (3) ensuring through the testing of analytical methods that adequate enforcement of the established tolerance can be achieved. Authorizing legislation is contained in the FFDCA, as amended, Sections 402, 406, 408, and 409.

REGISTRATION

1984 Program Request

The Agency requests a total of \$8,916,300, all of which is in the Salaries and Expenses appropriation, and 183.5 permanent workyears. This amount represents no change in workyears and an increase of \$1,451,700 to fully fund personnel compensation in addition to increases in other expenses.

In 1984, the Agency expects to conduct 250 reviews of new chemicals and biorationals, 8,500 reviews of old chemicals, 20,300 amended registration reviews, and 150 new use reviews. New use reviews, formerly found in old chemical reviews and amended registration reviews, will now be tracked separately since they are labor intensive units regardless of whether they are conducted as a part of a new product review or for an amendment to a previously registered product. Also, new uses are of much greater concern, economically and environmentally, than are routine new products containing old chemicals and amendments.

Priority, through reduced data requirements and rapid review, will continue to be given to environmentally protective pesticides and alternatives to pesticides which have been cancelled or which pose serious threats to the environment. Process efficiencies will continue to be evaluated and introduced, when appropriate, to reduce processing time and registration costs for both the Agency and industry.

Long term regulatory reform projects, which will be explored in 1983-84 include: general registration, which applies to products whose toxicology and use patterns are well understood and of little concern, permitting registrant self certification of compliance with the appropriate Registration Standard; provisional registration; expanded use of Section 25(b) exemption for pesticides which are found to be practically safe or regulated by other Agencies--additional candidates will be identified and policies for granting full or conditional exemptions will be articulated; and, fulfilling Executive Order 12291 through the review of existing regulations.

The Agency will employ cost-benefit studies and economic impact analyses to ensure that regulations issued under FIFRA and FFDCA will result in minimal adverse impacts on the economy and the pesticide industry. In addition, the Agency will continue to improve communication to applicants to enhance the quality of submissions and will continue to emphasize timely informal meetings with applicants to discuss problems encountered during review in order to speed resolution. Administratively determined processing time limits for registration actions will be met for at least 90% of the actions. Backlogs will be maintained at or near zero for new chemical and biorational registrations and will be minimized for old chemical and amended registration reviews as demand permits.

The Agency will develop and implement a systematic approach to identifying the level of regulation appropriate for classes of pesticides, e.g., chemical families and use situations. As provided by FIFRA Section 25(b), pesticides which are reviewed and found to be practically safe or adequately regulated by another Agency will be exempted from regulation. Work will continue on farm safety with particular emphasis on reentry problems and impacts of agricultural use on human health. This program will focus on educating farm workers, growers, and applicators about pesticide hazards, and involving them in efforts to mitigate those hazards. Cooperative agreements, interagency agreements (Department of Labor, U.S. Department of Agriculture, etc.), and contracts, funded through the Generic Chemical Review program element, will be implemented to promote safe pesticide use practices among various exposure and user groups, including city dwellers moving into agricultural areas.

The Agency will seek to assess charges to the applicants for certain registration and supporting services provided by EPA. These funds could go directly to the U.S. Treasury and consequently would have no impact on budget authority or appropriation needs of the pesticides program.

1983 Program

In 1983, the Agency is allocating a total of \$7,464,600, all of which is in the Salaries and Expenses Appropriation, and 183.5 permanent workyears. Priority will continue to be given to reducing backlogs to as close to zero as possible by the end of 1983, commensurate with the level of external demand, and to improving response times for processing applications.

The Agency expects to conduct 250 reviews of new chemicals and biorationals, 8,500 reviews of registrations for new products containing old chemicals identical or similar to others already registered, and 20,300 amended registration reviews.

As part of the program's regulatory reform efforts, existing regulations (registration, reregistration and classification procedures; disposal and storage guidelines; and the Polynuclear Aromatic Hydrocarbon (PNA) policy statement) will be reviewed and revised, as necessary. Conditional registration and compensation regulations will be proposed again for notice and comment and, ultimately, published as final rules. The Label Improvement and Farm Safety Programs and use of data and reviews of other organizations and countries will be continued on a priority basis. Ground water contamination will be given added emphasis. Long term regulatory reform efforts, identified previously, will be evaluated for possible implementation.

The Agency will complete proposals seeking to assess fees or other charges to support pesticide registrations.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$240,000 results from the following action:

-Reprogrammings. (+\$240,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$240,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$8,242,500, all of which was in the Salaries and Expenses appropriation.

In response to the Vice President's Task Force on Regulatory Reform, the Agency completed testing guidelines for publication during 1983 by the National Technical Information Services, better articulated data requirements, revised application procedures, and held more frequent pre-application conferences with registrants. As a result, the Agency increased the quality of data submission in support of registration applications, and thereby, reduced the number of industry resubmissions and improved the timeliness and consistency of Agency actions. New regulatory reform initiatives, which were implemented, included exemption of some classes of pesticides (such as pheromones used in insect traps) from regulation under Section 25(b) of FIFRA, extension of efficacy data waivers, approval of registrations based on draft labels in lieu of final labels, elimination of pre-market review of distributor (supplemental) applications, and provision of a broader approach to determining packaging effectiveness for products requiring child-resistant packaging.

Consistent with Congressional intent and OMB direction, EPA conducted a study in 1982 of alternative funding mechanisms for support of the activities of this program.

In 1982, the Agency conducted 221 reviews of new chemicals and new biorationals, 11,993 reviews of registrations for new products that contain old chemicals identical or substantially similar to others already registered, and 23,727 amended registration reviews.

Outputs for 1982 exceeded the Agency's original expectations due to a major effort directed to backlog reduction. The Agency reduced backlogs of new chemical reviews by 92%, old chemical reviews by 97%, and amended registration reviews by 97%.

SPECIAL REGISTRATION

1984 Program Request

The Agency requests a total of \$2,569,400, all of which is in the Salaries and Expenses appropriation, and 57.8 permanent workyears. This is an increase of \$241,700 to fully fund personnel compensation and benefits. Workyears do not change from 1983.

In 1984, efficiencies in the Special Registration process, featuring a more direct working relationship with pesticide registrants and the States, will continue to be employed to reduce processing times and costs. Statutory processing times for experimental use permits (120 days) to allow data development in support of future registrations, and for the review of State section 24(c) registrations (90 days) which permit the use of pesticides for special local needs within individual states, will be met for the most part. Decisions on FIFRA Section 18 emergency exemption requests to allow unregistered uses to meet needs arising from acute and critical pest outbreaks, will generally be reached prior to the requested implementation time (in any event within a target processing time of 50 days), and backlogs will be maintained at or near zero. The Agency will support increased State responsibilities for the issuance of experimental use permits to develop data for special local needs registrations through reviews and approvals of State experimental use permit plans and encouragement to registrants to seek State experimental use permits when testing in only one State is required. The special registration program should begin to benefit from additions to the chemical data base resulting from chemical reviews conducted in the process of establishing registration standards.

In 1984, the Agency expects to conduct 770 reviews for emergency exemptions, 475 reviews for experimental use permits, 100 State experimental use permit reviews, 175 reviews for temporary tolerances, and 1,100 reviews of special local need registrations.

1983 Program

In 1983, the Agency is allocating a total of \$2,327,700 all of which is in the Salaries and Expenses appropriation, and 57.8 permanent workyears. The Agency will conduct a formal review of experimental use permit regulations and conclude the review of emergency exemption regulations; backlogs are expected to be reduced further. Consideration will be given to measures to reduce workload and processing times such as accepting multi-year experimental use permit requests rather than considering only repetitive, one year permits; reducing Federal oversight of State registrations by accepting State certifications, as appropriate, and encouraging the States to complete State experimental use permit plans under FIFRA Section 5(f).

All emergency exemption requests will be decided upon, whenever possible, prior to the time their use is required. Statutory time limits for experimental use permits, temporary tolerance petitions, and special local needs registrations will be met. Existing backlogs will be maintained near zero.

In 1983, the Agency will conduct 770 reviews of emergency exemption requests, 475 reviews of experimental use permits, 100 State experimental use permit reviews, 175 reviews of temporary tolerances and 1,100 reviews of special local needs registrations.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$100,000 results from the following action:

-Reprogrammings. (+\$100,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$100,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,948,700 for this program, all of which was in the Salaries and Expenses appropriation.

During 1982, major emphasis was placed on improving response times, adhering to statutory deadlines, eliminating backlogs, and reevaluating regulations. The Agency began a formal review of emergency exemption regulations in 1982. Pursuant to the initiatives of the Vice President's Task Force on Regulatory Reform, the Agency met with the industry, State and association representatives to identify their concerns and obtain recommendations for improving the program. Operating improvements were introduced, including earlier screening of requests and applications to forestall data problems later on, improved processing procedures for experimental use permits, focusing Agency attention on the critical health and safety aspects of emergency exemptions (relying on States to assess pest problems and evaluate available pesticides), and shortening of science review time. As a result of these improvements, statutory deadlines for experimental use permits were met for 83% of the actions, and the existing backlog from 1981 was reduced by 83%.

During 1982, the Agency conducted 752 reviews of emergency exemption requests, 499 reviews of experimental use permits, 167 reviews of temporary tolerance petitions to permit the marketing of food products exposed to pesticides during experimentation, and 1,656 reviews of State registrations.

TOLERANCES

1984 Program Request

The Agency requests a total of \$2,713,400, all of which is in the Salaries and Expenses appropriation, and 62.4 permanent workyears for this program. This amount represents an increase of \$273,200, which is to fund personnel compensation and benefits. Workyears do not change from 1983.

Requested resources will permit an anticipated 640 tolerance petition reviews and 50 reviews of inert ingredient requests. All possible tolerance petition reviews will be completed within statutory time limits in the review process by employing such methods as a fast track system when limited scientific review is required.

The Agency, after all attainable efficiencies are achieved in the process, will consider whether Congressional legislation may be appropriate to extend statutory processing deadlines for petitions. Tolerance petitions now involve the review of far more sophisticated data than was anticipated when the current time limit was enacted into law. The backlog of overdue petitions will be kept low. Most of the inert ingredient requests will be processed within 90 days. It is anticipated that modifications to the system, proposed in 1982, such as crop grouping, will permit processing for most minor use petitions to be completed within 90 days. This new approach will reduce data requirements, save Agency resources, and broaden the applicability of tolerances so that the States can issue "special local need" registrations for minor uses.

The Agency will continue to utilize the policy of reducing data requirements for minor uses of pesticides. Tolerance fees charged will cover reasonable costs of processing applications, as authorized under Section 408 of the Federal Food, Drug and Cosmetic Act (FFDCA). The Agency will continue to waive fees when appropriate to the public interest (Federal or State agency requests, important public health uses, innovative pesticide chemicals, and chemicals and biorationals used in integrated pest management).

1983 Program

The Agency is allocating a total of \$2,440,200, all of which is in the Salaries and Expenses appropriation, and 62.4 permanent workyears to this program.

The Agency expects to conduct 640 tolerance petition reviews, and 50 reviews of inert ingredient requests. The backlog of tolerance petitions will be reduced but not totally eliminated by the end of the year. Most of the tolerance petitions will be processed within statutory deadlines. Petitions without statutory time limits will be completed on the same schedule as petitions with statutory requirements. Comments will be reviewed on policies proposed in 1982 for crop grouping and food additive tolerance requirements. The Tolerance fee structure will be revised to more fully cover the costs of the program.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$50,000 results from the following action:

-Reprogrammings. (+\$50,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$50,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,086,000 for this program, all of which was in the Salaries and Expenses appropriation.

The Agency conducted 599 reviews of tolerance petitions and 58 reviews of inert ingredient requests. To reduce the petition processing time, preregistration conferences with applicants were implemented to identify and resolve possible issues on petitions and a priority review system was established to assure that review attention is allocated appropriately. The Agency utilized the policy of reducing requirements for minor uses of pesticides and began using crop tolerance groupings of petitions which broaden the applicability of tolerances. The proposed rule to expand the concept of crop grouping was published for comment in the Federal Register in 1982. It is anticipated that farmers will benefit significantly from this proposed change in procedures.

The Agency also developed a proposed policy statement to eliminate food additive tolerance requirements for pesticides applied to bodies of water; residues in drinking water will be governed by the Safe Drinking Water Act rather than FFDCA. This new policy was published for public comment in 1982 in the Federal Register. In addition, measures for backlog reductions and turnaround time efforts were incorporated in employees' performance standards, thus assuring better management of the process.

PESTICIDES

Generic Chemical Review & Special Reviews - EIS Preparation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Generic Chemical Review					
Salaries & Expenses	\$9,253.9		\$7,965.0	\$8,715.8	\$750.8
Abatement Control & Compliance	\$12,725.5		\$11,570.7	\$10,570.7	-\$1,000.0
TOTAL	\$21,979.4		\$19,535.7	\$19,286.5	-\$249.2
Registration Standards					
Salaries & Expenses		\$3,689.9			
Abatement Control & Compliance		\$4,180.1			
TOTAL		\$7,870.0			
RPAR Reviews					
Salaries & Expenses		\$4,470.9			
Abatement Control & Compliance		\$7,390.6			
TOTAL		\$11,861.5			
Special Reviews - EIS Preparation					
Salaries & Expenses	\$97.9	\$105.4	\$105.4	\$55.6	-\$49.8
TOTAL	\$97.9	\$105.4	\$105.4	\$55.6	-\$49.8
TOTAL:					
Salaries & Expenses	\$9,351.8	\$8,266.2	\$8,070.4	\$8,771.4	\$701.0
Abatement Control & Compliance	\$12,725.5	\$11,570.7	\$11,570.7	\$10,570.7	-\$1,000.0
Generic Chemical Review & Special Reviews - EIS Preparation	TOTAL \$22,077.3	\$19,836.9	\$19,641.1	\$19,342.1	-\$299.0
PERMANENT WORKYEARS					

Generic Chemical Review	218.1		185.9	185.9	
Registration Standards		93.3			
RPAR Reviews		92.6			
Special Reviews-EIS Preparation	2.4	3.0	3.0	1.5	-1.5
TOTAL PERMANENT WORKYEARS	220.5	188.9	188.9	187.4	-1.5

PESTICIDES

Generic Chemical Review & Special Reviews - EIS Preparation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

TOTAL WORKYEARS					

Generic Chemical Review	224.8		192.9	192.9	
Registration Standards		99.6			
RPAR Reviews		93.3			
Special Reviews-EIS Preparation	2.4	3.0	3.0	1.5	-1.5
TOTAL WORKYEARS	227.2	195.9	195.9	194.4	-1.5

PESTICIDES

Generic Chemical Review and Special Reviews - EIS Preparation

Budget Request

The Agency requests a total of \$19,342,100 and 187.4 permanent workyears for 1984, a decrease of \$299,000 and 1.5 permanent workyears from 1983. Included in this total are \$8,771,400 for Salaries and Expenses and \$10,570,700 for Abatement, Control and Compliance, an increase of \$701,000 and a decrease of \$1,000,000 respectively, mainly in the Generic Chemical Review program.

Program Description

Generic Chemical Review -- The Generic Chemical Review program (this new program consolidates resources from the previous Registration Standards and RPAR Review Programs) consists of the Registration Standards and Special Review decision processes. The goal of this program is to reregister currently registered pesticides and to evaluate potentially hazardous pesticides. The Registration Standards process was established to enable the Agency to meet efficiently the mandate in Section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to reregister currently registered pesticides. The Special Review decision process (formerly RPAR) evaluates pesticides which have an identified potential for producing significant adverse health or environmental effects.

The Generic Chemical Review program is designed to update the scientific data base supporting registrations and establish scientifically based regulatory standards for the reregistration of existing pesticides and efficient registration of new or amended products. The program also systematically identifies and takes appropriate regulatory action on problems which some pesticides pose for human health and the environment. The Registration Standards process begins long before the issuance of formal registration standards guidance packages with the identification and systematic call-in of data to fill many of the most critical data gaps. This approach assures early attention to the most vital known requirements for additional data and begins a process that leads to reregistration for most chemicals.

Special Reviews - Environmental Impact Statement Preparation -- The goal of this program is the preparation of statements which delineate the impact on humans and/or the environment due to exposure to a pesticide under consideration through the Special Review process. Such statements are part of the documentation leading to Special Review decisions.

GENERIC CHEMICAL REVIEW

1984 Program Request

The Agency requests a total of \$19,286,500 and 185.9 permanent workyears for this program, of which \$8,715,800 is for the Salaries and Expenses appropriation and \$10,570,700 is for the Abatement, Control and Compliance appropriation. This represents an increase of \$750,800 and a decrease of \$1,000,000, respectively, for the purpose of fully funding personnel compensation and benefits costs. Workyears requested do not change from 1983. The extramural resources will be used for information services, scientific data review contracts to support special review decisions and the establishment of registration standards (exposure/hazard assessment, risk/benefit analysis, toxicology, health effects, etc.), site/pest information, pesticide use information, economic impact analyses of various regulatory recommendations, and to fund various pesticide monitoring and integrated pest management projects.

These resources are expected to permit the completion of 10 Special Review decisions. The new process should provide for fewer formal reviews or administrative hearings and more negotiated settlements for Special Review chemicals. This will result from improvements in the quality of scientific reviews, revisions in criteria for the initiation of intensive special review in order to reflect risk more realistically, and attention to alternative risk reducing measures. Negotiated settlements will be encouraged through improved communication with all involved parties and scientific evaluation will continue to be subject to peer review. A total of 18 laboratory audits are projected and the results will be fed into the Special Review and Registration processes to assure that data concerning health and environmental effects used in support of pesticide registration actions are accurate and reliable. The use of Integrated Pest Management will be furthered through development of models useful in urban pest management. The Agency will work with government agencies and others in developing such models -- particularly for problems such as rodent control.

It is anticipated that 35 registration standards, up 59 percent from 1983, will be established and the Agency will continue the implementation of data call-in by requesting long-term chronic health data on chemicals for which standards will not yet have been started. Data call-in will ensure that these critical data will be available by the time standards development begins. In 1984, the use of the cluster concept and ranking strategy will be continued to ensure, whenever feasible, early review of clusters with high volume, high exposure (especially food uses), and significant potential hazards. The resource efficiencies derived from the cluster approach come primarily from the simultaneous review of all products with similar uses, the more efficient assessment of use patterns and exposure, and the ready availability of information on alternatives in the event Special Review of any of the members of a cluster is required.

1983 Program

In 1983, the Agency is allocating a total of \$19,535,700 and 185.9 permanent workyears to this program, of which \$7,965,000 is under the Salaries and Expenses appropriation and \$11,570,700 is for extramural purposes under the Abatement, Control and Compliance appropriation.

During 1983, emphasis will be placed on completing final resolutions on those chemicals remaining in the Special Review process in order to resolve uncertainty among producers and users. Emphasis will also be placed on analysis of new chemicals which exceed the risk criteria. New reviews will be initiated principally as a result of reviews and new data developed under the registration standards process. When adverse effects data are identified through registration standards development, the Agency will issue combined pre-Special Review and Registration Standards documents to reduce duplicate effort. A total of 13 Special Review decisions are anticipated. Integrated Pest Management approaches and other alternative practices will be considered in Special Reviews to be certain that a full range of potential risk reduction measures are examined. A total of 18 laboratory data audits is projected. The formal Industrial Biotest data reviews will be completed. Any other miscellaneous data will be reviewed under Registration Standards. All sponsors of Industrial Biotest studies will be notified of the results of the program review.

Efficiencies in the registration standards process are expected to contribute to the establishment of 22 standards. The Agency will continue to pilot and implement additional efficiencies and will explore additional approaches to increasing industry involvement in the process as a means of reducing review time and costs. Some cluster reviews will be completed in 1983. Data call-in will continue to ensure that critical data gaps are filled early.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$19,535,700 results from the following actions:

-Restructuring. (+\$19,731,500) The Congressionally approved restructuring transferred Registration Standards and RPAR Reviews into the new program element Generic Chemical Reviews. This allowed for better management of resources by combining two program elements which were similar in nature. The change to the Salaries and Expenses appropriation was +\$8,160,800 and the change to the Abatement, Control and Compliance appropriation was +\$11,570,700.

-Congressional Action. (+\$44,200) This increase includes +\$44,200 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (-\$240,000). During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$240,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$21,979,400 for this program of which \$9,253,900 was under the Salaries and Expenses appropriation and \$12,725,500 is for extramural purposes under the Abatement, Control and Compliance appropriation.

Special Review decisions were reached on 16 chemicals and a total of 13 lab audits were performed. Industrial Biotest Laboratory reviews were completed on 98 chemicals. The emphasis in Integrated Pest Management activities was on the control of urban pests.

In 1982, 18 Registration Standards Guidance Packages were established for a cumulative total of 42. Internal procedures and productivity improvements developed in earlier years were implemented. A pilot program was initiated on the development of standards for new chemicals and work continued on the review of chemicals in clusters. The Agency increased involvement by registrants in the review process by supplying them with a bibliography of available data and discussing use patterns and data requirements with them early in the process.

SPECIAL REVIEWS - ENVIRONMENTAL IMPACT STATEMENT PREPARATION

1984 Program Request

The Agency requests a total of \$55,600, all of which is in the Salaries and Expenses appropriation, and 1.5 permanent workyears. This represents a decrease of \$49,800 and 1.5 permanent workyears which reflects the reduction of formal reviews being conducted for Special Review chemicals. Activities projected for 1984 include preparation in the Special Review process of analyses on the projected impacts on humans and/or the environment due to exposure to a pesticide. Such analyses are part of the documentation supporting Special Review decisions. In developing the documentation, the Agency considers the adverse effects (health and environmental impact) of the pesticide under review. This analysis is an integral part of the Special Review documentation and is not issued as a separate Environmental Impact Statement.

1983 Program

In 1983, the Agency is allocating a total of \$105,400 and 3.0 permanent workyears to this program, all of which is for the Salaries and Expenses Appropriation. Activities for 1983 are basically the same as those described above.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$97,900, all of which was in Salaries and Expenses appropriation. Activities completed included preparation in the Special Review process of impact analyses concerning exposure to pesticides. The analyses were used to support Special Review decisions.

PESTICIDES

Federal and State Program Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Pesticides Use Management		
Salaries & Expenses		\$550.5
	TOTAL	\$550.5
TOTAL:		
Salaries & Expenses		\$550.5
Federal and State Program Support	TOTAL	\$550.5

PERMANENT WORKYEARS

Pesticides Use Management	13.0
TOTAL PERMANENT WORKYEARS	13.0

TOTAL WORKYEARS

Pesticides Use Management	13.2
TOTAL WORKYEARS	13.2

PESTICIDES

Federal and State Program Support

Budget Request

The Agency requests no funds or permanent workyears for 1984. In 1982, the pesticide use management program activities were integrated into other pesticide programs.

Program Description

This program includes consultation and the exchange of information and technical advice between the Agency and Federal, State and local officials with interests in pesticide regulation, as well as assistance to pesticide users, pesticide producers, and the general public, to promote compliance with pesticide regulations and safe use practices.

PESTICIDE USE MANAGEMENT

1984 Program Request

The Agency requests no funds or permanent workyears for 1984.

1983 Program

In 1983, the Agency is allocating no funds or permanent workyears to this program. The functions of this program that are being continued are supported in other pesticide program elements, e.g., Registration.

1982 Accomplishments

In 1982, the Agency obligated a total of \$550,500 for this program, all of which was under the Salaries and Expenses appropriation. The program provided Regional offices with program documentation and guidance on Agency programs and policies regarding pesticide registration, regulatory requirements, and pesticide incidents requiring Agency technical expertise. Information and referral services were provided to Federal, State, and local agencies; trade organizations; poison control centers; hospitals; physicians; and worker clinics in dealing with pesticide problems. The integration of pesticide use management functions into other pesticide programs enabled direct consultation between Agency headquarters technical specialists (who have intimate, firsthand knowledge of pesticide regulatory policies, processes, and actions), State and local officials, and pesticide producers and users, thus expediting the exchange of information, advice, and assistance on matters of concern to the pesticide community.

Enforcement

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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PESTICIDES

Pesticides Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Pesticides Enforcement					
Salaries & Expenses	\$4,111.5	\$3,670.1	\$3,785.6	\$4,075.1	\$289.5
Abatement Control & Compliance	\$18.9	\$45.3	\$45.3	\$45.3	
TOTAL	\$4,130.4	\$3,715.4	\$3,830.9	\$4,120.4	\$289.5
Pesticides Enforcement Grants					
Abatement Control & Compliance	\$9,087.4	\$6,918.4	\$8,702.9	\$6,918.4	-\$1,784.5
TOTAL	\$9,087.4	\$6,918.4	\$8,702.9	\$6,918.4	-\$1,784.5
Pesticides Certification & Training					
Abatement Control & Compliance	\$2,579.1	\$2,000.0	\$2,000.0	\$2,100.0	\$100.0
TOTAL	\$2,579.1	\$2,000.0	\$2,000.0	\$2,100.0	\$100.0
TOTAL:					
Salaries & Expenses	\$4,111.5	\$3,670.1	\$3,785.6	\$4,075.1	\$289.5
Abatement Control & Compliance	\$11,685.4	\$8,963.7	\$10,748.2	\$9,063.7	-\$1,684.5
Pesticides Enforcement TOTAL	\$15,796.9	\$12,633.8	\$14,533.8	\$13,138.8	-\$1,395.0

PERMANENT WORKYEARS

Pesticides Enforcement	114.6	96.6	96.1	90.9	-5.2
TOTAL PERMANENT WORKYEARS	114.6	96.6	96.1	90.9	-5.2

TOTAL WORKYEARS

Pesticides Enforcement	124.2	104.7	104.2	99.6	-4.6
TOTAL WORKYEARS	124.2	104.7	104.2	99.6	-4.6

PESTICIDES

Pesticides Enforcement

Budget Request

The Agency requests a total of \$13,138,800 and 90.9 permanent workyears for 1984, a decrease of \$1,395,000 and 5.2 permanent workyears from 1983. Included in this total is \$4,075,100 under the Salaries and Expenses appropriation, and \$9,063,700 under the Abatement, Control and Compliance appropriation, an increase of \$289,500 and a decrease of \$1,684,500 respectively. The overall reduction reflects a continuing shift in emphasis from Federal to State enforcement.

Program Description

This activity includes monitoring the pesticide industry -- including producers, distributors and users -- for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); providing compliance assistance to the regulated community; and preparing and issuing, where compliance first cannot be gained by other means, notices of violation and administration orders. Also involved in this activity is the management and funding of State cooperative enforcement agreements and State certification and training programs. As a result of Federal and State agreements, the program is conducted largely by cooperating State agencies.

Pesticides Enforcement -- This program emphasizes gaining compliance by the pesticide industry and users with registration, classification, and labeling requirements. Headquarters provides enforcement support to the FIFRA regulatory development process; designs, implements, and oversees compliance monitoring activities. The Regional offices negotiate and manage grants for the cooperative enforcement programs and the State applicator certification programs; provide Federal compliance monitoring in States not participating in the cooperative enforcement program; and, monitor laboratories performing tests as required by FIFRA regulations. The Regional pesticide enforcement program also provides compliance assistance to the agricultural chemical industry, commercial and private applicators, user groups and States.

Pesticide Enforcement Grants -- This program provides for the bulk of pesticide compliance monitoring activities in the United States. Under the terms of cooperative agreements with EPA, States inspect pesticide producer establishments, provide marketplace surveillance, and investigate pesticide use, misuse, and field reentry questions. The grants also support the States in surveying pesticide imports, inspecting pesticide dealer records and reviewing commercial applicator records.

Pesticides Certification and Training -- Pesticides certification and training insures that highly toxic, restricted use pesticides are handled, applied, and stored only by competent, trained applicators. Funds for training applicators are transferred to the U.S. Department of Agriculture for distribution to State Cooperative Extension Services. Certification funds are distributed through grants to designated State agencies. Funds are used by the States for certification activities, such as developing and grading exams, issuing credentials, monitoring training, and keeping records of certified applicators. The EPA also provides funding for Federal certification and training programs in Colorado, a State that has chosen not to conduct its own certification and training programs.

PESTICIDES ENFORCEMENT

1984 Program Request

The Agency requests a total of \$4,120,400 and 90.9 permanent workyears for this program, of which \$4,075,100 is for Salaries and Expenses, and \$45,300 is for

Abatement, Control and Compliance. This is a decrease of 5.2 workyears, an increase of \$289,500 for Salaries and Expenses, and no change for Abatement, Control and Compliance. Regional resources are reduced 11.7 permanent workyears which reflects increased participation by States, Territories and Indian Tribes in cooperative enforcement and certification programs. Headquarters is increased by 6.5 permanent workyears to support activities, such as quality assurance and laboratory training for State chemists, which were previously conducted by National Enforcement Investigations Center (NEIC). The increase in Salaries and Expenses is due to higher personnel costs and reflects a more balanced sharing of ADP costs between pesticides and toxic substances enforcement. Contract funds will be used for ADP support to store annual pesticide production data as required by Section 7 of FIFRA, and for support of the FIFRA and TSCA Enforcement System (FATES), the computer system used to store and maintain compliance data.

In 1984, the first priority of the pesticides enforcement program will be continued cooperation with States. Emphasis will be placed upon achieving compliance with pesticide use and application rules and upon enhancement of overall compliance with FIFRA through cooperative agreements. As a consequence of this enhanced State role in the overall program, the primary Federal role will continue to be in program management and training. The enforcement program will include the oversight of State cooperative agreements and applicator certification and training programs, administration of Federal applicator certification and training programs in Colorado (Nebraska is expected to accept the certification program in 1983), and administration of certification and training programs among Indian Tribes. A comprehensive evaluation of the cooperative enforcement programs will be conducted and the measurement of environmental results will be included in State agreements.

Headquarters will provide support to the FIFRA regulatory development and review process and will manage and execute national programs to monitor compliance with FIFRA regulatory actions, such as the Toxaphene cancellation order issued in 1983 and the Child Resistant Packaging rules. Headquarters will also provide oversight to cooperative Federal/State enforcement programs and State applicator certification and training programs. Technical support for Regional activities will be provided.

The Regional offices will negotiate and manage grants for the cooperative enforcement programs and the certification programs. Federal compliance monitoring in those States (Colorado, Wyoming, Ohio) not participating fully in the cooperative enforcement program will be increased to upgrade these programs to a level comparable with the cooperative State programs. Monitoring laboratories conducting tests required by FIFRA regulations will be also undertaken by the Regional offices.

In addition, the Regional enforcement program is committed to provide compliance assistance to the agricultural chemical industry, commercial and private applicators, user groups, and States to assist them in obtaining product registrations, experimental use permits, special local need registrations, emergency exemptions, and to understand and meet their obligations under FIFRA. Providing assistance should help preclude the need for future enforcement activity in most instances.

The Regional enforcement program will also prepare and issue notices of violation and administrative orders, with the concurrence of the Office of Legal and Enforcement Counsel (OLEC). In addition, the program will assist and support OLEC in the development of civil and criminal referrals.

1983 Program

In 1983, the Agency is allocating a total of \$3,830,900 and 96.1 permanent workyears to this program, of which \$3,785,600 is for Salaries and Expenses and \$45,300 is for extramural purposes under the Abatement, Control and Compliance Appropriation.

The first priority of the pesticides enforcement program is developing and enhancing the cooperative programs between EPA and the States. To further this end, the Agency continues to manage 52 cooperative enforcement agreements and 50 State certification and 52 training programs. Training of State personnel is continuing, as is Federal compliance monitoring activities in those States not participating in the grant program and in those States with problems which the State cannot adequately address. Federal compliance assistance is being provided to the regulated community. Efforts also include preparing and issuing notices of violation and administrative orders.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$115,500 results from the following actions:

-Congressional Action. (+\$20,000) This increase includes +\$20,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$95,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$95,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, \$4,130,400 was obligated, of which \$4,111,500 was for Salaries and Expenses and \$18,900 was for Abatement, Control and Compliance.

During 1982, the EPA Federal compliance monitoring program accomplished the following: 286 inspections of pesticide producing establishments; 414 use and re-entry inspections, 306 inspections at ports of entry; 283 marketplace inspections; and, 13 laboratory inspection audits. As a result of these and States' efforts, the Agency issued 170 administrative orders and 856 notice of warnings for product and producer and use violations. This includes all legal and technical aspects of these actions.

EPA also provided management and oversight to 52 cooperative agreements and 50 State certification and 52 training programs. Training of State personnel, as part of these cooperative agreements, was provided to inspectors, chemists, and case preparation officers.

PESTICIDES ENFORCEMENT GRANTS

1984 Program Request

The Agency requests a total of \$6,918,400, all under the Abatement, Control and Compliance appropriation. This is a decrease of \$1,784,500. With improvements in State priority setting activities, the enforcement program will direct available resources toward those aspects of pesticide use that have been associated with the greatest harm to public health or the environment.

As part of the cooperative enforcement agreements, States and Territories will determine their own local program priorities and use the resources provided to act upon these priorities. State compliance monitoring activities will include pesticide producer establishment and marketplace inspections, use and reentry investigations, applicator license and record inspections, and dealer record inspections.

The Agency anticipates that one new State, Colorado, will be added to the cooperative enforcement program for a total of 54 States and Territories.

1983 Program

In 1983, the Agency is allocating \$8,702,900, all of which is under the Abatement, Control and Compliance appropriation, for cooperative enforcement grants with States and Territories. In 1983, these agreements stress compliance with pesticide use and application regulations, and improvement of State program priority-setting methodologies. As in previous years, the pesticides enforcement program will foster user compliance with label directions and manufacturer adherence to product formulation requirements under FIFRA.

One new State, Nebraska, will be added to the cooperative enforcement program for a total of 53 States and Territories.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,784,500 results from the following action:

-Congressional Action. (+\$1,784,500) The Congressional add-on to this activity of +\$1,784,500 to the Abatement, Control and Compliance appropriation was for the State pesticides enforcement grants program.

1982 Accomplishments

In 1982, the Agency obligated \$9,087,400 all of which is under the Abatement, Control and Compliance appropriation, for cooperative agreements with 52 States and Territories. This funding provided resources for States to conduct: 2,318 establishment inspections; 13,850 use and reentry inspections; 15,808 marketplace inspections; 183 import inspections, 14,005 applicator license and record inspections; and, 11,967 dealer record inspections.

PESTICIDES CERTIFICATION AND TRAINING

1984 Program Request

The Agency requests a total of \$2,100,000 for this program, all under the Abatement, Control and Compliance appropriation. The program will support 51 applicator certification and 52 training programs in States and Territories and a Federally run program in Colorado. This is an increase of \$100,000 for the certification program in Nebraska, which will be conducted by the State for the first time in 1984. States will be encouraged to raise or implement fees to provide for increased State support for the certification programs. The EPA will assist States in designing improved training materials in 1984.

1983 Program

In 1983, the Agency is allocating \$2,000,000, all under the Abatement, Control and Compliance appropriation, for 50 certification and 52 training programs with States and Territories. In addition, these funds support Federal programs in Colorado and Nebraska. The resources will continue to be used for certification and training in the application of highly toxic, restricted use pesticides.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, resources obligated were \$2,579,100, all under the Abatement, Control and Compliance appropriation, for funding 50 certification and 52 training programs in States and Territories. In addition, resources funded Federal certification and training programs in Colorado and Nebraska.

Radiation

ENVIRONMENTAL PROTECTION AGENCY

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RADIATION

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

APPROPRIATION

Salaries & Expenses	\$8,430.7	\$7,917.8	\$8,340.0	\$7,742.4	-\$597.6
Abatement Control & Compliance	\$2,987.2	\$2,195.7	\$2,195.7	\$3,095.7	\$900.0
Research & Development	\$917.5	\$237.6	\$387.6	\$16.7	-\$370.9
TOTAL, Radiation	\$12,335.4	\$10,351.1	\$10,923.3	\$10,854.8	-\$68.5
PERMANENT WORKYEARS	150.3	135.1	148.1	126.9	-21.2
TOTAL WORKYEARS	169.6	159.9	172.2	146.4	-25.8
OUTLAYS	\$12,349.0	\$11,147.0	\$12,483.0	\$11,419.0	-\$1,064.0
AUTHORIZATION LEVELS					

RADIATION

OVERVIEW AND STRATEGY

EPA's mandate to protect the public health and environment from adverse effects of radiation exposure is derived from several statutes: (1) the Federal guidance and general environmental standard authorities under the Atomic Energy Act, transferred to EPA by Reorganization Plan #3 of 1970; (2) the Clean Air Act Amendments of 1977 which provide authority to regulate radioactive air pollutants through the standard setting authorities of the Act; (3) the Resource Conservation and Recovery Act and the Uranium Mill Tailings Radiation Control Act which charge EPA with providing standards for protection from waste materials with radioactive content; (4) the Nuclear Waste Policy Act; and (5) other authorities contained in the Federal Water Pollution Control Act, the Marine Protection Research and Sanctuaries Act, the Safe Drinking Water Act, the Public Health Service Act, and the National Environmental Policy Act.

EPA's legislative authorities generally prescribe an environmental assessment, technology assessment, and standard setting role for EPA. In some cases enforcement responsibilities are given to other agencies, notably the Nuclear Regulatory Commission. In these instances, EPA performs some oversight functions to insure that established standards and guidance are followed.

Within the framework of applicable legislation, EPA's radiation program strategy is to:

1. Establish radiation standards and guidance that result in regulatory controls which promise the greatest reduction in adverse health effects and environmental impacts;
2. Maintain a capability to assess and quantify existing and emerging radiation problems and the potential impact of technologies under development;
3. Evaluate and respond to issues of serious public concern, and point out situations where corrective action is the responsibility of other agencies; and
4. Maintain a capability to respond to emergencies and to aid development and testing of State, local, and Federal plans for emergency response.

Within this general strategy, highest priorities have been given to activities mandated by the Clean Air Act of 1977, radioactive waste management activities, completion of Federal Guidance currently under development, and testing of State radiological emergency response plans.

The emphasis on the Clean Air Act activities is consistent with public concern over radiation, the existence of a significant number of poorly defined and uncontrolled sources which emit radioactive air pollutants, and the court decision mandating EPA action on airborne radionuclides.

EPA's role in the control of radioactive waste disposal is prescribed in the Nuclear Waste Policy Act, the Uranium Mill Tailings Radiation Control Act, and by the Interagency Review Group on Nuclear Waste Management. Areas covered by Federal Guidance currently under development include general occupational exposure, radio-frequency exposure and protective action guides for accidental release. EPA responsibilities for review and testing of emergency response plans, monitoring Three Mile Island, and Protective Action Guides are specified in regulations issued by the Federal Emergency Management Agency in March 1982.

EPA's radiation health research program has been focused on research to support the issuance, in late 1984, of Federal Radiation Protection Guidance for radio-frequency and microwave radiation. Since development of these environmental exposure guidelines is nearing completion, an orderly phase-out of the health research program will begin in 1983. A health assessment document, Biological Effects of Radiofrequency Radiation, will be a companion document to the Guidance and is being completed in 1983. As such, no resources have been requested for the health effect program in 1984. The off-site monitoring program, conducted to support the Department of Energy's operation of nuclear test sites, and the quality assurance program for radiochemical analyses will be maintained at the same level of effort.

Research and Development

ENVIRONMENTAL PROTECTION AGENCY

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RADIATION

RESEARCH & DEVELOPMENT

Nonionizing Radiation..... R-6

RADIATION

Nonionizing Radiation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Technical Information & Liaison

Salaries & Expenses	\$55.1	\$10.7			
Research & Development	\$.9				
TOTAL	\$56.0	\$10.7			

Monitoring Systems & Quality Assurance

Salaries & Expenses	\$84.4	\$174.6	\$174.6	\$216.4	\$41.8
Research & Development	\$15.4	\$16.7	\$16.7	\$16.7	
TOTAL	\$99.8	\$191.3	\$191.3	\$233.1	\$41.8

Health Effects

Salaries & Expenses	\$1,532.5	\$1,163.5	\$1,163.5		-\$1,163.5
Research & Development	\$901.2	\$220.9	\$370.9		-\$370.9
TOTAL	\$2,433.7	\$1,384.4	\$1,534.4		-\$1,534.4

TOTAL:

Salaries & Expenses	\$1,672.0	\$1,348.8	\$1,338.1	\$216.4	-\$1,121.7
Research & Development	\$917.5	\$237.6	\$387.6	\$16.7	-\$370.9

Nonionizing Radiation TOTAL	\$2,589.5	\$1,586.4	\$1,725.7	\$233.1	-\$1,492.6
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PERMANENT WORKYEARS

Technical Information & Liaison

.9

Monitoring Systems & Quality Assurance

2.0	5.0	5.0	5.0	
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Health Effects

22.7	16.0	16.0		-16.0
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TOTAL PERMANENT WORKYEARS

25.6	21.0	21.0	5.0	-16.0
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TOTAL WORKYEARS

Technical Information & Liaison

.9

Monitoring Systems & Quality Assurance

2.0	5.0	5.0	5.0	
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Health Effects

27.4	20.4	20.4		-20.4
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TOTAL WORKYEARS

30.3	25.4	25.4	5.0	-20.4
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RADIATION

Nonionizing Radiation

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Conduct Off-Site Radiological Monitoring and Surveillance Program.			
- Provide annual reports on off-site surveillance in previous calendar year. (Monitoring)	7/82	7/83	7/84
Conduct an Analytical Radiochemical Quality Assurance Program.			
- Report on each laboratory quality assurance inter-comparison study as completed. (Monitoring)	9/82	9/83	9/84
Support Issuance of 1984 Radiofrequency Guidance			
- Provide comprehensive health assessment document, <u>Biological Effects of Radiofrequency Radiation</u> , as part of documentation for development of environmental exposure guidelines. (Health)		9/83	
- Present paper on the development of a mathematical model to predict the absorption of electromagnetic energy and the body's resultant thermophysiology response. (Health)		6/83	
- Provide data on the behavioral effects of microwave radiation exposure, based on a workshop to evaluate discrepancies in the behavioral bioeffects data base, the divergence between various international standards, and the potential effects on human behavior. (Health)	1/83		
- Provide data on the interaction of various microwave radiation frequencies with key pathways for brain energy metabolism. (Health)	9/82		
- Evaluate growth stunting and body weight reductions in young mice exposed to 2450 MHz microwave radiation <u>in utero</u> . (Health)	7/82		

RADIATION

Nonionizing Radiation

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Provide data on the immune responsiveness of mice irradiated with continuous wave or pulse-modulated 425 MHz radiofrequency radiation. (Health)	12/82		
- Measure blood-brain barrier permeation in rats during exposure to 2450 MHz microwave radiation. (Health)	9/82		

RADIATION

Nonionizing Radiation

Budget Request

The Agency requests a total of \$233,100 and 5.0 permanent workyears for 1984, a decrease of \$1,492,600 and 16.0 permanent workyears from 1983. Included in the total is \$216,400 for Salaries and Expenses and \$16,700 for Research and Development, with decreases of \$1,121,700 and \$370,900, respectively. This decrease occurs in the health effects program element.

Program Description

The overall goal of the research and development program in radiation is to provide Agency decision-makers, and other Federal, Regional, State and local officials with scientifically credible data on effects, methodologies, relationships, models and assessments which they require to control and to assess public exposure to nonionizing radiation (NIR) and to man-made radioactive materials in the environment. The following objectives support these goals:

Objective 1. Conduct Off-Site Radiological Monitoring and Surveillance Program. The program under this objective provides comprehensive radiological monitoring and surveillance services to meet specific Department of Energy (DOE) requirements for its nuclear testing programs, especially at the Nevada Test Site (NTS). This work is conducted under a reimbursable arrangement with DOE.

Objective 2. Conduct an Analytical Radiochemical Quality Assurance Program. A quality assurance (QA) program is conducted in support of Federal, Regional, State, and local laboratories which assesses radionuclide activities in air, water, milk, and food to determine the impact of local nuclear facility activities. The QA program supports the Office of Radiation Programs by serving as a source of radionuclide and instrument standards and radiochemical methods for analysis of environmental samples.

Objective 3. Support Issuance of 1984 Radiofrequency Guidance. The research under this objective provides support to the Office of Radiation Programs for the 1984 issuance of Federal Radiation Protection Guidance for radiofrequency and microwave radiation.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$56,000 for this program of which \$55,100 was under the Salaries and Expenses appropriation and \$900 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$233,100 and 5.0 permanent workyears for this program, of which \$216,400 is for Salaries and Expenses and \$16,700 is for Research and Development. This represents no substantial change from 1983.

Conduct Off-Site Radiological Monitoring and Surveillance Program. National nuclear testing activities must be conducted in a way that does not adversely impact the health and safety of the population or the quality of the environment. To assure this requires comprehensive environmental monitoring and surveillance capabilities. The Environmental Protection Agency (EPA) will provide these capabilities to support DOE nuclear test activities. EPA is an active participant in the decision-making process when tests are instituted and serves on the test controller's advisory panel. This panel advises the DOE test controller on whether it is advisable to initiate a test. At each test, radiation safety and monitoring teams will be deployed to document environmental levels of radioactivity and to be prepared for remedial action in the event of accidental releases.

Conduct an Analytical Radiochemical Quality Assurance Program. Standard reference materials and laboratory audits are necessary to support the quality assurance aspects of the environmental radiation monitoring programs being conducted by program offices, Regions, States, nuclear facilities, and contract laboratories. Over 200 of these organizations routinely make radiation measurements which are reported to various local, State, and Federal agencies. This research program will provide technical expertise and guidance to those laboratories for radiochemical analyses of environmental samples. Laboratory intercomparison studies are focused on the accuracy and precision of measurements of radioactivity in milk, simulated diet, drinking water, urine, and air filters. These data will be used in assessments of population exposures to radiation. At least 11 laboratory intercomparison studies will be conducted in 1984. The integrity of standards or reference materials are ensured through continuing radionuclide traceability studies with the National Bureau of Standards (NBS) and a repository for NBS-certified radionuclide standards will be maintained. The specific radionuclides have not yet been selected for 1984.

1983 Program

In 1983, the Agency is allocating a total of \$191,300 and 5.0 permanent work-years for this program of which \$174,600 is under the Salaries and Expenses appropriation and \$16,700 is for extramural purposes under the Research and Development appropriation.

Conduct Off-Site Radiological Monitoring and Surveillance Program. The off-site monitoring and surveillance program at the Nevada Test Site and at former sites of nuclear tests is continuing at the request of the DOE. Testing in 1983 is anticipated to continue at the same or a greater rate than in 1982.

Conduct an Analytical Radiochemical Quality Assurance Program. In 1983, 11 laboratory intercomparison studies are being conducted in the quality assurance program for samples of food, milk, urine, and air. About 400 radionuclide standards and reference materials maintained under the repository program are planned to be distributed to Federal, State, and local laboratories involved in monitoring radiation in the environment.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$99,800 for this program, of which \$84,400 was under the Salaries and Expenses appropriation and \$15,400 was for extramural purposes under the Research and Development appropriation.

Conduct Off-Site Radiological Monitoring and Surveillance Program. EPA provided environmental monitoring and surveillance services to DOE and participated in 22 nuclear tests at the Nevada Test Site in 1982. In addition, a community monitoring program involving 15 communities was initiated in 1982 as a cooperative effort between EPA, DOE, and the Desert Research Institute of the University of Nevada at Las Vegas.

Conduct an Analytical Radiochemical Quality Assurance Program. In 1982, the quality assurance program conducted eight laboratory intercomparison studies on strontium and gamma emitters in milk and simulated diet samples, on tritium in urine samples, and on gross alpha and beta activities, cesium 137, and strontium 90 for air filters. In the repository program for NBS-certified radionuclide standards, approximately 400 standards and reference materials were distributed to private, State, and nuclear facility laboratories. The radionuclides submitted for traceability study to NBS in 1982 were thorium 230, carbon 14, nickel 63, silver 110, scandium 46, and chromium 51.

HEALTH EFFECTS

1984 Program Request

No resources have been requested for the nonionizing radiation (NIR) health effects program in 1984. This program has been focused on research to support the issuance of the 1984 Federal Radiation Protection Guidance for radiofrequency and microwave radiation. Since development of these environmental exposure guidelines will be completed in 1984, no additional health research will be needed for incorporation in the guidelines and the program will be closed out.

1983 Program

In 1983, the Agency is allocating a total of \$1,534,400 and 16.0 permanent workyears to this program, of which \$1,163,500 is under the Salaries and Expenses appropriation and \$370,900 is for extramural purposes under the Research and Development appropriation.

Support Issuance of 1984 Radiofrequency Guidance. Program activities in 1983 are geared to complete development of environmental exposure guidance for radiofrequency radiation, scheduled to be issued in 1984. A health assessment document, Biological Effects of Radiofrequency Radiation, is being completed to accompany the Federal Radiation Protection Guidance. This document provides a comprehensive and critical evaluation of scientific data available on the biological effects of exposure to radiofrequency radiation. The available data largely addresses the risks of select frequencies of continuous wave NIR and the average whole-body rate of energy absorption.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$150,000 results from the following action:

-Congressional Action. (+\$150,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports nonionizing radiation health effects.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,433,600 for this program, of which \$1,532,400 was under the Salaries and Expenses appropriation and \$901,200 was for extramural purposes under the Research and Development appropriation.

Support Issuance of 1984 Radiofrequency Guidance. In 1982, results of research on the effects of repeated in utero exposure of mice to 2450 MHz continuous wave radiation were reported. Confirming earlier studies, decreased fetal weight (stunting) was demonstrated through the first week after birth and found to be associated with delayed skeletal maturation. Measurements were made on the permeation of radioactive tracers across the blood-brain barrier of adult rats exposed to 2450 MHz radiation at varied power densities (incident exposure) and ambient environmental temperatures. After correcting the data for thermal effects of the microwave radiation, no significant increase in permeation was found. Results were reported on work to examine whether key biochemicals in the energy production system of the rat brain are affected directly by microwaves or indirectly by

tissue hyperthermia. The dependence of effects on frequency and wave modulation was also examined. The data indicated frequency specific inhibition of brain energy metabolism, supporting the hypothesis that microwave radiation directly, rather than by tissue heating, inhibits mitochondrial energy production pathways in the rat brain. Effects were noted at 591 MHz and 200 MHz, but these effects were different. No effects were noted at 2450 MHz. The immune responsiveness of mice irradiated with continuous wave or pulse-modulated 425 MHz (radar) radiation was assessed. No differences between the control group and the two irradiated groups were observed for several measures of immune response.

Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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RADIATION

Radiation Criteria, Standards & Guidelines

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Radiation Criteria, Standards & Guidelines						
Salaries & Expenses	\$1,733.8	\$3,167.8	\$3,626.6	\$3,870.0	\$243.4	
Abatement Control & Compliance	\$2,604.9	\$1,595.7	\$1,595.7	\$2,495.7	\$900.0	
TOTAL	\$4,338.7	\$4,763.5	\$5,222.3	\$6,365.7	\$1,143.4	
TOTAL:						
Salaries & Expenses	\$1,733.8	\$3,167.8	\$3,626.6	\$3,870.0	\$243.4	
Abatement Control & Compliance	\$2,604.9	\$1,595.7	\$1,595.7	\$2,495.7	\$900.0	
Radiation Criteria, Standards & Guidelines	TOTAL	\$4,338.7	\$4,763.5	\$5,222.3	\$6,365.7	\$1,143.4
PERMANENT WORKYEARS						

Radiation Criteria, Standards & Guidelines	35.7	55.2	68.2	65.0	-3.2	
TOTAL PERMANENT WORKYEARS	35.7	55.2	68.2	65.0	-3.2	
TOTAL WORKYEARS						

Radiation Criteria, Standards & Guidelines	39.0	65.4	77.7	74.3	-3.4	
TOTAL WORKYEARS	39.0	65.4	77.7	74.3	-3.4	

RADIATION

Radiation Criteria, Standards, and Guidelines

Budget Request

The Agency requests a total of \$6,365,700 and 65.0 permanent workyears for 1984, an increase of \$1,143,400 and a decrease of 3.2 permanent workyears from 1983. Included in this total is \$3,870,000 for Salaries and Expenses and \$2,495,700 for Abatement, Control and Compliance, with an increase of \$243,400 and \$900,000 respectively.

Program Description

Radiation environmental standards and guidelines are developed and promulgated under this subactivity. These standards and guidelines protect the public health and the environment by minimizing risk of radiation exposures from nuclear energy applications, naturally occurring radioactive materials, medical and occupational radiation exposure and non-ionizing radiation.

RADIATION CRITERIA, STANDARDS, AND GUIDELINES

1984 Program Request

The Agency requests a total of \$6,365,700 and 65.0 permanent workyears for this program, of which \$3,870,000 is for the Salaries and Expenses appropriation and \$2,495,700 is for the Abatement, Control and Compliance appropriation. This represents an increase of \$243,400 and \$900,000 respectively from 1983. The increase in Salaries and Expenses is associated with an increase in personnel and operating costs. The increase in extramural expenses will provide more contract support for regulatory analysis related primarily to radionuclide activities.

Work in 1984 will concentrate on three major areas of regulatory effort: airborne radionuclides, radioactive waste management, and Federal Guidance. Attention will also be devoted to the mandated review of the environmental standards for normal operations in the uranium fuel cycle (40 CFR 190). Airborne radionuclides efforts will concentrate on bringing to final action proposals made under court order in 1983. Because of the highly accelerated schedule which requires proposal 180 days from the court order, until public comments are received, the amount of effort and the precise schedule for final action is uncertain. Major progress on this regulatory effort will remain a high priority for this program in 1984. It is anticipated that the high level waste standard will be promulgated in accordance with the Nuclear Waste Policy Act. The generic standard for land disposal of low level waste will be proposed before the end of 1984. Anticipated permit requests from other federal agencies for disposal of low level wastes in the ocean will be reviewed and a determination made on the adequacy of each request based on existing evaluation criteria. Generic criteria for ocean disposal sites of low level radioactive wastes will be completed and development of monitoring criteria started. Full-scale initiation of standards development for decommissioned nuclear facilities will be undertaken.

Public hearings for the proposed Federal Guidance for non-ionizing radiation in the radiofrequency range will be held, and completion of this regulation is anticipated. Work will continue on the issuance of Protective Action Guides for decontamination and reentry of areas contaminated in radiation incidents.

1983 Program

In 1983, the Agency is allocating a total of \$5,222,300 and 68.2 permanent workyears for this program, of which \$3,626,600 is for Salaries and Expenses and \$1,595,700 is for Abatement, Control and Compliance. During 1983, efforts are concentrated in three areas: regulation of radionuclides under Section 112 of the Clean Air Act; management of radioactive waste under the generally applicable

environmental standards authority of the Atomic Energy Act and the Uranium Mill Tailings Radiation Control Act; and development of Federal radiation guidance under the provisions of the Atomic Energy Act. Clean Air Act efforts are directed towards meeting the court order requiring EPA to propose all airborne radionuclide standards within 180 days. Other radioactive waste disposal program activities include: proposal of the high level waste standard, promulgation of uranium mill tailing standards for inactive sites, and anticipated proposal of standards for active sites. Under development in 1983 are generic waste standards for land disposal of low level waste. Final guidance for general occupational exposure to radiation is expected to be completed under the Federal Guidance authority; and guidance for exposure to non-ionizing radiation in the radiofrequency range will be proposed. Work necessary to issue Protective Action Guides will resume in 1983. EPA and other Federal agencies will work together to assure adequate implementation of existing regulations.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$458,800 results from the following action:

-Congressional Action. (+\$458,800) This increase includes +\$458,800 of the \$10.5 million Salaries and Expenses add-on which supports workyears in the development of radionuclides standards.

1982 Accomplishments

In 1982, the Agency obligated \$4,338,700 for this program, of which \$1,733,800 was for Salaries and Expenses and \$2,604,900 was for Abatement, Control and Compliance. Contract funds supported the gathering of data and analysis in support of standards setting, particularly in the areas of airborne radionuclides and radioactive waste disposal. This work has led to the proposal of the high level radioactive waste standards and promulgation of uranium mill tailings standards for inactive sites. Work continued on uranium mill tailings standards for active sites, disposal standards for low level wastes, guidance for general occupational radiation exposure, and guidance to limit exposure to radiofrequency non-ionizing radiation. Work on development of hazardous air pollution standards for airborne radionuclides was accelerated in response to a court order.

RADIATION

Radiation Program Implementation

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Radiation Program Implementation					
Salaries & Expenses					
	\$629.1	\$628.6	\$602.7	\$716.7	\$114.0
TOTAL	\$629.1	\$628.6	\$602.7	\$716.7	\$114.0
TOTAL:					
Salaries & Expenses	\$629.1	\$628.6	\$602.7	\$716.7	\$114.0
Radiation Program Implementation	TOTAL	\$629.1	\$628.6	\$602.7	\$716.7
					\$114.0

PERMANENT WORKYEARS

Radiation Program Implementation	12.9	10.0	10.0	10.0
TOTAL PERMANENT WORKYEARS	12.9	10.0	10.0	10.0

TOTAL WORKYEARS

Radiation Program Implementation	14.2	11.1	11.1	11.1
TOTAL WORKYEARS	14.2	11.1	11.1	11.1

RADIATION

Radiation Program Implementation

Budget Request

The Agency requests a total of \$716,700 and 10.0 permanent workyears for 1984, an increase of \$114,000 from 1983, all of which is for Salaries and Expenses.

Program Description

This subactivity supports activities of EPA's Regional offices including: reviewing environmental impact statements (e.g., lightwater reactors and uranium mining and milling); providing the public with technical information; providing direct assistance to State and local governments with special radiation problems of a short-term nature; participation in the reviewing and testing of State radiological emergency response plans; and providing the radiological expertise needed by the Regions to manage radiological problems associated with the drinking water and hazardous waste programs.

RADIATION PROGRAM IMPLEMENTATION

1984 Program Request

The Agency requests a total of \$716,700 and 10.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$114,000 from 1983 reflecting increased personnel and operating costs. A major emphasis for the 1984 Regional program is technical assistance to States in the area of emergency response planning. EPA assists States in the development of radiological emergency response plans and formally reviews these plans along with other Federal agencies under the coordination of the Federal Emergency Management Agency. Regions will continue to be involved in the characterization and identification of hazardous radioactive waste sites. This effort supports both the EPA headquarters hazardous waste programs and the requests of the States. The Regions will continue to be the primary reviewer of environmental impact statements for radiation facilities, such as commercial nuclear power plants, uranium mines and mills, and radioactive waste disposal facilities. Other areas of special concern to Regions will be assistance in the implementation of the uranium mill tailings standards in those Regions affected and continued support to the States, particularly for the management of radioactive wastes.

1983 Program

In 1983, the Agency is allocating a total of \$602,700 and 10.0 permanent workyears for this program, all of which is for Salaries and Expenses. In 1983, emergency preparedness and technical assistance to the States on radioactive waste problems remains the central focus of the EPA Regional radiation program.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$25,900 results from the following action:

-Reprogrammings. (-\$25,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$25,900 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$629,100 for this program, all of which was for Salaries and Expenses. Emergency preparedness and technical assistance to the States and other EPA Regional programs remained the central focus of the EPA Regional radiation program.

RADIATION

Radiation Environmental Impact Assessment

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Radiation Environmental Impact Assessment

Salaries & Expenses	\$4,395.8	\$2,772.6	\$2,772.6	\$2,939.3	\$166.7
Abatement Control & Compliance	\$382.3	\$600.0	\$600.0	\$600.0	
TOTAL	\$4,778.1	\$3,372.6	\$3,372.6	\$3,539.3	\$166.7

TOTAL:

Salaries & Expenses	\$4,395.8	\$2,772.6	\$2,772.6	\$2,939.3	\$166.7
Abatement Control & Compliance	\$382.3	\$600.0	\$600.0	\$600.0	

Radiation Environmental Impact Assessment

TOTAL	\$4,778.1	\$3,372.6	\$3,372.6	\$3,539.3	\$166.7
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PERMANENT WORKYEARS

Radiation Environmental Impact Assessment	76.1	48.9	48.9	46.9	-2.0
TOTAL PERMANENT WORKYEARS	76.1	48.9	48.9	46.9	-2.0

TOTAL WORKYEARS

Radiation Environmental Impact Assessment	86.1	58.0	58.0	56.0	-2.0
TOTAL WORKYEARS	86.1	58.0	58.0	56.0	-2.0

RADIATION

Radiation Environmental Impact Assessment

Budget Request

The Agency requests a total of \$3,539,300 and 46.9 permanent workyears for 1984, an increase of \$166,700 and a decrease of 2.0 permanent workyears from 1983. Included in this total is \$2,939,300 for Salaries and Expenses and \$600,000 for Abatement, Control and Compliance.

Program Description

Activities in this area provide the information necessary to identify and analyze potential radiological health problems having public health impact and to support the development of standards and guidelines. Also encompassed under this subactivity is the monitoring of environmental radiation, as well as laboratory analysis, technology assessments, emergency preparedness, and emergency response.

RADIATION ENVIRONMENTAL IMPACT ASSESSMENT

1984 Program Request

The Agency requests a total of \$3,539,300 and 46.9 permanent workyears for this program, of which \$2,939,300 is for Salaries and Expenses and \$600,000 is for Abatement, Control and Compliance. This represents an increase of \$166,700 in Salaries and Expenses reflecting increased payroll and operating costs. In 1984, this program will continue to support development of standards under the Clean Air Act and the Nuclear Waste Policy Act and the management of radioactive wastes. A fully equipped emergency response capability will be maintained and off-site monitoring of the Three Mile Island nuclear reactor will continue. The Environmental Radiation Ambient Monitoring System will collect and analyze samples of air, precipitation, and milk in its national network to determine ambient radiation levels and will maintain its preparedness to monitor the environment in the event of atmospheric testing of nuclear devices. The quality assurance program will be operated to ensure accuracy of all laboratory measurements and data analyses conducted either in-house or through program contracts. In addition, support to States, other Federal agencies, and other parts of EPA will continue in the form of radiochemical analyses, technical assistance, occasional loans of equipment, and EPA participation in the National Conference of Radiation Control Program Directors. As a part of the Ocean Disposal program, marketplace seafood surveys in the Boston area will be continued.

1983 Program

In 1983, the Agency is allocating a total of \$3,372,600 and 48.9 permanent workyears for this program, of which \$2,772,600 is for Salaries and Expenses and \$600,000 is for Abatement, Control and Compliance. Activities include: continued laboratory and technical support to standards-setting, maintenance of an emergency response capability, coordination of the Regions in their review and testing of State emergency response plans, assistance to other EPA offices and to State radiological programs, and support for the Environmental Radiation Ambient Monitoring System. The radium collection and repository program will be discontinued this year and the radium previously collected shipped for permanent disposal. Ocean disposal monitoring activities will continue with our participation in the Massachusetts Bay and marketplace seafood surveys. The monitoring of off-site releases at Three Mile Island will also continue. Additional work includes completion of the field work on the Butte, Montana radon survey and continued operation of a program-wide quality assurance plan. Several changes in the 1983 program reflect a shift in emphasis from field work to standards-setting

activities, including a reduction in emergency preparedness activities as Regional guidance and equipment acquisition are completed, an increase in resources for Clean Air Act work necessary to meet the proposed regulatory schedules, and a decrease in the Butte study as the field work is completed.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$4,778,100 for this program, of which \$4,395,800 was for Salaries and Expenses and \$382,300 was for Abatement, Control and Compliance. Contract funds supported monitoring activities at Three Mile Island and the ocean disposal survey of Massachusetts Bay. Activities in 1982 included: continued laboratory and technical support to standards-setting, maintenance of an emergency response capability, coordination of the Regions in their review and testing of State emergency response plans, and assistance to other EPA offices and to State radiological programs. The Environmental Radiation Ambient Monitoring System was maintained as was the radium collection and repository program. Ocean disposal monitoring activities included our participation in the Massachusetts Bay and marketplace seafood surveys. Work on the Butte, Montana radon survey was continued. Operation of a program-wide quality assurance program was initiated.

Noise

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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NOISE

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

APPROPRIATION

Salaries & Expenses	\$1,280.3			
Abatement Control & Compliance	\$341.0			

TOTAL, Noise	\$1,621.3			
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PERMANENT WORKYEARS	21.2			
TOTAL WORKYEARS	27.4			
OUTLAYS	\$6,616.0	\$350.0	\$1,707.0	\$663.0
AUTHORIZATION LEVELS				-\$1,044.0

NOISE

OVERVIEW AND STRATEGY

The 1982 noise control budget represented a major policy change with respect to the Federal effort to reduce noise exposure. As reflected in that budget request, the EPA noise control program has been phased-out. This decision resulted from a determination that the benefits of noise control are highly localized and that the function of noise control can be adequately carried out at the State and local level without the presence of a Federal program.

States and localities have shown a significant increase in their ability and desire to develop their own noise control programs. During the last decade, over 1,300 municipalities and 24 States have enacted noise control legislation. Of these, 20 States have viable active programs and over 300 local communities have ongoing noise control programs with active enforcement. This dramatic growth (233% in the past five years) convincingly demonstrates that State and local governments can and will deal with environmental noise problems within their jurisdictions.

The major components of EPA's noise control effort were promulgation and enforcement of Federal noise regulations, strengthening the capabilities of State and local noise control agencies by providing technical and financial assistance, and the conduct of noise health effects research.

For 1982, activities were structured to achieve a prompt but orderly phase-out of current program activities by transferring to the State and local programs knowledge and experience EPA has gained. This included the transfer of noise measurement equipment that will aid States and local governments as they assume additional responsibility, and the training of approximately 800 State and local personnel in noise control techniques.

Since most final phase-out activities of the Noise Control Program were nearing completion at the end of 1982, no resources were requested for this program in 1983, and no resources are requested for 1984.

NOISE

Environmental Noise Strategies & Standards

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				

PROGRAM

Noise Standards
Development
Salaries & Expenses \$437.0
Abatement Control &
Compliance \$163.3
TOTAL \$600.3

Noise Control
Technology Assessment &
Criteria Development
Salaries & Expenses \$843.3
Abatement Control &
Compliance \$149.3
TOTAL \$992.6

TOTAL:
Salaries & Expenses \$1,280.3
Abatement Control &
Compliance \$312.6

Environmental Noise TOTAL \$1,592.9
Strategies & Standards

PERMANENT WORKYEARS

Noise Standards 8.2
Development

Noise Control 13.0
Technology Assessment &
Criteria Development

TOTAL PERMANENT WORKYEARS 21.2

TOTAL WORKYEARS

Noise Standards 9.5
Development

Noise Control 17.9
Technology Assessment &
Criteria Development

TOTAL WORKYEARS 27.4

Abatement and Control

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NOISE

Environmental Noise Strategies and Standards

Budget Request

Consistent with the Agency's decision to phase-out the Noise Program in 1982, no resources are requested for 1984.

Program Description

This program has been phased-out.

NOISE STANDARDS DEVELOPMENT

1984 Program Request

No resources are requested for this program in 1984.

1983 Program

No resources were requested for this program in 1983.

1982 Accomplishments

In 1982, the Agency obligated \$600,300 for this program, of which \$437,000 was for Salaries and Expenses and \$163,300 was for Abatement, Control and Compliance. The program focused on regulatory phase-out operations, including the clearing of an incomplete regulatory agenda. Noise studies and more than a half-million publications were sent to States and localities for their use. Also, fifty-six on-site visits were made to State and local governments to provide technical assistance in strengthening their noise control programs.

NOISE CONTROL TECHNOLOGY ASSESSMENT AND CRITERIA DEVELOPMENT

1984 Program Request

No resources are requested for this program in 1984.

1983 Program

No resources were requested for this program in 1983.

1982 Accomplishments

In 1982, the Agency obligated \$992,600 for this program, of which \$843,300 was for Salaries and Expenses and \$149,300 was for Abatement, Control and Compliance. During 1982, the Agency concentrated on the completion of phase-out activities. Health effects research studies as well as technology research projects were either completed or transferred to other agencies for continuation. The results of final studies were made available to the scientific community and also to other Federal, State, and local governments for incorporation in their noise control efforts.

NOISE

Noise Program Implementation

Budget Request

Consistent with the Agency's decision to phase-out the Noise Program in 1982, no resources are requested for 1984.

Program Description

This program has been phased-out.

NOISE CONTROL IMPLEMENTATION AND EVALUATION

1984 Program Request

No resources are requested for this program in 1984.

1983 Program

No resources were requested for this program in 1983.

1982 Accomplishments

In 1982, the Agency obligated \$28,400 for this program, all of which was for Abatement, Control and Compliance. Contract funds supported completion of the phase-out of the Noise Program.



Interdisciplinary

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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INTERDISCIPLINARY

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

APPROPRIATION					

Salaries & Expenses	\$10,243.6	\$15,437.6	\$17,573.5	\$18,244.1	\$670.6
Abatement Control & Compliance	\$2,142.5	\$2,709.8	\$2,909.8	\$7,049.4	\$4,139.6
Research & Development	\$4,542.8	\$2,590.7	\$3,452.6	\$16,042.1	\$12,589.5
TOTAL, Interdisciplinary	\$16,928.9	\$20,738.1	\$23,935.9	\$41,335.6	\$17,399.7
PERMANENT WORKYEARS	200.2	310.3	325.6	353.4	27.8
TOTAL WORKYEARS	243.9	363.7	388.8	396.5	7.7
OUTLAYS	\$6,616.0	\$350.0	\$1,707.0	\$663.0	-\$1,044.0
AUTHORIZATION LEVELS					

INTERDISCIPLINARY

OVERVIEW AND STRATEGY

The Environmental Protection Agency's (EPA) Interdisciplinary program is composed of several activities that cut across programmatic lines and are not readily assignable to a specific media. These programs address environmental concerns that affect several media and require an interdisciplinary approach. The Interdisciplinary program includes the Intermedia research program within the Research and Development function, the Federal Agencies Compliance and National Environmental Policy Act (NEPA) Compliance programs within the Abatement and Control function, and components of the Legal and Enforcement Counsel program within the Enforcement function.

The goals of the Intermedia research program are to: (1) identify and assess long-term scientific trends and problems; (2) advance the state-of-the-art of the Agency's scientific base; (3) develop defensible methods to improve the Agency's ability to perform cost benefit analyses of major regulations; and (4) effectively communicate the technical and scientific information the Office of Research and Development (ORD) has developed.

The Federal Agencies Compliance program accomplishes statutory objectives under the authority of the National Environmental Policy Act (NEPA); Section 309 of the Clean Air Act; and Executive Order 12088 - Federal Compliance with Pollution Control Standards. These laws require EPA to review and comment on proposed actions of other Federal agencies to ensure that public health and the environment are protected. In addition, Executive Order 12088 directs the Agency to: (1) provide technical advice and assistance to Federal agencies to ensure that their facilities comply with pollution control requirements in a cost-effective and timely manner; (2) monitor all Federal facilities compliance with applicable pollution control requirements; (3) assist Federal agencies and the Office of Management and Budget (OMB) in developing budgetary plans for controlling pollution at Federal facilities; and (4) resolve disputes regarding Federal facilities violation of pollution control requirements through the administrative mechanism provided by the Order. The name of this program element was changed from Environmental Impact Statement (EIS) Review because Federal Agencies Compliance is more descriptive of the range of Federal agency projects and actions subject to review.

The NEPA Compliance program element is responsible for preparing its own Environmental Impact Statements (EISs) or alternatively, determining Findings of No Significant Impact, on National Pollutant Discharge Elimination System permitting and municipal wastewater treatment grant actions to assure that new facilities with federal involvement are planned, constructed and operated pursuant to Section 511(c) of the Clean Water Act and NEPA.

Enforcement Policy and Operations provides consistent direction to EPA enforcement for all non-Superfund media to assure the overall quality of EPA enforcement. To accomplish these goals, it establishes strategies, priorities, policies, and procedural guidelines so that enforcement actions are properly selected and prepared, and it assures that these policies are correctly implemented by the media enforcement programs and Regional offices. It conducts all legal case development, litigation, and adjudicatory hearing activities for media enforcement programs; this includes oversight of evidence gathering, preparation and management of cases, and referral of cases to the Department of Justice for litigation. A special thrust in this subactivity is the Agency's criminal investigations effort. The program will investigate, prepare, and refer cases involving criminal violations of environmental statutes. Investigators and attorneys will provide support to the Department of Justice during subsequent investigation and litigation of these cases.

The National Enforcement Investigations Center (NEIC) in Denver provides specialized technical expertise in support of EPA enforcement case preparation activities. NEIC serves as a point of coordination and support for complex investigations that have a national impact on EPA and State regulatory programs. In 1984, resources at NEIC are focused on support of litigation and criminal investigations. Previous responsibilities in compliance-related technical assistance have been returned to the media program offices as appropriate.

Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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INTERDISCIPLINARY

Intermedia Program

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Exploratory Research Core Program					
Salaries & Expenses	\$2,015.2	\$1,622.0	\$1,798.1	\$374.3	-\$1,423.8
Research & Development	\$4,542.8	\$2,590.7	\$2,590.7	\$15,173.9	\$12,583.2
TOTAL	\$6,558.0	\$4,212.7	\$4,388.8	\$15,548.2	\$11,159.4
Technical Information & Liaison					
Salaries & Expenses			\$1,700.3	\$1,727.2	\$26.9
Research & Development			\$861.9	\$868.2	\$6.3
TOTAL			\$2,562.2	\$2,595.4	\$33.2
TOTAL:					
Salaries & Expenses	\$2,015.2	\$1,622.0	\$3,498.4	\$2,101.5	-\$1,396.9
Research & Development	\$4,542.8	\$2,590.7	\$3,452.6	\$16,042.1	\$12,589.5
Intermedia Program TOTAL	\$6,558.0	\$4,212.7	\$6,951.0	\$18,143.6	\$11,192.6
PERMANENT WORKYEARS					

Exploratory Research Core Program	27.0	12.1	16.5	5.5	-11.0
Technical Information & Liaison			16.9	17.0	.1
TOTAL PERMANENT WORKYEARS	27.0	12.1	33.4	22.5	-10.9
TOTAL WORKYEARS					

Exploratory Research Core Program	35.2	16.0	20.4	7.4	-13.0
Technical Information & Liaison			28.5	28.6	.1
TOTAL WORKYEARS	35.2	16.0	48.9	36.0	-12.9

INTERDISCIPLINARY

Intermedia

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Implement and Manage the Exploratory Research Program			
- Develop a long-range strategy		9/83	9/84
- Issue revised Grants program solicitation	9/82	9/83	9/84 (NSF)
- Evaluate effectiveness of university Centers program		6/83	
- Complete updating and documentation of Residual Accounting Model	9/82		
- Complete series of special assessments			
- Sun Belt Study	4/82	4/83	
- Mini-Assessments		6/83	
- Region I Outlook		8/83	
- Biotechnologies		9/83	
- Biological Trend Monitoring		9/83	
- Industrial Outlook	9/82	9/83	
Develop and Validate Economic Benefit Methodologies			
- Survey and assessment of methods for determining the benefits of toxic substances and hazardous waste control		7/83	
- Reports on improved methods for valuing the economic benefits of health risk valuation			8/84
Disseminate Technical Information/ Technology to States and Localities			
- Handbook on Remedial Actions at Waste Disposal Sites	6/82		
- Process Design Manual: Dewatering of Municipal Wastewater Sludges	9/82		
- Handbook for Identification and Correction of Typical Publicly Owned Treatment Works' (POTW) Design Deficiencies	4/82		

INTERDISCIPLINARY

Intermedia

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Manual: Managing Asbestos in Schools and Other Public Buildings		8/83	
- Process Design Manual: Land Applications of Sludge		6/83	
- Safety and Health Reference Manual for Hazardous Waste Sites		12/83	12/83
- Manual on Ground Water Management of Public Water Supplies Threatened by Contamination.		12/83	12/83
- Handbook on Volatile Organic Compound Monitoring Guidelines			9/84
- Dissemination of capsule reports on Post-Construction Evaluations of Innovative Technology Projects			9/84

INTERDISCIPLINARY

Intermedia Program

BUDGET REQUEST

The Agency requests a total of \$18,143,600 and 22.5 permanent workyears for 1984, an increase of \$11,192,600 and a decrease of 10.9 permanent workyears from 1983. Included in this total is \$2,101,500 for Salaries and Expenses and \$16,042,100 for Research and Development, with a decrease of \$1,396,900 and an increase of \$12,589,500, respectively. This is not an increase in the total budget; rather, it reflects consolidation of the Exploratory Grants and Centers resources into the Intermedia program; the Exploratory Research Grants and Centers will continue at the 1983 level of funding in 1984. The decrease reflects a reduction in the exploratory research core program.

Program Description

The role of the Intermedia research program is to: (1) identify and assess long-term scientific trends and problems; (2) advance the state-of-the-art of the Agency's scientific knowledge in basic research; (3) develop defensible methods to improve the Agency's ability to perform cost-benefit analyses of major regulations; and (4) effectively communicate the technical and scientific information the Office of Research and Development (ORD) has developed. The program achieves this through the following objectives:

Objective 1. Implement and Manage the Exploratory Research Program. The purpose of this objective is to support mission-oriented, long-term research designed to strengthen the Agency's environmental science and engineering base through grants to individual investigators and through multidiscipline university Research Centers.

Objective 2. Develop and Validate Economic Benefit Methodologies. The purpose of this objective is to provide the Agency with the methodological capability to estimate the economic benefits of pollution control measures, one of the requirements of Executive Order 12291. The Order requires cost-benefit analyses of most major Federal regulations, including documentation as to whether or not benefits of proposed regulations exceed the costs. Additionally, Agency statutes, such as the Clean Water Act, require research to develop tools and techniques for measuring the social and economic benefits of environmental policies and programs.

Objective 3. Manage Technical Information Products. The purpose of this objective is to manage ORD's technical information products. ORD's Center for Environmental Research Information (CERI) tracks, processes, and distributes all ORD reports; develops special reports as needed; and produces all ORD project summaries and reviews them for policy implications.

Objective 4. Disseminate Technical Information/Technology to States and Localities. The purpose of this objective is to disseminate ORD's technical information products. This activity includes the design, production, quality control, and distribution of ORD's technology transfer efforts.

Objective 5. Manage the Peer and Administrative Review Control System. The purpose of this objective is to develop and manage an ORD policy for peer and administrative review that is consistent with Agency policy and to monitor the implementation of the policy.

EXPLORATORY RESEARCH CORE PROGRAM

1984 Program Request

The Agency requests a total of \$15,548,200 and 5.5 permanent workyears for this program, of which \$374,300 is for Salaries and Expenses and \$15,173,900 is for Research and Development. This reflects a decrease of \$1,423,800 and an increase of \$12,583,200, respectively. A decrease results from management changes in the Exploratory Research program and a reduction in economic benefits research. Because of these management changes we have been able to eliminate Salaries and Expenses and workyears in the Exploratory Research Grants Program and to eliminate the strategic assessment function. The increase occurs because we have consolidated all Exploratory Research resources in this media in 1984. We will fund the Exploratory Grants and Centers at the same level in 1984 as in 1983.

Implement and Manage the Exploratory Research Program. During 1984 the focus for the program will continue to be research grants and our eight academic Research Centers. However, the Agency will institute management changes to improve the Exploratory Research program. These changes should result in an Exploratory Research program that is better focused on our long-range needs in a way that more effectively meets these priorities. The Agency will (1) concentrate on developing a long-term research strategy; (2) align our grants program with the National Science Foundation's (NSF) basic environmental research program; and (3) strengthen our management of, and the role of, the Centers to assure that they are meeting our needs. The Agency feels that it must clearly tie both the Grants and the Centers programs to a long-range strategy in order for the programs to be effective. In the future we want to assure that both of these programs are clearly connected to a long-range strategy.

In 1984, the Agency will use the Grants program to support research that will advance the state-of-the-art in critical areas identified in the long-range strategy. Because these areas require basic research, the Agency believes NSF, with its background and ongoing programs, is the appropriate locus for this component of our program. The Agency will therefore manage the program in conjunction with NSF. The Agency will transfer \$4,000,000 to NSF in 1984 for new grants. The Agency will work closely with NSF to assure that these grants are tailored to our long-range strategy. To provide for an orderly transition of the program, we will retain \$6,000,000 in 1984 to complete existing grants.

The Agency will also institute changes to the management of the Research Centers, based on the results of 1983 evaluations of the Centers. Additionally, the Agency will conduct a comprehensive review of the three Centers that are completing their first five years of operation. For all of the Centers the program will emphasize increased interaction with ORD laboratories and the Agency program offices and dissemination of the results of research initiated during 1981-1983. The eight Centers (funding at approximately \$420,000 per Center) and their principal research areas are:

- (1) The Ultimate Waste Elimination Center (Illinois Institute of Technology and the University of Notre Dame) conducts research on innovative/cost-effective process modifications to reduce industrial pollutants.
- (2) The Intermedia Transport Center (University of California at Los Angeles) is working on the definition of chemical/physical processes governing pollutant exchange at air-land and air-water boundaries.
- (3) The Ecosystem Center (Cornell University) is identifying and applying ecosystem principles to environmental management problems.

(4) The Marine Center (University of Rhode Island) is conducting research on measurement and assessment of marine ecosystem health, emphasizing exposure of marine organisms to toxics.

(5) The Advanced Control Technology Center (University of Illinois, Urbana) conducts research in the areas of separation technology, thermal destruction, biological separation, and chemical detoxification.

(6) The Ground Water Center (a consortium of the University of Oklahoma, Oklahoma State University, and Rice University) conducts research on subsurface characterization, transport and fate, and ground water horizon modeling.

(7) The Epidemiology Center (University of Pittsburgh) conducts research on basic epidemiology methods and airborne particulate health effects.

(8) The Hazardous Waste Center (Louisiana State University) conducts research on the design, construction, maintenance, operation, and closure of hazardous waste landfills.

The Agency sees no need to continue the strategic assessments program. We feel that the focus of a long-range strategy and a comprehensive review of our long-range needs will adequately fulfill this function. We intend to work more closely with Agency program offices and ORD laboratories in preparing the strategy. Additionally, we will welcome comment by the outside scientific community.

The minority institutions and national environmental workforce programs are the responsibility of this program. They will continue at the same level of effort in 1984 as 1983.

Develop and Validate Economic Benefit Methodologies. In 1984, this program will continue efforts to develop improved methodologies and validate existing methodologies and associated data required by the Agency to estimate the economic benefits of proposed regulations and programs. The work initiated in 1983 for validation of methodologies and development of new and improved methodologies will continue. Close program office involvement will insure selection of methodological developments and validations useful to regulatory impact analyses.

The 1984 program will emphasize completion of work started in 1982 and 1983, including improved methods and validation of methods for ozone and lead control. These methods will enable the Agency to make health damage estimates for air pollutants using econometric approaches, value the economic benefits of health risk reduction, determine the boating and swimming benefits of freshwater pollution control, estimate recreational benefits of marine water pollution control, and use contingent valuation techniques for water pollution benefit estimation.

1983 Program

In 1983, the Agency is allocating a total of \$4,388,800 and 16.5 permanent workyears to this program, of which \$1,798,100 is under the Salaries and Expenses appropriation and \$2,590,700 is for extramural purposes under the Research and Development appropriation.

Implement and Manage the Exploratory Research Program. During 1983, the Agency will plan for the reorientation of the program that will occur in 1984. We will be working on a long-range strategy in 1983. The Grants program will focus on the completion of existing grants and the development of plans and procedures for the transfer of the program to NSF in order to enable NSF to focus future grants to Agency needs. The Centers program continues to provide coordination of the Agency's eight Exploratory Research Centers. Activities include promoting increased Agency involvement in Center program planning, insuring appropriate interaction among Centers, and communicating results. Recommendations based on the effectiveness review of the Centers program are being completed in 1983.

Projects to support the Strategic Assessments program in 1983 include a seminar series on environmental implications of biotechnologies, analyses of long-term trends that focus on issues of regional concern, and analyses of emerging trends in United States industries. Since this is the final year of the program, the Agency will prepare for an orderly close-out of the program.

Develop and Validate Economic Benefit Methodologies. This program conducts methodological research designed to enable the Agency to better estimate the economic benefits of pollution abatement and control alternatives and other environmental decisions. The program concentrates its research activities in three major areas: methodology development, methodology validation, and special studies. Close interaction and cooperation with Agency program offices are emphasized. The program is substantially expanded in 1983 to meet the need for improved methods imposed by the Executive Order.

(1) Methodology Development and Validation: Current research programs are seeking to develop innovative methodologies designed to provide improved water and air benefits estimates and alternate methodologies to estimate benefits of land disposal regulations for hazardous wastes. Validation research is being designed to test the utility of applicable economic benefits estimation methodology.

(2) Special Studies: This program focuses on economic research issues of special concern to the Agency. These include projects designed to inventory and assess economic benefits research in areas such as economic risk valuation; to carry out research on technical issues of portraying confidence limits and uncertainty in benefit estimates, and to improve techniques for determining the valuation of morbidity and mortality.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$176,100 results from the following actions:

-Congressional Action. (+\$116,300) This increase includes +\$116,300 of the Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$59,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogrammings limitations. These changes resulted in a net increase of +\$59,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$6,558,000 for this program, of which \$2,015,200 was under the Salaries and Expenses appropriation and \$4,542,800 was for extramural purposes under the Research and Development appropriation.

Implement and Manage the Exploratory Research Program. The Agency continued its management of the Exploratory Grants program. A formal solicitation for grants was issued. Proposals were reviewed and funded based on scientific merit and relevance to Agency objectives. A series of seminars was conducted where grantees presented their project results to peers, Agency specialists, and interested public.

A Hazardous Waste Research Center at Louisiana State University was initiated in 1982 as part of the Exploratory Research Centers program. This Center studies the design, construction, maintenance, operation, and closure of hazardous waste landfills and facilities. Research also includes remedial activities related to the problems unique to spills and other emergency situations. A major review of the Centers program began in 1982 to determine the effectiveness of existing Centers.

The 1982 Strategic Assessment and Special Studies program produced the following outputs: (1) revised and updated an analysis of future emission trends for use in the Environmental Outlook report; (2) conducted eight special assessments of selected emerging or future environmental problems; (3) completed an analysis of problems in the Sun Belt region; (4) reported on future problems resulting from changes in United States industry; (5) conducted a seminar series on issues associated with risk-benefit computations; (6) continued the Summer Fellows program; and (7) conducted a program review of environmental indicators' efforts (including the Mussel Watch and Pilot Specimen Bank programs).

The minority institutions research support program moved closer to completing its objective in 1982. In order to continue to promote the participation of minority institutions in the Grants program, the Agency established an Ombudsman function to aid eligible institutions in competing more effectively within the Agency's Exploratory Research Grants program.

The 1982 national environmental workforce program continued to provide support to the Agency. This program established a volunteer senior environmental assistance program in support of State environmental agency workforce needs, continued to promote the use of senior citizens working for the Agency through the senior environmental employment program, developed three additional minority research apprenticeship programs, and developed and managed an estimated 20 grants for academic training.

Develop and Validate Economic Benefit Methodologies. The 1982 economic benefits research program was substantially revised to focus on data development and methods validation of particular use in carrying out the most urgent studies required by Executive Order 12291, which requires cost-benefit analysis of most major Federal regulations. In 1982, the program emphasized improved methodologies for determining the benefits of water pollution control regulations, for determining the benefits of revised ambient air standards (particularly lead and ozone), and for assessing the methods available to determine the benefits of hazardous and toxic waste control. Some of the methods and data developed on economic benefits of air pollution control are being used in regulatory impact analyses for revisions of air ambient standards. The program also completed a major study of the benefits of improved visibility in the Eastern United States to determine the benefits of related ambient standards.

TECHNICAL INFORMATION AND LIAISON

1984 Program Request

The Agency requests a total of \$2,595,400 and 17.0 permanent workyears for this program, of which \$1,727,200 is for Salaries and Expenses and \$868,200 is for Research and Development. This reflects an increase of \$26,900 and \$6,300 respectively, which supports high priority technology transfer activities. Beginning in 1983, the Agency has consolidated resources for this function in the Interdisciplinary media because the function cuts across all media. Prior to 1983, the resources were spread across all media.

Manage Technical Information Products. The Center for Environmental Research Information (CERI) is and will continue to be the central point for all ORD information products. CERI will track, process, and distribute all ORD reports, develop special reports as needed, produce all ORD project summaries, and review project summaries for policy implications. CERI's product management activities will fall into three major areas: (1) processing reports and journal articles for submission to the National Technical Information Service (NTIS); (2) reviewing and processing project summaries; and (3) printing, warehousing, and distributing ORD information products. In 1984, CERI plans to process approximately 850 Project Reports and 250 journal articles to NTIS. It will also process approximately 800 project

summaries and 40 other reports. CERI will continue to process special requests for reports, respond to telephone inquiries, continue cost recovery charges for project summaries and Technology Transfer reports, produce the regulatory program oriented Research Summaries, and oversee development of the Congressionally-mandated Research Outlook. The publications prepared and disseminated by the program include design manuals, technical capsule reports, seminar proceedings, and handbooks. Specific activities are planned in such areas as: Oxidants, with a series of workshops to provide information to help State and local officials compliance monitor for sample organic compounds that are precursors to the formation of photochemical oxidants; Municipal Wastewater, with a manual on alternative technology, costs, and risk benefit assessment data for selecting sludge disposal methods; and Hazardous Waste/Superfund, with development of handbooks on assessment of monitoring and testing protocols for solid waste hazardous assessments and technical alternatives for uncontrolled hazardous waste sites.

Disseminate Technical Information/Technology to States and Localities. In response to requests from the EPA program offices and the needs expressed by the Regions and the States, ORD continually disseminates the available technology to States and localities to enable them to meet their regulatory responsibilities.

There are two primary tools used by the Technology Transfer Program to carry out its mission: seminars and publications. Seminars are developed by a team headed by a CERI staff member. This team normally includes both EPA and private industry personnel who have expertise in the particular technical discipline being addressed. The seminar presentations discuss the applicable regulations, the multimedia pollution control technology available to meet the regulations and the management/financial consideration in choosing optimum pollution control strategies.

Manage the Peer and Administrative Review Control System. ORD's primary mission is to provide scientific information needed by the Agency to support its regulatory and enforcement activities. In order to effectively accomplish this mission, it is imperative that ORD maintain a credible scientific program, both known to, and acknowledged by, our peers in the environmental, scientific, and technical communities. As a part of that process for furthering the credibility of EPA research and its results, EPA has instituted a review process for scientific, informational, and educational documents to ensure that they are based on the best scientific and technical evidence available. This process provides a clearly defined route for the review and approval of the publications before their public release. The goal is to establish clear Agency responsibility for literature published in its name and by its employees when they are acting in an official capacity.

Within ORD, CERI has the responsibility for administering the process and coordinating with the appropriate Agency personnel to insure a responsive and effective peer review process. It is anticipated that 1,500 to 2,000 peer reviews will be processed in 1984.

1983 Program

In 1983, the Agency is allocating a total of \$2,562,200 and 16.9 permanent workyears to this program, of which \$1,700,300 is under the Salaries and Expenses appropriation and \$861,900 is for extramural purposes under the Research and Development appropriation.

Manage Technical Information Products. Product Management Activities are needed on a continuing basis; so, the 1983 Program is similar to that described in the 1984 Program Request. In 1983, CERI is processing publications to NTIS, as well as processing and distributing project summaries and other reports. These activities ensure that ORD's scientific and technical information products are produced cost-effectively, controlled for quality, and distributed uniformly.

Inquiries for reports are being answered; and, regulatory program oriented Research Summaries and the Congressionally-mandated Research Outlook are being produced. In addition, ORD is initiating cost recovery charges for project summaries and for Technology Transfer reports; CERI is administering this process. All funds recovered will be deposited into the Treasury general fund.

Disseminate Technical Information/Technology to States and Localities. Various technology transfer products are being developed, such as design manuals, user's guides, handbooks, training seminars, and workshops. These are being produced in close cooperation with the program offices and the Regions (and often involve participants from industry) and generally include discussion of regulations, best available pollution control technologies, management and financial considerations, and case histories of actual operations. Specific technology transfer activities are being carried out in Hazardous Air Pollutants, Gases and Particles, Water Quality, Municipal Wastewater, Industrial Wastewater, Drinking Water, Hazardous Waste, and Toxics. Other research efforts receive support as requested and as needs arise.

These activities provide State and local officials with the technical data necessary to meet regulatory responsibilities.

Manage the Peer and Administrative Review Control System. Currently, the implementation of ORD's technical information policy, peer review policy, and public information policy is being coordinated and monitored by CERI. The Director of CERI advises the Director of the Office of Research Program Management and the Assistant Administrator for ORD on particular issues related to the above policies. The 1983 program is similar to the 1984 request, as these activities are required on a continuing basis.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$2,562,200 results from the following action:

-Restructuring. (+\$2,555,200) The Congressionally approved restructuring consolidated 13 Technical Information and Liaison program elements across media into one Technical Information and Liaison program element. This allows for a more accurate overall picture of the program activities. The change to the Salaries and Expenses appropriation was +\$1,693,300 and the change to the Research and Development appropriation was +\$861,900.

-Reprogrammings. (+\$7,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogrammings limitations. These changes resulted in a net increase of +\$7,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

Since this program was not consolidated into the Interdisciplinary media until 1983, resources for 1982 are contained within the individual media. The 1982 accomplishments of the program follow.

Manage Technical Information Products. In 1982, CERI was the central point for all ORD information products. CERI tracked, processed, and distributed all ORD reports, developed special reports, produced all ORD project summaries and reviewed the project summaries for policy implications. CERI processed 540 project reports and 430 journal articles to NTIS. It also processed 475 project summaries and 78 other reports. CERI responded to telephone inquiries, processed special requests for reports, and produced the Research Outlook.

Disseminate Technical Information/Technology to States and Localities. In 1982, CERI was involved in the development of various technology transfer tools, especially handbooks and seminars. For example, reports/handbooks were produced on the following subjects: (a) dry scrubbing flue gas desulfurization which informed industry personnel about technical and economic data for the dry SO₂ control alternative; (b) remedial action at waste disposal sites; (c) identification and correction of typical publicly owned treatment works (POTW) design deficiencies; and (d) control and treatment technology for the metal finishing industry. Further, CERI was involved in a number of seminars/conferences, including a conference to transmit state-of-the-art information on POTW operation and maintenance, a national wastewater disinfection symposium, and a symposium on advances in air pollutant monitoring.

Manage the Peer and Administrative Review Control System. CERI began the coordination and implementation of ORD's peer review policy. It continued its work on ORD's technical information and public information policies.

Abatement and Control

SECTION TAB

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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INTERDISCIPLINARY

Federal Agencies Compliance & NEPA Compliance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

NEPA Compliance					
Salaries & Expenses				\$3,090.7	\$3,090.7
Abatement Control & Compliance				\$6,563.9	\$6,563.9
TOTAL				\$9,654.6	\$9,654.6

Federal Agencies Compliance					
Salaries & Expenses	\$2,006.8	\$1,786.5	\$1,834.0	\$1,881.5	\$47.5
TOTAL	\$2,006.8	\$1,786.5	\$1,834.0	\$1,881.5	\$47.5

New Source EIS Preparation					
Salaries & Expenses	\$362.7	\$118.7	\$123.4		-\$123.4
Abatement Control & Compliance	\$315.0	\$869.8	\$869.8		-\$869.8
TOTAL	\$677.7	\$988.5	\$993.2		-\$993.2

TOTAL:					
Salaries & Expenses	\$2,369.5	\$1,905.2	\$1,957.4	\$4,972.2	\$3,014.8
Abatement Control & Compliance	\$315.0	\$869.8	\$869.8	\$6,563.9	\$5,694.1

Federal Agencies Compliance & NEPA Compliance	TOTAL	\$2,684.5	\$2,775.0	\$2,827.2	\$11,536.1	\$8,708.9
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PERMANENT WORKYEARS

NEPA Compliance				69.7	69.7
Federal Agencies Compliance	56.8	46.8	46.8	46.8	
New Source EIS Preparation	10.2	3.0	3.0		-3.0
TOTAL PERMANENT WORKYEARS	67.0	49.8	49.8	116.5	66.7

TOTAL WORKYEARS

NEPA Compliance				72.2	72.2
Federal Agencies Compliance	58.6	48.0	48.0	48.0	
New Source EIS Preparation	11.0	3.0	3.0		-3.0
TOTAL WORKYEARS	69.6	51.0	51.0	120.2	69.2

INTERDISCIPLINARY

Federal Agencies Compliance and NEPA Compliance

Budget Request

The Agency requests a total of \$11,536,100 and 116.5 permanent workyears for this program, of which \$4,972,200 is for the Salaries and Expenses appropriation and \$6,563,900 is for the Abatement, Control and Compliance appropriation. This represents an increase of \$8,708,900 and 66.7 permanent workyears from 1983 levels, reflecting the consolidation of New Source EIS Preparation and NEPA Compliance Municipal Wastewater Treatment Facility Construction (previously funded in the Water medium) into one comprehensive program element, NEPA Compliance.

Program Description

In previous years, this subactivity included the review of Federal agencies actions and Environmental Impact Statements (EISs) together with the preparation of EISs for National Pollutant Discharge Elimination System permits for new sources. Beginning in 1984, activities and resources formerly associated with EIS Review will be renamed and continued as Federal Agencies Compliance. Resources which support New Source EIS Preparation activity are now reflected in the newly created NEPA Compliance program element along with total resources from NEPA Compliance Municipal Wastewater Treatment Facility Construction (previously funded in the Water medium).

NEPA Compliance -- Section 511(c) of the Clean Water Act requires EPA to prepare Environmental Impact Statements (EISs) or, alternatively, determine Findings of No Significant Impact on National Pollutant Discharge Elimination System (NPDES) permitting and municipal wastewater treatment grant actions to assure facilities are planned, constructed, and operated in conformance with the National Environmental Policy Act (NEPA). These activities were previously budgeted separately under the Interdisciplinary medium as New Source EIS Preparation and the Water medium as NEPA Compliance Municipal Wastewater Treatment Facility Construction.

Federal Agencies Compliance -- Under the direction of the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act and Executive Order 12088 (Federal Compliance with Pollution Control Standards), activities for this program include review and comment on EISs and on the environmental impact of any major legislation, regulations or other actions proposed by other Federal agencies. In addition, under Executive Order 12088 and OMB Circular A-106, resources in this program assist Federal agencies in: (1) identifying facilities needing pollution control mechanisms; (2) determining the most cost-effective control; (3) developing fiscal plans for installing needed abatement control technology; and (4) resolving disputes surrounding facilities which are out of compliance.

New Source EIS Preparation -- EPA is responsible for preparing its own EISs or, alternatively, determining Findings of No Significant Impact on National Pollutant Discharge Elimination System permitting to ensure that new facilities are planned, constructed, and operated pursuant to Section 511(c) of the Clean Water Act and NEPA. For 1984, New Source EIS preparation activities are included in the newly created program element, NEPA Compliance.

NEPA COMPLIANCE

1984 Program Request

The Agency requests a total of \$9,654,600 and 69.7 permanent workyears for this program, of which \$3,090,700 is for the Salaries and Expenses appropriation and \$6,563,900 is for the Abatement, Control and Compliance appropriation. The program expects to initiate 46 EISs and related studies in 1984. EPA will focus on assuring that effective environmental assessments are keyed to specific issues and on preparing credible and defensible Findings of No Significant Impact.

1983 Program

No resources are allocated to this program in 1983. Resources for these activities were budgeted in NEPA Compliance Municipal Wastewater Treatment Facility Construction in the Water media and New Source EIS Preparation in the Inter-disciplinary media.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

No resources were allocated to this program in 1982. Resources for these activities were budgeted in NEPA Compliance Municipal Wastewater Treatment Facility Construction in the Water media and New Source EIS Preparation in the Inter-disciplinary media.

FEDERAL AGENCIES COMPLIANCE

1984 Program Request

The Agency requests a total of \$1,881,500 and 46.8 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$47,500 and no change in permanent workyears from 1983 levels for these activities. This program expects to review and comment on 550 draft and 200 final EISs. In addition, the Agency will place increased emphasis on advice to Federal agencies on control methods and requirements, compliance monitoring, and dispute resolutions.

1983 Program

In 1983, the Agency is allocating a total of \$1,834,000 and 46.8 permanent workyears to this program, all of which is for the Salaries and Expenses appropriation. EPA will continue to identify and resolve environmental concerns at an early stage in the project development process. The program expects to review over 400 draft and 200 final EISs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$47,500 results from the following action:

-Reprogrammings. (+\$47,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$47,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,006,800 for this program, all of which was for the Salaries and Expenses appropriation. The program placed emphasis on identifying and resolving environmental concerns at an early stage in the project development process. In addition, it reviewed and commented on over 500 draft and 400 final Environmental Impact Statements.

NEW SOURCE EIS PREPARATION

1984 Program Request

The Agency requests no resources for this program element in 1984. The activities performed under this program element have been restructured and are now included in the newly created NEPA Compliance program element.

1983 Program

In 1983, the Agency is allocating a total of \$993,200 and 3.0 permanent work-years for this program, of which \$123,400 is for the Salaries and Expenses appropriation and \$869,800 is for the Abatement, Control and Compliance appropriation. 1983 resources reflect the shift away from initiating new EISs and toward completing those already in progress. The program expects to complete one draft and five final EISs in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$4,700 results from the following action:

-Reprogrammings. (+\$4,700) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$4,700 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$667,700 for this program, of which \$362,700 was for Salaries and Expenses and \$315,000 was for Abatement, Control and Compliance. The Agency completed six draft and six final EISs.

INTERDISCIPLINARY

Accelerated Review & Permitting

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Accelerated Review & Permitting

Salaries & Expenses	\$1,263.2	\$1,805.4	\$1,759.5	-\$1,759.5
Abatement Control & Compliance	\$1,688.4	\$1,600.0	\$1,600.0	-\$1,600.0
TOTAL	\$2,951.6	\$3,405.4	\$3,359.5	-\$3,359.5

TOTAL:

Salaries & Expenses	\$1,263.2	\$1,805.4	\$1,759.5	-\$1,759.5
Abatement Control & Compliance	\$1,688.4	\$1,600.0	\$1,600.0	-\$1,600.0

Accelerated Review & Permitting	TOTAL	\$2,951.6	\$3,405.4	\$3,359.5	-\$3,359.5
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PERMANENT WORKYEARS

Accelerated Review & Permitting	25.5	30.6	30.6	-30.6
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TOTAL PERMANENT WORKYEARS	25.5	30.6	30.6	-30.6
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TOTAL WORKYEARS

Accelerated Review & Permitting	40.0	49.3	48.9	-48.9
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TOTAL WORKYEARS	40.0	49.3	48.9	-48.9
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INTERDISCIPLINARY

Accelerated Review and Permitting

Budget Request

The Agency requests no resources for this activity in 1984. This represents a decrease of \$3,359,500 and 30.6 permanent workyears from 1983 levels.

Program Description

This program contains the resources for the Accelerated Review and Permitting program. It expedites development of energy-related and other important projects in an environmentally sound manner by augmenting, when necessary, the resources of EPA's permitting, Environmental Impact Statement (EIS) review, and EIS preparation programs.

ACCELERATED REVIEW AND PERMITTING

1984 Program Request

The Agency is not requesting funding for this activity in 1984 because the anticipated workload for accelerated permitting has not materialized. This represents a decrease of \$3,359,500 and 30.6 permanent workyears from 1983 levels.

1983 Program

In 1983, the Agency is allocating a total of \$3,359,500 and 30.6 permanent workyears for this program, of which \$1,759,500 is for the Salaries and Expenses appropriation and \$1,600,000 is for the Abatement, Control and Compliance appropriation. The program is continuing to develop and implement streamlined procedures for environmental review and permit issuance. Most of these efforts are concentrated on accelerated permit issuance for complex development projects.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$45,900 results from the following action:

-Reprogrammings. (-\$45,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$45,900 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,951,600 for this program, of which \$1,263,200 was for the Salaries and Expenses appropriation and \$1,688,400 was for the Abatement, Control and Compliance appropriation. The program was in its second year and emphasized development of streamlined permit review procedures and environmental assessment at an early stage in project development.

INTERDISCIPLINARY

Interdisciplinary Training Grants

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Interdisciplinary Training Grants					
Abatement Control & Compliance	\$110.0		\$200.0		-\$200.0
TOTAL	\$110.0		\$200.0		-\$200.0
TOTAL:					
Abatement Control & Compliance	\$110.0		\$200.0		-\$200.0
Interdisciplinary Training Grants	TOTAL	\$110.0	\$200.0		-\$200.0

INTERDISCIPLINARY

Interdisciplinary Training Grants

Budget Request

The Agency requests no resources for this program in 1984.

INTERDISCIPLINARY TRAINING GRANTS

1984 Program Request

The Agency requests no resources for this program in 1984. We feel that the program has accomplished its objectives. Many academic institutions have now established environmental science programs; and, the number of students trained in this discipline has substantially increased.

1983 Program

In 1983, the Agency is allocating a total of \$200,000 to this program within the Office of Research and Development (ORD), all of which is under the Abatement, Control and Compliance appropriation. The program continues to support academic training through fellowships and training grants.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$200,000 results from the following action:

-Congressional Action. (+\$200,000) The Congressional add-on to this activity of +\$200,000 to the Abatement, Control and Compliance appropriation was for the academic training program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$110,000 to this program within ORD, all of which was under the Abatement, Control and Compliance appropriation. The program funded 20 training grants and fellowships.



Enforcement

ENVIRONMENTAL PROTECTION AGENCY

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INTERDISCIPLINARY

Enforcement Policy & Technical Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Technical Support - Office of Legal & Enforcement Counsel						
Salaries & Expenses	\$3,489.6	\$3,241.0	\$3,241.0	\$3,041.7	-\$199.3	
Abatement Control & Compliance	\$29.1	\$40.0	\$40.0	\$285.5	\$245.5	
TOTAL	\$3,518.7	\$3,281.0	\$3,281.0	\$3,327.2	\$46.2	
Enforcement Policy & Operations						
Salaries & Expenses	\$1,084.6	\$6,864.0	\$7,117.2	\$8,128.7	\$1,011.5	
Abatement Control & Compliance		\$200.0	\$200.0	\$200.0		
TOTAL	\$1,084.6	\$7,064.0	\$7,317.2	\$8,328.7	\$1,011.5	
TOTAL:						
Salaries & Expenses	\$4,574.2	\$10,105.0	\$10,358.2	\$11,170.4	\$812.2	
Abatement Control & Compliance	\$29.1	\$240.0	\$240.0	\$485.5	\$245.5	
Enforcement Policy & Technical Support	TOTAL	\$4,603.3	\$10,345.0	\$10,598.2	\$11,655.9	\$1,057.7
PERMANENT WORKYEARS						

Technical Support - Office of Legal & Enforcement Counsel	66.8	65.2	65.2	51.0	-14.2	
Enforcement Policy & Operations	13.4	152.6	146.6	163.4	16.8	
TOTAL PERMANENT WORKYEARS	80.2	217.8	211.8	214.4	2.6	
TOTAL WORKYEARS						

Technical Support - Office of Legal & Enforcement Counsel	81.5	79.8	79.3	63.4	-15.9	
Enforcement Policy & Operations	17.1	167.6	160.7	176.9	16.2	
TOTAL WORKYEARS	98.6	247.4	240.0	240.3	.3	

INTERDISCIPLINARY

Enforcement Policy and Technical Support

Budget Request

The Agency requests a total of \$11,655,900 and 214.4 permanent workyears for 1984, an increase of \$1,057,700 and 2.6 permanent workyears from 1983. Included in this total is \$11,170,400 for Salaries and Expenses and \$485,500 for Abatement, Control and Compliance, with increases of \$812,200 for Salaries and Expenses and \$245,500 for Abatement, Control, and Compliance. An increase in workyears for civil and criminal litigation efforts in Enforcement Policy and Operations is substantially offset by a decrease in the technical support program due to a transfer of compliance technical support to the appropriate program offices.

Program Description

Technical Support - Office of Legal and Enforcement Counsel -- The National Enforcement Investigations Center (NEIC) is the primary source of specialized technical support for the Office of Legal and Enforcement Counsel (OLEC) for specific case development activities for all media. NEIC provides Headquarters and Regional offices with technical support for litigation development in nationally managed cases; cases with precedential implications; criminal cases; cases with multi-regional impacts; cases involving unique technological requirements and complexity; and cases which exceed a Region's capability and resources. NEIC plans, develops, and provides technical assistance, information and interpretations for civil and criminal case preparations involving: the Resource Conservation and Recovery Act (RCRA); the Toxic Substances Control Act (TSCA); the Clean Water Act and other water pollution control legislation; the Clean Air Act; the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); and regulatory aspects of other environmental legislation, statutes and executive orders.

Enforcement Policy and Operations -- This program element comprises the legal aspects of Agency enforcement programs in all non-Superfund media. It is comprised of Headquarters and Regional resources and personnel which provide for the development and implementation of legal enforcement policy and procedures. This includes the direction of legal enforcement activities of the Agency including the initiation and conduct of civil and criminal litigation as appropriate. Full legal enforcement support services are provided to media compliance programs in accordance with specific media priorities and compliance monitoring activities.

Efforts are coordinated with the Office of Deputy General Counsel and Regional Counsel staff attorneys to assure consistency of interpretation and application of the law. Litigation activities are conducted in cooperation with the Department of Justice (DOJ). Technical support is provided by the National Enforcement Investigations Center (NEIC) in Denver, Colorado and individual media and regional offices. States are encouraged to resolve compliance problems whenever possible with Agency assistance as appropriate.

The Agency enforcement strategy is results oriented. Environmentally significant violations are pursued vigorously in a certain, timely, predictable and fair manner. Health and safety related violations will continue to receive overriding priority attention.

Environmental problems resulting from improper waste disposal practices will be of high priority and appropriate statutes and sanctions will be brought to bear to resolve compliance problems in the most effective way. For all media, problems of initial and/or continuing compliance by major sources will be addressed with appropriate legal enforcement responses. Instances of non-compliance with judicial orders or consent decrees also will receive attention. Criminal sanctions will be considered for the most significant and indefensible forms of environmental misconduct.

TECHNICAL SUPPORT - OFFICE OF LEGAL AND ENFORCEMENT COUNSEL

1984 Program Request

The Agency requests a total of \$3,327,200 and 51.0 permanent workyears for 1984, an increase of \$46,200 and a decrease of 14.2 permanent workyears from 1983. Included in this total is \$3,041,700 for Salaries and Expenses and \$285,500 for Abatement, Control and Compliance. This represents a decrease in Salaries and Expenses of \$199,300 related to workyear reductions and an increase of \$245,500 in Abatement, Control and Compliance for contract funds to support litigation and evidence audit activities. The decrease reflects a refocusing of efforts to meet the needs of the Agency's legal case preparation activity. Previous technical efforts in support of non-litigation activities such as quality assurance and sample analysis for pesticides and toxics have been transferred and are provided for in the specific media requests as appropriate. This budget subactivity comprises the activities of the National Enforcement Investigations Center (NEIC) at Denver, Colorado.

The NEIC operates in an integrated multimedia mode in support of Agency enforcement priorities. In 1984 it will respond to Headquarters, Regional, and State requests for assistance in instances where specialized technical needs are required.

In the air enforcement program, NEIC will support civil litigation activity resulting from the December 31, 1982 Clean Air Act deadlines and from compliance dates contained in existing consent decrees. Support will also be provided to litigation cases regarding noncompliance with National Emissions Standards for Hazardous Air Pollutants (NESHAPS) and New Source Performance Standards (NSPS).

In the water program, the NEIC will assist in the evaluation of operations and maintenance problems preparatory to litigation where complex technological factors require intensive or prolonged evaluation or precedents are involved. As available, NEIC will provide technical support to adjudicatory hearings on National Pollutant Discharge Elimination System (NPDES) and Best Available Technology (BAT) permits.

The Center's assistance in hazardous waste will emphasize case preparations at the larger or more complex sites where significant violations are identified through Regional media compliance monitoring. Priority will be given to case preparations of precedential or deterrent value.

In support of litigation case development in the pesticides enforcement program, NEIC will conduct major mass application misuse investigations exceeding State and Regional resource capabilities. NEIC's activity in the toxics enforcement program will involve cases arising from violations in reporting, record-keeping, storage, handling, testing, and violations of chemical control rules for toxic substances.

In the Abatement, Control and Compliance appropriation, \$285,500 will support litigation by providing expert witnesses, technical and laboratory expertise, and evidence audit activities.

1983 Program

For 1983 the Agency is allocating a total of \$3,281,000 and 65.2 permanent workyears to this program of which \$3,241,000 is for Salaries and Expenses and \$40,000 is for extramural purposes under the Abatement, Control, and Compliance appropriation.

In the Stationary and Mobile air programs, case preparation activities and technical support to enforcement actions are continuing. Sample permits and emissions monitoring protocols and requirements are being developed and testing for violations of National Emission Standards for Hazardous Air Pollutants (NESHAP) is continuing. Tampering and defect surveys are also continuing. Water program

compliance evaluations and performance audit inspections, multimedia inspections, evaluations of remaining major publicly owned treatment works (POTWs) suspected of noncompliance, and continuing technical support and case preparation in major national cases against municipal and industrial sources are continuing. Investigative and analytical capabilities for RCRA Section 7003 and radiological hazardous waste evaluations and case preparations are continued. This support includes technical evaluation, case preparation, litigation support including testimony by participants, participation in negotiations to consent decrees, and evidence audit and quality assurance and case follow-up functions. Assistance is being provided to conduct pesticide field investigations, evidence gathering, case preparations, use observations, overview monitoring for FIFRA Section 18 exemptions, and technical assistance and training of State pesticide inspectors. Technical and analytical support continues for TSCA case development, quality assurance, evidence audit, emergency response, and criminal investigations as well as developing TSCA procedures for inclusion in multi-media inspection doctrines.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,518,700 of which \$3,489,600 was for Salaries and Expenses and \$29,100 was for extramural purposes under the Abatement, Control, and Compliance appropriation. This program provided technical consultation and assistance in case preparation by performing background, reconnaissance, and file review; field investigations; laboratory analysis; data evaluation; report preparation; permit writing expertise; technical testimony; and negotiation of technical aspects of consent decrees. Specialized technical assistance was provided to State and regional case development efforts in preparation and analysis of high hazard samples.

ENFORCEMENT POLICY AND OPERATIONS

1984 Program Request

The Agency requests a total of \$8,328,700 and 163.4 permanent workyears for this program, of which \$8,128,700 is for the Salaries and Expense appropriation and \$200,000 is for the Abatement, Control and Compliance appropriation. This represents an increase of 16.8 permanent workyears and \$1,011,500 in Salaries and Expenses from 1983. The increase is required in order to provide sufficient legal support to projected civil and criminal litigation caseload.

The Agency's goal is to respond to instances of non-compliance in a timely, quality, and consistent fashion. Developing, implementing, and updating enforcement policies, guidelines, and strategies lay the foundation for efforts to meet this goal.

Enforcement operations include legal review of administrative orders and notices of violation or non-compliance; provision of trial counsel to support administrative proceedings; and preparation and management of civil and criminal litigation. These efforts, supported by an automated docket and case tracking system, produce the more tangible results of a successful legal enforcement effort. In 1984, the Agency expects to refer 154 civil actions to the Department of Justice (DOJ). This level of litigation, which is an increase of 95% over 1982 outputs, confirms the Agency's aggressive pursuit of those violators who create the most significant environmental problems.

Efforts also include a centralized criminal investigations program that includes preliminary inquiries, investigations, referrals and post-referral support. This effort is expected to yield 34 criminal referrals to DOJ, a 70% increase over 1982 levels.

In the Abatement, Control, and Compliance appropriation, \$200,000 is requested for expert witnesses in support of litigation.

1983 Program

In 1983, the Agency is allocating a total of \$7,317,200 and 146.6 permanent workyears to this program, of which \$7,117,200 is for Salaries and Expenses and \$200,000 is for extramural purposes under the Abatement, Control, and Compliance appropriation. This is the first full year of funding for this subactivity.

In 1983, efforts are being made to improve the overall quality and timeliness of Agency legal activities in response to problems of non-compliance. Management systems foster accountability and consistency of Agency enforcement actions throughout the country. A prime management goal is to assure prompt resolution of identified cases of non-compliance. Policies and procedures are reviewed as necessary to achieve this goal and to assure certainty and predictability of Agency enforcement responses. An automated docket and case tracking system is used to help manage the enforcement processes of the Agency to avoid a backlog of enforcement actions.

The legal resources allocated for 1983 are used to help select appropriate enforcement responses to instances of non-compliance that are identified in various State, local, and source reports, or through inspections and complaints. Likewise, legal personnel initiate and provide trial counsel for administrative hearings under the various statutes. Throughout the enforcement process, legal personnel participate in or lead negotiations with sources to assure resolution of compliance problems that are consistent with statutory requirements and national enforcement policy. Resources provide for the legal review of and concurrence on certain administrative notices and enforcement orders and proposed administrative penalties. Resources are also used for the development, initiation, and conduct of civil and criminal litigation for all media. It is estimated that some 138 civil and 26 criminal actions will be referred to the Department of Justice in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$253,200 results from the following actions:

-Congressional Action. (+\$134,100) This increase includes +\$134,100 of the Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

-Reprogrammings. (+\$119,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$119,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982 the Agency obligated a total of \$1,084,600 for this program, all of which was for Salaries and Expenses. This was a new program as a result of the Agency reorganization which created the Office of Legal and Enforcement Counsel. These resources were for start-up efforts of the new enforcement organization and complemented the legal resources that were budgeted for in the various media programs. Examples of legal functions include the conduct of litigation and the use of administrative sanctions where appropriate. In 1982, 79 civil and 20 criminal actions were referred to the Department of Justice.

INTERDISCIPLINARY

Interdisciplinary Technical Assistance

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

EPA Disaster Assistance					
Salaries & Expenses		\$21.5			
	TOTAL	\$21.5			
TOTAL:					
Salaries & Expenses		\$21.5			
Interdisciplinary	TOTAL	\$21.5			
Technical Assistance					

PERMANENT WORKYEARS

EPA Disaster Assistance	.5
TOTAL PERMANENT WORKYEARS	.5

TOTAL WORKYEARS

EPA Disaster Assistance	.5
TOTAL WORKYEARS	.5



Toxic Substances

ENVIRONMENTAL PROTECTION AGENCY

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TOXIC SUBSTANCES

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

APPROPRIATION

Salaries & Expenses	\$32,694.1	\$33,852.3	\$34,182.0	\$32,900.5	-\$1,281.5
Abatement Control & Compliance	\$27,987.8	\$22,603.0	\$22,603.0	\$21,970.3	-\$632.7
Research & Development	\$22,030.9	\$12,148.7	\$12,876.8	\$11,804.9	-\$1,071.9
TOTAL, Toxic Substances	\$82,712.8	\$68,604.0	\$69,661.8	\$66,675.7	-\$2,986.1
PERMANENT WORKYEARS	634.4	607.7	626.7	606.2	-20.5
TOTAL WORKYEARS	729.5	687.7	706.9	683.2	-23.7
OUTLAYS	\$82,211.0	\$80,130.3	\$79,915.0	\$71,368.0	-\$8,547.0
AUTHORIZATION LEVELS	\$58,646.0	\$62,000.0	\$62,000.0		-\$62,000.0

TOXIC SUBSTANCES

OVERVIEW AND STRATEGY

The Toxic Substances program strategy is designed to produce a highly focused, cost-effective program which will reduce unreasonable risk of harm to health and the environment caused by potentially toxic chemicals. After an initial start-up period, the five years prior to 1982, Toxic Substances Control Act (TSCA) implementation has taken a firm direction. The 1984 strategy builds on this framework and, through the identification of several major cross-cutting themes, establishes priorities across the various TSCA activities.

Program Improvements Continue

In 1984, resources will be focused on meeting and enforcing the statutory requirements of TSCA and preventing the creation of backlogs. Efficiencies built into the program in 1982 will have eliminated all backlogs in early 1984. These efficiencies, as well as other anticipated changes in 1983, that will integrate the various key sections of TSCA as they were originally intended, have been incorporated into the 1984 program and will result in higher productivity and increased outputs with slightly fewer resources.

The Agency will continue to use both formal rulemaking and other nonregulatory risk reduction tools. We will develop, implement, and refine cost-effective enforcement strategies that ensure compliance with formal and informal controls at minimum cost. In addition, we will continue to initiate regulatory reform activities aimed at minimizing industry burdens in the areas of new and existing chemicals, while maintaining health and environmental protection.

In 1984, all regulatory decisions will be supported with clearly articulated and peer-reviewed scientific documentation. This will provide interested parties with the rationale for EPA actions. Interaction with industry, small business, labor and public interest groups will remain an established part of the decision-making process.

Duplicative toxic substances regulatory efforts will be minimized by this and other agencies, under different statutes, by pursuing a vigorous integration effort. By using existing integration tools such as multi-media chemical strategy work groups, we are better able to formulate national policy and make decisions on toxic chemicals in a technically sound and consistent way.

Overall, the Agency's efforts focus on six broad program areas to achieve environmental results. These programs include: review of new chemical substances prior to manufacture; development of rules or negotiated agreements for testing of chemicals by industry; risk assessments and control of existing chemicals; integration of agency chemical control; enforcement of rules and orders issued under TSCA; and, a Research and Development program to support regulatory efforts. Throughout the Toxic Substances program, these efforts are carried out in a variety of ways.

The major focus for the Chemical Integration program will be on work groups that develop multi-media chemical strategies. The strategies developed by these work groups help coordinate scientific assessments of the chemicals, determine if control is necessary, and if so, under what statute--thereby avoiding needless imposition of regulatory control. In 1984, the Agency also plans to maintain and update tools for integration such as the Chemical Activity Status Report and the Extramural Activity Report which provide comprehensive reports of chemical control activity in all media and support many other integration mechanisms.

In the Chemical Testing program, the Agency has shifted resources from the test guidelines program, where the emphasis will be on the statutorily required review and updating of guidelines, to the area of test data development. Resources

in the test data development area will support the audit of data developed on Interagency Testing Committee (ITC) designated chemicals. The shift away from test guidelines is possible because the major development stage, based on currently available testing methods, is concluded.

Early in 1984, the Chemical Testing program will mark the completion of the final 13 backlog chemicals designated for priority testing consideration by the ITC as required by the court ordered schedule. A major effort will focus on responding to the ITC on the 11th and 12th priority lists, within the one-year time requirement, and preparing analysis to respond to the 13th and 14th lists. Testing of chemicals previously designated by the ITC will begin to generate large quantities of test data to be reviewed for compliance with rules and agreements, and referred to the Existing Chemical Review program for risk evaluation. Also in 1984, the Agency plans to develop proposed test rules or negotiated testing agreements on chemicals of concern identified through the new and existing chemical programs. The test rule program will provide a vital link between the new and existing chemical programs. When chemical classes of concern are identified in the PMN program, the test rule program is used to obtain needed data on the related classes of existing chemicals. Such action is necessary to ensure EPA activities do not result in the substitution of equally or more hazardous products.

Existing Chemical Review Program Redirected

The Existing Chemical Review program effort has been redirected from past attempts to develop comprehensive analyses of all effects and exposures of a few selected chemicals. The new program will review and evaluate a larger number of existing chemicals focusing on necessary control of specific problems that may be posed by a given activity with the chemical. The Agency will give primary attention to evaluating and controlling existing chemical problems identified through specific TSCA mechanisms, such as Section 8(e) "substantial risk" notices, chemicals found to produce adverse effects in testing performed in response to recommendations of the ITC committee, and petitions received under Section 21. We expect to receive 200 studies from the Section 4 testing program in 1984.

The major changes in the New Chemical Review program will be the reduction in the number of new chemicals that will require full premanufacture review. The rate of premanufacture notice (PMN) submissions has not leveled off; in fact, it is estimated that the Agency will receive 1,300 new chemical notices in 1984, compared to approximately 800 in 1982. Of the 1,300 expected new chemical notices, 660 will undergo a full PMN review. This review will involve a greater proportion of detailed scientific reviews than in 1982 because this segment of the population of new chemicals is more likely to have toxicity concerns. The remaining 640 applicants will be reviewed under the low risk exemption program.

Compliance Monitoring Support Increases

The Enforcement program will increase support for regional compliance monitoring, analytical and case development activities. This increase will enable the Agency to monitor compliance with new TSCA rules promulgated in 1983 and 1984, while maintaining the 1983 level of monitoring for rules existing prior to that year. Included will be inspections of facilities subject to chemical control regulations: polychlorinated biphenyls (PCB) marking and disposal; the PCB rules; the chlorofluorocarbons (CFC) rule; asbestos-in-schools and other rules.

Research and Development

The Toxic Substances Research and Development program is comprised of a mixture of disciplinary activities that will provide information and methods needed to continue implementation of TSCA. Research efforts will directly support the goal of the Office of Toxic Substances to protect human health and the environment while minimizing the impact on industry by providing analytical methods, models, field monitoring systems and associated quality assurance protocols needed to maintain a data base of the highest possible quality.

TOXIC SUBSTANCES

Program Activities	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1983 vs. 1983
<u>TOXICS INTTEGRATION</u>					
No. of Intermedia					
Priority Pollutants					
produced or updated . .	19	6	6	6	--
Multi-media chemical					
strategies completed	1	4	4	4	--
<u>CHEMICAL TESTING</u>					
Test Rules Proposed/					
Negotiated Agreements	7	14	15	28	+13
Test Rules Final	0	11	3	6	+3
Test Guidelines					
published	96	65	16	12	-4
<u>EXISTING CHEMICAL REVIEW</u>					
Substantial Risk					
Notices reviewed. . . .	45	75	50	50	--
Test Data Studies					
reviewed.	95	*	100	200	+100
Risk Assessments	4	1	3	5	+2
Negotiated Control					
Agreement/Risk					
Management Advisories	0	*	3	5	+2
Proposed/Final §6 Rules.	5	2	3	2	-1
Exemption Requests					
Proposed/Final.	3	4	4	60	+56
Section 8 Information					
Collection Rules/					
Agreements.	5	3	3	3	--
Significant New Use Rules					
Proposed/Final.	0	*	3	3	--
PCB Disposal Permits					
reviewed.	0	*	40	40	--
<u>NEW CHEMICAL REVIEW</u>					
PMN Notices Processed. .	839	1000	1000	660	-340
PMN Risk Assessments . .	15	40	40	60	+20
PMN Notice Withdrawals/					
Negotiated Agreements/					
Section 5(e)/(f) Orders	27	23	23	40	+17
§ 5(h)(4) Notices Reviewed	0	*	40	640	+600
Section 5(h)(4) Exemption					
Rules Proposed/Final. .	4	10	8	3	-5
New Chemical Significant					
New Use/§8(a) Rules . .	0	1	6	5	-1
<u>TOXICS ENFORCEMENT</u>					
Inspections under § 4	0	125	40	125	+85
Inspections under § 5	33	265	265	295	+30
Inspections under § 6	2164	875	1332	960	-372
Inspections under § 8	17	100	200	175	-25
Inspections under § 12/13	0	215	100	715	+615

* New category for 1984 budget. |



Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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TOXIC SUBSTANCES

Chemical Testing & Assessment

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Scientific Assessment						
Salaries & Expenses	\$77.5	\$161.4	\$161.4	\$170.3	\$8.9	
Research & Development	\$20.0	\$75.0	\$325.0	\$75.0	-\$250.0	
TOTAL	\$97.5	\$236.4	\$486.4	\$245.3	-\$241.1	
Technical Information & Liaison						
Salaries & Expenses	\$270.9	\$170.5				
Research & Development		\$21.9				
TOTAL	\$270.9	\$192.4				
Monitoring Systems & Quality Assurance						
Salaries & Expenses	\$1,710.5	\$1,856.2	\$1,856.2	\$1,716.0	-\$140.2	
Research & Development	\$4,055.4	\$3,611.8	\$3,611.8	\$2,856.1	-\$755.7	
TOTAL	\$5,765.9	\$5,468.0	\$5,468.0	\$4,572.1	-\$895.9	
Health Effects						
Salaries & Expenses	\$3,435.9	\$5,556.6	\$5,556.6	\$3,657.2	-\$1,899.4	
Research & Development	\$7,898.3	\$3,455.8	\$3,580.8	\$6,191.4	\$2,610.6	
TOTAL	\$11,334.2	\$9,012.4	\$9,137.4	\$9,848.6	\$711.2	
Environmental Engineering & Technology						
Salaries & Expenses	\$520.9	\$384.9	\$384.9		-\$384.9	
Research & Development	\$1,269.8	\$142.7	\$142.7		-\$142.7	
TOTAL	\$1,790.7	\$527.6	\$527.6		-\$527.6	
Environmental Processes & Effects						
Salaries & Expenses	\$5,956.8	\$6,239.8	\$6,239.8	\$6,288.3	\$48.5	
Research & Development	\$6,681.6	\$3,189.1	\$3,564.1	\$1,940.0	-\$1,624.1	
TOTAL	\$12,638.4	\$9,428.9	\$9,803.9	\$8,228.3	-\$1,575.6	
Stratospheric Modification						
Salaries & Expenses	\$142.3	\$130.7	\$130.7	\$132.7	\$2.0	
Research & Development	\$765.6	\$742.4	\$742.4	\$742.4		
TOTAL	\$907.9	\$873.1	\$873.1	\$875.1	\$2.0	
National Center For Toxicological Research						
Research & Development	\$1,340.2	\$910.0	\$910.0		-\$910.0	
TOTAL	\$1,340.2	\$910.0	\$910.0		-\$910.0	
TOTAL:						
Salaries & Expenses	\$12,114.8	\$14,500.1	\$14,329.6	\$11,964.5	-\$2,365.1	
Research & Development	\$22,030.9	\$12,148.7	\$12,876.8	\$11,804.9	-\$1,071.9	
Chemical Testing & Assessment	TOTAL	\$34,145.7	\$26,648.8	\$27,206.4	\$23,769.4	-\$3,437.0

TOXIC SUBSTANCES

Chemical Testing & Assessment

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PERMANENT WORKYEARS					

Scientific Assessment	1.5	2.5	2.5	2.5	
Technical Information & Liaison	4.6	1.1			
Monitoring Systems & Quality Assurance	28.5	23.2	22.6	23.2	.6
Health Effects	39.8	49.1	49.1	49.1	
Environmental Engineering & Technology	10.1	5.3	5.1		-5.1
Environmental Processes & Effects	81.3	70.5	69.7	68.5	-1.2
Stratospheric Modification	.5	1.8	1.8	1.8	
TOTAL PERMANENT WORKYEARS	166.3	153.5	150.8	145.1	-5.7
TOTAL WORKYEARS					

Scientific Assessment	2.5	4.0	4.0	4.0	
Technical Information & Liaison	6.6	2.3			
Monitoring Systems & Quality Assurance	29.4	27.1	25.4	27.1	1.7
Health Effects	45.7	55.1	55.1	55.1	
Environmental Engineering & Technology	11.7	6.2	6.0		-6.0
Environmental Processes & Effects	94.8	89.2	88.4	87.2	-1.2
Stratospheric Modification	1.3	1.8	1.8	1.8	
TOTAL WORKYEARS	192.0	185.7	180.7	175.2	-5.5

TOXIC SUBSTANCES

Chemical Testing and Assessment

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop and Validate Test Methods			
- Revise and update mutagenicity and cancer guidelines (Scientific Assessment)			5/84
- Provide immune function tests in perinatally exposed mice, and in adult mice (Health)	9/84	9/84	9/84
- Report on acute test round robin (Env. Processes)	12/82	12/82	
Develop and Validate Methods to Predict and Monitor Exposure			
- Report on TEAM Study (Monitoring)	12/83	6/83	
- Final project report - Test of EXAMS in Iowa reservoirs (Env. Processes)		3/83	
Develop and Validate Risk Assessment Methods			
- Provide journal article on known/suspected human carcinogens as characterized by genetic test procedures (Health)	9/83	9/83	9/83
- Provide extrapolation models for estimating neurotoxic risk to human (Health)	10/88	10/88	10/88
Perform Technical Evaluations and Scientific Assessment			
- Completion of Lifecycle Emissions/Release studies (Env. Engineering)	9/83	9/83	
- Publication of PCB Guidance Documents	10/82		
Develop Structure-Activity Relationships			
- Validity of existing SAR models in predicting bioaccumulations of toxics in marine biota (Env. Processes)	10/82	10/82	

TOXIC SUBSTANCES

Chemical Testing and Assessment

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop Methods and Provide Quality Assurance			
- Guidelines for Field Testing Soil Transport Models (Monitoring)			1/84
Assess Stratospheric Modification			
- Third biennial research report to Congress		2/83	
- Work on fourth biennial research report to Congress			10/84

TOXIC SUBSTANCES

Chemical Testing and Assessment

Budget Request

The Agency requests a total of \$23,769,400 and 145.1 permanent workyears for 1984, a decrease of \$3,437,000 and 5.7 permanent workyears from 1983. Included in this is \$11,964,500 for Salaries and Expenses and \$11,804,900 for Research and Development, with a decrease of \$2,365,100 and \$1,071,900, respectively. The decrease primarily reflects a reduction in monitoring and quality assurance and environmental processes and effects. In addition, the decrease reflects the transfer of \$1,219,600 in exploratory research funds to the Intermedia program.

Program Description

The Chemical Testing and Assessment research and development program is the Toxic Substances research program that provides the Office of Toxic Substances (OTS) with the scientific tools to implement the Toxic Substances Control Act (TSCA). The major needs and objectives of EPA's toxic substances research efforts which support TSCA activities are as follows:

Objective 1. Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. The purpose of this objective is to develop and validate environmental and human health effects tests and define the bounds of reliability for such tests so that OTS can use them in their test guidelines. OTS publishes test guidance to assure that industry test data will adequately identify and assess potential environmental and health hazards due to exposure to chemicals.

Objective 2. Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals Under TSCA. The purpose of this objective is to identify major transport and transformation processes and to develop validated models and monitoring methods and data bases so that we can document and estimate human and environmental exposures to chemicals.

Objective 3. Develop and Validate Improved Risk Assessment Methods for TSCA Studies. The purpose of this objective is to develop health risk assessment methods that are more reliable and economical than existing methods and to develop methods necessary to evaluate major health effects for which no adequate assessment methods exist.

Objective 4. Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. The purpose of this objective is to provide scientific evaluations and assessments to OTS on monitoring and risk assessment problems and to develop defensible methods to estimate the value of adverse health and environmental impacts related to the production, use and disposal of chemicals.

Objective 5. Develop Structure-Activity Fate and Effects Relationships in Support of Premanufacturing and New Use Reviews. The purpose of this objective is to develop structure-activity relationships (SAR) to provide a tool to determine whether a new chemical poses unreasonable risk or needs additional testing.

Objective 6. Develop Methods and Provide Quality Assurance for TSCA Data and Analytical Activities. This objective supports research to improve measurement methods, field monitoring systems and associated quality assurance protocols that enable us to identify and quantify toxic chemicals in the environment. Standard reference banks and audit programs to assess laboratory and field performance are also maintained to assure the quality of data.

Objective 7. Assess Stratospheric Modification. The Clean Air Act Amendments of 1977 require assessment of the environmental and health effects of stratospheric modification due to changes in the ozone layer. The purpose of this objective is to investigate the health and environmental consequences of lower levels of ozone and anticipated increased exposure to ultra-violet radiation.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$245,300 and 2.5 permanent workyears for this program, of which \$170,300 is for Salaries and Expenses and \$75,000 is for Research and Development. This reflects an increase of \$8,900 for Salaries and Expenses and a decrease of \$250,000 for Research and Development. This decrease of \$250,000 reflects completion of several projects in 1983.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. In 1984, the Scientific Assessment program will improve the Agency's risk assessment methods by developing more accurate and cost-effective methodologies. The program will focus on the (1) identification of scientifically advanced methods and (2) identification of more scientifically accurate and less costly methods. Additionally, based on the results of 1983 case studies of the Program Integration Project's industry-by-industry assessment approach, the Scientific Assessment program will participate in the efforts to modify the risk assessment methodology. The program will also continue its efforts to provide uniform risk assessment methodologies for the Agency.

1983 Program

In 1983, the Agency is allocating a total of \$486,400 and 2.5 permanent workyears to this program of which \$161,400 is under the Salaries and Expenses appropriation and \$325,000 is for extramural purposes under the Research and Development appropriation.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. In 1983, the Scientific Assessment program is continuing its efforts to achieve uniform Agency risk assessment approaches. This program is completing an exposure assessment handbook for Agency use which explains the appropriate exposure techniques used to assess the major types of environmental problems. The program is assisting the various Agency programs in documenting the production, use and disposal of toxic chemicals. The program is also completing case studies that attest the validity of the Program Integration Project's industry-by-industry risk assessment approach.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$250,000 results from the following action:

-Congressional Action. (+\$250,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports methods to assess risk from toxic chemicals at low doses.

1982 Accomplishments

In 1982, the Agency obligated a total of \$97,500 for this program, of which \$77,500 was under the Salaries and Expenses appropriation and \$20,000 was for extramural purposes under the Research and Development appropriation.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. The 1982 Scientific Assessment program accomplished (1) preparation of the first draft of a carcinogen policy document for OTS, (2) preparation of risk assessment documents of ethylene oxide and chloroform, (3) review of a PCB document for reproductive effects, and (4) assistance in the development of methodologies for screening chemical mutagens.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$270,900 for this program, all of which was under the Salaries and Expenses appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program and 1982 Accomplishments narrative sections appear there.

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$4,572,100 and 23.2 permanent work years for this program, of which \$1,716,000 is for Salaries and Expenses and \$2,856,100 is for Research and Development. This decrease of \$140,200 and \$755,700, respectively, reflects both the completion of the Total Exposure Assessment Methodology Field Study (TEAM) in 1983 and transfer of the Exploratory Research program to the Intermedia program.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals under TSCA. The exposure monitoring research effort emphasizes developing (1) monitoring data directly related to exposure measurements to corroborate the limited laboratory and model data used in risk assessments, and (2) monitoring systems and approaches capable of linking environmental concentrations of chemicals to human exposure. A field test to evaluate exposure monitors, sampling protocols and data analysis techniques developed in prior years will be initiated. The program will continue to develop improved statistical tools to aid in the design and analyses of exposure monitoring programs. This research supports OTS in its assessment and regulation of existing chemicals.

Develop Methods and Provide Quality Assurance for TSCA Data and Analytical Activities. The Agency continues to foster new and improved measurement methods and quality assurance. Methods will be developed and evaluated for sampling and analyzing volatile organic compounds which are currently difficult to isolate. Specifically, new pattern recognition approaches to analytical instrument outputs will be evaluated so that we can reduce data to more manageable proportions. We will continue research on various cryogenic approaches and new collector materials for sampling heavier compounds in air; this will enable us to expand the number of chemicals that we can monitor. A number of direct methods for analysis of organic compounds which are contained in particulate matter will be examined in order to reduce both the time and cost of such analyses. The quality assurance area will emphasize protocols for biological measurements thereby recognizing the increasing reliance of the Agency on these methods. We will conduct field work to develop guidelines that will be used in validating soil models; this class of models will soon be ready for validation. A protocol and report on assessing asbestos fiber reduction techniques will be published; this will enable us to assess the effectiveness of asbestos clean-up operations. Laboratory audits will be conducted as needed and a standard reference bank for material and spectra will be maintained.

1983 Program

In 1983, the Agency is allocating a total of \$5,468,000 and 22.6 permanent workyears to this program, of which \$1,856,200 is under the Salaries and Expenses appropriation and \$3,611,800 is for extramural purposes under the Research and Development appropriation.

Develop Methods and Provide Quality Assurance for TSCA Data and Analytical Activities. Methods for sampling and analyzing volatile organic compounds are being tested. We will finalize guidelines that will be used in the field validation of stream models that predict fate and transport of chemicals and chemical compounds. The audit program for the asbestos in school program is continuing, and quality assurance protocols and standard reference materials are being provided for a number of studies and field activities.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals Under TSCA. The Agency is currently collecting data from the second city of the two city Total Exposure Assessment Methodology Field Study. The data will be used to evaluate the effectiveness of using personal dosimeters, biological samples, and population activity questionnaires to obtain improved exposure data in humans. The Agency is also initiating development work on a number of improved statistical approaches and data handling techniques for predicting and monitoring human and environmental exposure to chemicals. In addition technical assistance for a number of Agency exposure assessments is being provided.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$5,765,900 for this program, of which \$1,710,500 was under the Salaries and Expenses appropriation and \$4,055,400 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals under TSCA. The program has completed the field work on the Southeast Ohio Exposure Methods Study. Data was used to publish a protocol for soil sampling. In addition data was collected from the first city of the two city TEAM study to test the methodology for measuring personal exposure. Valuable field support was also provided OTS for the lead assessment study in Dallas, Texas.

Develop Methods and Provide Quality Assurance for TSCA Data and Analytical Activities. Some 60 new collector materials for sampling heavier compounds in air were synthesized and evaluated. A revised method for analyzing bulk asbestos was published. Field work to revise the interim guidelines for validating stream models was completed. Technical support in the form of standard reference material and laboratory audits was provided.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$9,848,600 and 49.1 permanent workyears for this program, of which \$3,657,200 is for Salaries and Expenses, and \$6,191,400 is for Research and Development. This reflects a decrease of \$1,899,400 for Salaries and Expenses and an increase of \$2,610,600 for Research and Development, for an overall increase of \$711,200. This decrease results from an accounting change. Formerly, many of the on-site research support contracts were funded out of the Salaries and Expenses appropriation; the transfer will allow the Agency to fund these contracts from a more appropriate source, the Research and Development appropriation. In 1984, the health program increased resources for research to improve the Agency's ability to quantify risk. We transferred Exploratory Research funds to the Inter-media program.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. Health effects test guidelines are needed for test rules specified under Section 4 of TSCA, to define testing data deficiencies under Section 5, and to meet the statutory requirements of Section 10(e). Existing guidelines contain deficiencies and gaps that must be addressed if we are to provide reliable, scientific guidance to industry for test rule development. Work will focus on two areas of concern to OTS: inexpensive and short-term screening tests, and longer-term tests and systems for the tier-testing matrix. This research includes emphasis on the relationship of animal test data to human systems.

Develop and Validate Improved Risk Assessment Methods for TSCA Studies. Research will address some of the significant gaps in the risk assessment methodologies. Current methodologies, for the most part, have been essentially limited to cancer risk; and, many existing methodologies are incompletely validated. Both qualitative and quantitative procedures need to be improved to extrapolate data from animal studies to human risk. An important area of research inquiry is the attempt to predict heritable genetic effects of environmental chemicals.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. OTS performs evaluations of exposure to chemicals and assesses the risk that can result from such exposure. Scientific assessments and data collection support this process.

Technical and scientific assessment support will continue; but, there will be additional emphasis on integrated, uniform assessment guidelines for heritable diseases. As part of a strategy to institute uniform assessments, methods for carcinogenicity and mutagenicity assessment will be evaluated for the Program Integration Project. We will improve risk assessments in the area of extrapolation of data from rapid mutagenic tests to predict carcinogenic effects in various mammalian species. Research is also being oriented toward validating existing methodologies and toward addressing those areas other than carcinogenicity, where significant gaps exist. Additionally, technical studies will be conducted for OTS on specific health issues and hazard risks of chemicals.

Develop Structure Activity Fate and Effects Relationships in Support of Premanufacturing and New Use Reviews. Estimates of health effects are part of the PMN reviews under Section 5 of TSCA. The computerized SAR techniques will improve the scientific accuracy of, and will streamline, the Agency's new chemical review process. We will continue to emphasize development of the structure-activity model. SAR will also improve OTS's ability to limit testing of existing chemicals to only the necessary tests.

1983 Program

In 1983, the Agency is allocating a total of \$9,137,400 and 49.1 permanent workyears to this program, of which \$5,556,600 is under the Salaries and Expenses appropriations, and \$3,580,800 is for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. Research to date has significantly expanded the basic state-of-the-art in testing knowledge. Basic development has been accomplished for health effects test guidance in the several areas of toxicology. Work has also begun to relate how to extrapolate animal test data to human systems. This information would enable OTS to evaluate human health risk by relating chemical exposure to internal dose-response of humans.

Develop and Validate Improved Risk Assessment Methods for TSCA Studies. In the area of risk assessments, improvements have been made in extrapolating data from rapid mutagenic studies to determine carcinogenic effects in various mammalian species. Research will be oriented toward validating existing methodologies and toward addressing those areas other than carcinogenicity where significant gaps exist.

Develop Structure Activity Fate and Effects Relationships in Support of Premanufacturing and New Use Reviews. Research to date on SAR provides evidence that computer simulated metabolism of organic agents is feasible for predicting toxic health effects. Structure-activity methods are now being developed for the rapid toxicity and fate screening of chemicals and for extending toxicity evaluation methods to additional classes of chemicals by comparative techniques.

Perform Technical Evaluation and Scientific Assessments and Control Quality of Agency Risk Assessments. ORD is providing OTS with risk calculation consultations, such as estimates of release rates for chemicals, on a systematic basis and is providing guidance to support the development of test rule documents.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$125,000 results from the following action:

-Congressional Action. (+\$125,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports bioassays of chlorinated hydrocarbons and structure-activity relationships to predict behavior of new chemicals.

1982 Accomplishments

In 1982, the Agency obligated a total of \$11,334,200 for this program, of which \$3,435,900 was under the Salaries and Expenses appropriation and \$7,898,300 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. Initial phases of test methods development have provided a number of methods which have expanded chemical testing capabilities. For example, the Agency also developed an in vitro mammalian assay system that is capable of simultaneously detecting gene mutations and chromosome mutations. We also performed studies to evaluate how toxic chemicals affect the immune system.

Develop and Validate Improved Risk Assessment Methods for TSCA Studies. The program developed animal models to predict the peripheral neurotoxicity of chemicals in humans. The program also developed in vitro methods which enable us to determine potential carcinogenic and mutagenic effects of volatile gases by exposing mammalian cells to these agents.

Develop Structure Activity Fate and Effects Relationships in Support of Pre-manufacturing and New Use Reviews. A data management system was developed to store and analyze research information on genetic and other toxic effects of chemicals.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. Studies were performed that demonstrated that the size of fibers has a correlation to tumor growth in mice. The laboratories also tested several chemicals for mutagenic and carcinogenic effects.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests no resources for this program in 1984. The Hazardous Waste research program has process specific information and engineering assessments which OTS can use.

1983 Program

In 1983, the Agency is allocating a total of \$527,600 and 5.1 permanent workyears for this program, of which \$384,900 is under the Salaries and Expenses appropriation and \$142,700 is for extramural purposes under the Research and Development appropriation.

Perform Technical Evaluations and Scientific Assessments. OTS utilizes process specific information and engineering assessments to estimate release rates of new toxic substances as part of the PMN review process, which is specified under Section 5 of the TSCA and for enforcement activities. ORD has concentrated its efforts on three areas: PMN reviews, life cycle emissions/release studies of dyestuffs and technical support.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,790,700 to this program, of which \$520,900 was under the Salaries and Expenses appropriation and \$1,269,800 was for extramural purposes under the Research and Development appropriation.

Two guidance documents were produced for State and Regional implementation of PCB disposal regulations under the Toxic Substances Control Act: (1) a draft report covering interim guidelines for the disposal/destruction of PCBs and PCB items by non-thermal methods; and (2) a report on Guidelines for the Disposal of PCBs and PCB Items by Thermal Destructions. Additionally, literature reviews were published and the engineering consultations were conducted for more than 150 PMN notices; and, enforcement support was provided.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$8,228,300 and 68.5 permanent workyears for this program, of which \$6,288,300 is for Salaries and Expenses and \$1,940,000 is for Research and Development. This represents an increase of \$48,500 in the Salaries and Expenses appropriation and a decrease of \$1,624,100 in the Research and Development appropriation. The decrease reflects the completion of a number of fate and effect studies, the completion of the development of certain test methods, the concentration of validation activities at laboratories with optimal skill mixes and the transfer of the Exploratory Research resources to the Intermedia program.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. The environmental hazards assessment program is designed to develop, improve, and validate test methods and to define the bounds of reliability for such tests. This research effort also provides effects data from field evaluations of the test methods for development of mathematical models and for testing and validation of physical models.

These validated test methods are needed in defining the hazard of toxic chemicals. Knowledge gaps still exist in developing single-species tests to meet the specific regulatory needs of OTS. Also, there is a need to evaluate the uses of single-species tests for multispecies systems. Methodologies will be developed to define how much testing is needed for an adequate assessment of potential chemical hazards.

Terrestrial toxicology research will focus on the effects of toxic chemicals on both plant and animal species. Test methods will be developed and validated; and, more emphasis on validation will be evident during this period. The proposed critically needed tests will assist EPA in identifying terrestrial effects which should concern us and in defining risk to terrestrial plants and wildlife.

The comparative toxicology program is designed to define how much testing is needed for an adequate risk assessment, when one species can be used to test and predict for other species, and which combination of species and toxicity tests can be considered most predictive. Efforts in comparative toxicology will lead to the identification of the most appropriate test organism and test method for a specific situation. Tests will be developed on a diverse phyla of marine organisms to develop comparative toxicological relationships.

System-level research is being conducted to perform studies on effects of toxic chemicals on ecosystems. This research is necessary because estimates based upon single-species data may not accurately define the hazard to larger ecosystems. Therefore, this research effort will evaluate system-level effects indicating ecosystem health/stress from toxic chemicals.

Humans are exposed to toxic chemical contaminants not only through direct contact from the ambient environment, but also through consumption of plants and animals which themselves have become contaminated. The indirect human exposure effort focuses on the development of methods for defining indirect human exposure with emphasis on protocols for plant uptake, fish and invertebrate uptake, food chain bioaccumulation and transport.

Laboratory scale simulated environmental systems (microcosms) are being developed to predict effects of chemicals in freshwater, marine/estuarine and terrestrial environments. They will be used to validate effects processes, to validate mathematical models and to screen the effects of chemicals for implementing Sections 4 and 5 of TSCA. This will be the first attempt to develop the criteria for determining limits of applicability of toxicological data, obtained in the laboratory, with certain kinds of aquatic communities and the first step in defining a quantitative relationship between the data obtained in the laboratory with field situations. This will provide OTS with the capability to extrapolate from lab models and methods to the real environment.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals Under TSCA. This research activity identifies the major transport and transformation processes that determine environmental exposures. It involves the development of data bases, validated mathematical models and associated methods needed to estimate environmental exposures. OTS needs evaluations of many aspects of exposure assessment to minimize costs related to data collection, laboratory testing and mathematical model applications. More accurate models will reduce the uncertainty surrounding exposure estimates and reduce the cost of regulatory actions as part of the Section 5 PMN review process and evaluation of specific chemicals under Section 6.

Environmental concentration data are critical for estimating exposure of humans and biota to toxic chemicals and for estimating environmental hazard and risk as a result of exposure. Exposure assessment methodologies will be developed for predicting the concentration of toxic chemicals. The results of this research will be a set of models, capable of predicting environmental concentrations of toxic chemicals, that are suitable for a wide range of applications by OTS.

Research in this area will be involved in developing the scientific understanding and quantification of how the various transport and fate processes act on toxic chemicals. This information is fundamental to determining the significance of the processes and to developing laboratory tests for measurement and for extrapolating the measured rates to real environments, through the development and use of exposure or benefit/risk models. These coefficients and/or protocols are needed for Section 4 of TSCA in PMN evaluations. In 1984 the basic scientific understandings, concepts, and data will be acquired to develop defensible protocols for predicting environmental exposure to chemicals. Mathematical descriptions of the significant fate processes will also be developed.

Microcosms provide a cost-effective tool for validating exposure assessment models, and for screening the fate and effects of chemicals for implementing Sections 4 and 5 of TSCA. In 1984, greater emphasis will be given to validating exposure assessment models in field situations and methodologies for determining environmentally relevant rates of biodegradation. Field evaluation and verification will be employed to confirm laboratory-derived data, test methods and models in situations under field conditions, and to verify the applicability of laboratory methodologies to the real environment. This work provides support under the Toxics Integration Program and increases the scientific basis of regulatory decisionmaking.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. Technical studies will be conducted for OTS on environmental fate, exposure, effects, hazards and risks of chemicals. Work will include review and screening of new chemicals, consultation on the development and revision of test guidelines and rules, development of support document material for test guidelines, review of specific chemicals or assessments, management of workshops and continuation of the work on non-commercial asbestos silicates.

Develop Structure-Activity Fate and Effects Relationships in Support of Premanufacturing and New Use Reviews. In 1984, the environmental processes and effects program will continue the development of SAR models for the prediction of fate and toxicity of chemicals in the environment. This effort complements research related to human health by providing data and methods to predict toxic chemical transport, transformation and effects on organisms from analogies based on an understanding of chemical molecular structural classes. SAR models for freshwater toxicity and bioaccumulation will be extended to include additional classes of chemicals, and SAR models for effects on marine species will be developed.

1983 Program

In 1983, the Agency is allocating a total of \$9,803,900 and 69.7 permanent workyears to this program, of which \$6,239,800 is under the Salaries and Expenses appropriation and \$3,564,100 is for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. Research continues on aquatic toxicology methodologies to select the most appropriate species and tests; terrestrial toxicology focused on the effects of toxics on both plant and animal species; comparative toxicology to determine the minimum number of freshwater test species needed to evaluate hazards of toxic industrial chemicals; system-level effects research to perform studies on effects of toxic chemicals on ecosystem processes and functions; indirect human exposure research to measure and predict exposures that occur to humans through the consumption of plants and animals that have become contaminated; and hazard validation research to predict effects of chemicals in freshwater, marine/estuarine and terrestrial environments.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals Under TSCA. Studies continue on this topic to identify major transport and transformation processes and to develop mathematical models and data bases needed to estimate environmental exposure. For example: a first generation exposure analysis model for metals, an expanded version of an exposure analysis modeling system (EXAMS) and a multi-media environmental screening model for organics will advance the state-of-the-art for assessing environmental concentrations for a range of pollutant types. Similar studies will provide an exposure assessment model for organic chemicals in estuarine environments.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. Assistance will be provided to OTS in the: critical review of test rule documents and screening of selected new chemicals under Section 5 premanufacture notification consideration; support for validation of toxicity tests; support for exposure and risk assessments; and assistance in preparation and update of TSCA testing guidelines.

Develop Structure-Activity Fate and Effects Relationships in Support of Premanufacturing and New Use Reviews. Resources allocated to research on SAR were increased. Areas expanded in 1983 include development of SAR models for predictive atmospheric reactivity; freshwater fate and exposure, including microbial degradation; effects in terrestrial plants; and toxicity and bioaccumulation in marine biota. SAR work on predicting toxicity and bioaccumulation in freshwater ecosystems will continue at the 1982 level.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$375,000 results from the following action:

-Congressional Action. (+\$375,000) Congress added +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports biodegradation of organic chemicals to determine the effect on and hazard to the environment (+\$200,000) and exposure validations using microcosms to verify the applicability of laboratory methodology to the real environment (+\$175,000).

1982 Accomplishments

In 1982, the Agency obligated a total of \$12,638,400 for this program, of which \$5,956,800 was under the Salaries and Expenses appropriation and \$6,681,600 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Test Methods That Identify and Assess Health and Environmental Hazards of Chemicals Under TSCA. The 1982 research activity under this objective consisted of five major themes: aquatic toxicology, terrestrial toxicology, comparative toxicology, system-level effects and validated hazard assessment using microcosms and field sites. Highlights of our accomplishments are:

The aquatic toxicology research activity identified, developed and validated several test methods which define the hazards of selected toxic chemicals to freshwater, marine and estuarine species. The acute toxicity data base for PMN chemicals was developed and published.

System-level research studies were conducted on the effects of toxic chemicals on ecosystem processes, and on species of concern to man. Information on the impact of selected toxic chemicals on freshwater organisms in a controlled, artificial stream channel was published.

Develop and Validate Methods to Predict and Monitor Human and Environmental Exposure to Chemicals Under TSCA. A number of environmental processes were elucidated to describe the transport, transformation and ultimate disposition of pollutants in various media.

Perform Technical Evaluations and Scientific Assessments and Control Quality of Agency Risk Assessments. Major technical assistance was provided to OIS by expert reviews of testing guidelines, Section 4 test rule determinations and other documents.

Develop Structure-Activity Fate and Effects Relationships in Support of Pre-manufacturing and New Use Reviews. Highlights of accomplishments during 1982 included: development of toxicity estimates based on molecular connectivity and development of the relationship of bioelectric activity in fish to chemical structure of toxicants.

STRATOSPHERIC MODIFICATION

1984 Program Request

The Agency requests a total of \$875,100 and 1.8 permanent workyears for this program, of which \$132,700 is for Salaries and Expenses and \$742,400 is for Research and Development. This request is approximately the same as the resources allocated to this work in 1983.

Assess Stratospheric Modification. The 1984 Stratospheric Modification program includes the following: continuation of research on the adaptability of plants to enhanced ultraviolet-B radiation and the effects on various key life forms; coordination of Federal research in this area; continuation of support to the National Academy of Sciences for updating a comprehensive assessment of the state of knowledge; and preparation of the fourth biennial research report to the Congress.

1983 Program

In 1983, the Agency is allocating a total of \$873,100 and 1.8 permanent work-years to this program, of which \$130,700 is under the Salaries and Expenses appropriation and \$742,400 is for extramural purposes under the Research and Development appropriation.

Assess Stratospheric Modification. The 1983 Stratospheric Modification research program is currently focused to: work closely with the National Academy of Sciences to assess the state-of-the-art knowledge and research needs and to provide an updated report in 1984; prepare the third biennial research report to the Congress, which will be delivered in February 1983; continue to conduct research begun in 1981 on the adaptability of plants to enhanced ultraviolet-B radiation under field conditions; study the effects of ultraviolet-B radiation on key marine life; and coordinate Federal research.

1983 Explanation of Change from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$907,900 for this program, of which \$142,300 was under the Salaries and Expenses appropriation and \$765,600 was for extramural purposes under the Research and Development appropriation.

Assess Stratospheric Modification. The Stratospheric Modification program had the following major accomplishments in 1982. The program published a National Academy of Science report entitled "Causes and Effects of Stratospheric Ozone Reduction: An Update." This report is a summary of state-of-the-art information on stratospheric modification and its attendant effects. The program computed solar ultraviolet radiation fluxes to earth's surface as functions of latitude, season, radiation wavelength, natural total ozone column and percentage changes in ozone concentrations; a handbook of tables containing computations for use in health, ecological effects and assessment studies is scheduled to be completed in 1983.

NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH

1984 Program Request

The Agency is not requesting resources for pass-through funding to the National Center for Toxicological Research for 1984. The Agency is concentrating its research efforts to directly support the implementation of TSCA. We will, however, directly fund specific projects at the Center when it is the most appropriate forum to meet our research needs.

1983 Program

In 1983, the Agency is allocating a total of \$910,000 to this program, all of which is under the Research and Development appropriation. This funds general long-term projects of mutual interest to both agencies.

1983 Explanation of Changes from Budget Estimate

There is no change in this program.

1982 Accomplishments

In 1981, the Agency obligated a total of \$1,340,200 for this program, all of which was for extramural purposes under the Research and Development appropriation. During 1982, the Agency provided core funding to the Center for general long-term studies of mutual interest to both agencies.

Abatement and Control

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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TOXIC SUBSTANCES

Toxic Substances Strategies

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					

Toxics Integration					
Salaries & Expenses	\$1,300.9	\$1,161.6	\$1,161.6	\$972.7	-\$188.9
Abatement Control & Compliance	\$1,905.0	\$2,353.4	\$2,353.4	\$1,938.1	-\$415.3
TOTAL	\$3,205.9	\$3,515.0	\$3,515.0	\$2,910.8	-\$604.2
Chemical Testing					
Salaries & Expenses	\$4,181.8		\$3,888.3	\$4,202.8	\$314.5
Abatement Control & Compliance	\$6,511.1		\$8,094.5	\$8,361.7	\$267.2
TOTAL	\$10,692.9		\$11,982.8	\$12,564.5	\$581.7
Existing Chemical Review					
Salaries & Expenses	\$5,312.6		\$4,607.3	\$4,609.7	\$2.4
Abatement Control & Compliance	\$7,365.0		\$6,078.8	\$6,078.8	
TOTAL	\$12,677.6		\$10,686.1	\$10,688.5	\$2.4
New Chemical Review					
Salaries & Expenses	\$6,841.5		\$7,472.0	\$7,571.6	\$99.6
Abatement Control & Compliance	\$10,779.6		\$5,869.3	\$5,384.7	-\$484.6
TOTAL	\$17,621.1		\$13,341.3	\$12,956.3	-\$385.0
Testing & Evaluation					
Salaries & Expenses		\$6,652.1			
Abatement Control & Compliance		\$12,863.7			
TOTAL		\$19,515.8			
Chemical Control					
Salaries & Expenses		\$4,618.0			
Abatement Control & Compliance		\$3,718.9			
TOTAL		\$8,336.9			
TSCA Information					
Salaries & Expenses		\$4,494.6			
Abatement Control & Compliance		\$3,460.0			
TOTAL		\$7,954.6			
TOTAL:					
Salaries & Expenses	\$17,636.8	\$16,926.3	\$17,129.2	\$17,356.8	\$227.6
Abatement Control & Compliance	\$26,560.7	\$22,396.0	\$22,396.0	\$21,763.3	-\$632.7
Toxic Substances Strategies	TOTAL	\$44,197.5	\$39,525.2	\$39,120.1	-\$405.1

TOXIC SUBSTANCES
Toxic Substances Strategies

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS) -----					
PERMANENT WORKYEARS -----					
Toxics Integration	24.5	21.0	20.5	16.0	-4.5
Chemical Testing	101.0		93.9	93.9	
Existing Chemical Review	113.9		99.0	93.0	-6.0
New Chemical Review	156.0		183.6	171.1	-12.5
Testing & Evaluation		174.9			
Chemical Control		136.7			
TSCA Information		57.7			
TOTAL PERMANENT WORKYEARS	395.4	390.3	397.0	374.0	-23.0
TOTAL WORKYEARS -----					
Toxics Integration	36.5	28.5	30.0	22.8	-7.2
Chemical Testing	110.9		103.9	103.7	-.2
Existing Chemical Review	130.8		109.0	103.0	-6.0
New Chemical Review	178.7		203.7	189.5	-14.2
Testing & Evaluation		193.5			
Chemical Control		152.4			
TSCA Information		63.0			
TOTAL WORKYEARS	456.9	437.4	446.6	419.0	-27.6

TOXIC SUBSTANCES

Toxic Substances Strategies

Budget Request

The Agency requests a total of \$39,120,100 and 374.0 permanent workyears for 1984, a decrease of \$405,100 and 23.0 workyears from 1983. Of these resources, \$17,356,800 is for Salaries and Expenses and \$21,763,300 is slated for Abatement, Control and Compliance, an increase of \$227,600 and a decrease of \$632,700 respectively. The decrease is possible because EPA has adopted a "problem-oriented" focus for the Existing Chemical Review program rather than one that attempts to produce a comprehensive evaluation of all aspects of a given chemical, industry or other subject. In the New Chemical Review program the decrease is possible because EPA completed a major effort culminating in several generic rules that partially exempt several broad categories of low-risk chemicals from the premanufacturing notice requirements of the Toxic Substances Control Act (TSCA) Section 5. In 1984, EPA expects to receive premanufacture notice exemption petitions which are more narrowly defined. Also, in 1984, the Toxics Integration State Management Assistance program will be ended. The increase in Salaries and Expenses is due to higher personnel costs.

Program Description

This subactivity comprises the program elements of Toxics Integration, Chemical Testing, Existing Chemical Review, New Chemical Review. The Agency's responsibilities under TSCA involve review, testing and control of new chemicals, and testing, information collection, information dissemination, evaluation and regulation of existing chemicals. Further the Agency is responsible for the integration of toxic chemical related activities.

Toxics Integration -- The objective of the Toxics Integration program is to promote a cohesive, coordinated Agency, Interagency and International approach to solving chemical problems. In 1984, this goal will continue to be carried out by: development and use of a comprehensive chemical information network to access multi-Agency and international data bases; the use of expert work groups to develop multimedia Agency strategies for chemicals and chemical classes; development of Agency-wide guidance packages on pollutants of concern; coordination of special chemical response activities requiring input and action by several programs or Agencies; provision of technical support to the international programs dealing with chemical activities; and, initiation of various projects to gather and analyze data on Agency chemical activities, to prevent overlap and duplication of such activities among Agency programs. By pursuing a vigorous integration effort, the Agency will minimize duplication and make sound, consistent decisions on chemicals.

Chemical Testing -- Chemical testing is the focal point for the development and accumulation of test data on potentially toxic chemicals referred to EPA. Based on TSCA data gathering provisions, which are unique in both scope and specificity, the information collected will narrow the gap in scientific knowledge about the toxicity of chemicals for other regulatory agencies as well as for EPA. The goal of the Chemical Testing program is to make accurate decisions about the need for additional testing of high priority chemicals. These decisions result in the generation of data that will allow EPA to make reasoned, scientific judgments leading to both regulatory and nonregulatory actions in its Existing Chemical Review program.

The testing program involves conducting negotiations with industry for testing or developing test rules, designing appropriate exemptions, developing test guidelines, and resolving reimbursement issues. The thrust of Section 4 testing will be toward negotiation. The negotiation procedure focuses the scope of EPA concerns

at an early stage of review, relying heavily on industry and public interest input for an acceptable agreement. We expect that negotiated agreements will result in data being received one to three years faster than through the traditional regulatory process. In cases where negotiation has a low chance for success, such as when a large number of manufacturers are involved, we will continue to use formal rulemaking procedures. In lieu of issuing rigid generic test standards, EPA revised its policy during 1982 to encourage flexibility between industry and the Agency for the development of cost effective and mutually agreed upon testing methodologies. These nonregulatory protocols allow industry the necessary flexibility to develop cost effective data collection schemes within the context of Good Laboratory Practice Standards.

Existing Chemical Review -- The goal of the Existing Chemical Review program is to reduce unreasonable risks to health or the environment caused by chemicals already in commerce. EPA plans to focus narrowly both problem evaluation and solution design with a coordinated inter- and intra-agency approach to achieve a comprehensive risk reduction. By focusing the evaluation, EPA will pinpoint the data and analyses needed to decide the most practicable and economic means of addressing the problem. EPA will take maximum advantage of opportunities to influence industry or user groups to reach negotiated agreements for risk reduction so that, risks can be reduced in a more timely manner than through more time-consuming rulemaking procedures. EPA will quickly document the cases which require no action because the risks are already being adequately managed. EPA will reserve regulatory controls for those instances where conflicting market forces and other factors make negotiated control infeasible.

The Existing Chemical Review program also includes information collection and risk management activities needed for TSCA regulation development and for the implementation of the program. Computer systems are maintained to ensure the confidential handling of business information, the collection and statistical analysis of health and environmental monitoring data, and the development and implementation of recordkeeping under TSCA Sections 8 and 12. The Chemical Inventory, which defines the universe of existing chemicals, includes over 80,000 submissions on over 55,000 chemicals and requires maintenance for both the new and existing chemical programs.

New Chemical Review -- EPA's new chemical premanufacture review program, conducted under Section 5 of TSCA, reflects the general preventive philosophy of TSCA. Its goal is to protect human health and the environment from unreasonable chemical risks before damage occurs. Without imposing undue regulatory burden, EPA will conduct a program that subjects new chemicals of possible concern to a meaningful premanufacture review to ensure that risks from those chemicals in their intended uses are adequately characterized and, where necessary, controlled. The program minimizes the reporting burden on manufacturers of new chemicals by limiting information requirements in premanufacture notices (PMN) to that which is necessary for an adequate review and by exempting manufactures of low concern chemicals from full PMN requirements. This is accomplished while protecting against risks from new chemicals after they have entered commerce by monitoring the commercial development of selected chemicals identified as possible hazards. The new chemical follow-up program is designed to reduce possible risks from recently commercialized new chemicals and to encourage data development on those chemicals later during commercialization.

TOXICS INTEGRATION

1984 Program Request

The Agency requests a total of \$2,910,800 and 16.0 permanent workyears for 1984, a decrease of \$604,200 and 4.5 workyears from 1983. Included in this total is \$972,700 for Salaries and Expenses and \$1,938,100 for Abatement, Control and Compliance, a decrease of \$188,900 and \$415,300 respectively. The decrease reflects cessation of the State Toxics Integration Management Assistance program. Prior Federal efforts established a network for fostering communication between States concerning the establishment and integration of individual State toxic chemical programs. Through this established network, States will continue to coordinate their efforts towards establishing effective and efficient chemical control programs.

Major 1984 outputs from these resources will be Agency-wide strategies on chemicals or chemical groups, that will present Agency information and regulation development tactics across EPA's seven major statutes for chemical control. Through choices among alternative information/regulatory scenarios, the Agency will be able to describe for industry and the public EPA's intentions regarding these chemicals from a multi-media exposure perspective. Three additional chemical strategies will be initiated and strategies for four chemicals started in 1983, will be completed. Two special response work groups will be supported to continue giving unified, crossmedia Agency attention to problems, such as risk assessment of dioxins in landfills, resource recovery plants, and those resulting from PCB fires. Such work groups forestall litigation and other adverse action by ensuring integrated Agency responses by all Regional offices. The definitive Agency-wide reference work for EPA on chemical effects, exposure, risks, analytic methods, and regulations--the 22 Intermedia Priority Pollutant (IPP) Guidance Documents--will be partially updated and three new ones prepared. Revisions sent to Headquarters as well as Regions ensure integrated Agency statements on such subjects as the risk of contaminants in drinking water and hazards from air explosions.

In 1984, updating the EPA Chemical Activity Status Report (EPACASR) data on all of EPA's chemical activities will continue to provide a definitive Agency source for avoiding duplicative and overlapping chemical activities across program areas, as well as the only resource for comprehensive information on chemical investigations. Coupled with the Chemical and Industry File, the EPACASR will permit the Toxics Integration program to conduct analyses to improve the cost-effectiveness of Agency activities--such as analyses to highlight, for potential control, high priority targets in terms of chemical risk. Finally, in 1984 implementation of the Extramural Integration Project will begin. This effort will assure that all new contracts and grants do not repeat or overlap previously purchased EPA studies.

The Toxics Integration program will continue to provide technical support for U.S. involvement with the Organization for Economic Cooperation and Development (OECD) Chemicals Group and the OECD Management Committee. In this role the Agency will participate in the development of consistent data interpretation guides for conducting hazard assessments, improved procedures for acquiring unpublished information on existing chemicals and identifying chemicals for which current data is inadequate. The Agency will continue to fulfill TSCA Section 12(b) export notification responsibilities, support technical chemical information sharing activities and review regulatory proposals for consistency with the Trade Agreement Act of 1979.

The 1984 request provides for maintenance of the 1983 level of service by the Chemical Substances Information Network (CSIN) to 100 user organizations from the public and private sector. CSIN provides a totally coordinated network of online chemical information systems which satisfies user needs to retrieve and relate chemical information about chemical substances from many independent and autonomous remote resources. A user charge system will be operational which will allow for partial recovery of operating and maintenance costs.

State assistance activities will be limited to management and evaluation of ongoing grants.

1983 Program

In 1983 the Agency is allocating a total of \$3,515,000 and 20.5 permanent workyears for this program, of which \$1,161,600 is for Salaries and Expenses and \$2,353,400 is for extramural purposes under the Abatement, Control and Compliance appropriation.

Integration activities will focus on completing the technical coordination of Agency chemical control activities. This will be done by four chemical strategy development work groups initiated during 1983 to coordinate potential control actions, resolve multi-media issues, and allow the Agency to streamline handling of toxics control actions. One similar work group, begun in 1981, will produce a prototype Agency strategy for six solvents which will give the Agency alternative scenarios by which to allocate regulatory attention to the most cost-effective risk reduction program. Two special response activities, a study of lead contamination in Dallas, and Dioxins risks begun during 1982 will be concluded. Two additional responses will be coordinated. The 19 IPP packages are being maintained and updated, with three new packages produced during 1983.

The Toxics Integration program will continue to provide technical support for U.S. involvement in the OECD Chemicals Group and the Management Committee, including participating in development of state-of-the-art testing guidelines, enforcement of good laboratory practices, guidelines for hazard assessments, and principles for exchange of information regarding risk of chemicals among the 24 countries. The automated processing of TSCA Section 12(b) export notifications will be implemented in June 1983.

The CSIN focus during 1983 is on testing the user charge system and on enhancing the system in response to the prototype evaluation. The evaluation is showing a savings in user time and resources, and enabling more comprehensive access to chemical substances information. An additional 50 users, many of them private sector users, are projected to begin using the system, resulting in 100 total user organizations by the end of 1983.

The State Management Assistance program will focus on information exchange and toxics coordination assistance. After 1983 these activities should be continued by other coordinating mechanisms. State Cooperative Agreements awarded under Section 28 of TSCA are being completed and evaluated this year; results will be transferred as information to other States.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,205,900 for Toxics Integration, of which \$1,300,900 was under the Salaries and Expenses appropriation and \$1,905,000 was for extramural purposes under the Abatement, Control and Compliance appropriation. A procedure to identify Agency priority pollutants was developed, and 13 chemicals were selected for development of Agency strategies. Two special response workgroups were coordinated. Nineteen Intermedia Priority Pollutant (IPP) packages were developed. A new data file on chemical use by industry was created and merged with chemical regulatory status files to assist in evaluating the burden imposed on industry by existing or anticipated chemical regulations. Two technical integration studies on Heavy Metals and Water Quality Criteria were produced upon request from other programs within the Agency.

The Toxics Integration program continued its involvement in international activities, including preparing for the High Level Meeting of the OECD Chemicals Group.

The Chemical Substances Information Network (CSIN) system became operational during 1982; 50 user organizations were brought into the system. A user-charge system was designed to be implemented in 1983 and extension of the prototype CSIN was initiated.

The State Management Assistance program continued to promote integration of State toxics control programs through information exchange and grants management. Twelve State profile case studies were completed to highlight the model elements of integrated State toxics management programs and previously awarded grants were managed in 1982.

CHEMICAL TESTING

1984 Program Request

The Agency requests \$12,564,500 and 93.9 permanent workyears for this program of which \$4,202,800 is for Salaries and Expenses and \$8,361,700 for Abatement, Control and Compliance. This represents no change for permanent workyears, but an increase of \$314,500 for the Salary and Expense appropriation, to cover increases in personnel compensation costs and an increase of \$267,200 for the Abatement Control and Compliance appropriation. The increase will support test data development activities for chemicals of concern identified by the new and existing chemicals programs. The extramural resources will be used to support test methodology development, rules design and analysis, and economic analysis.

In 1984 the Agency expects to complete five decisions not to test, 14 negotiated testing agreements, and 14 proposed rulemakings. By the end of calendar year 1983, the Agency will complete the requirements of the court-ordered schedule by disposing of the final 13 "backlog" chemicals. Therefore, by 1984, we will have completed regulatory requirements for all backlog chemicals included on lists one through six designated by the Interagency Testing Committee (ITC) and all statutory requirements for those chemicals included on the ITC lists in 1981 and 1982 (7th, 8th, 9th, and 10th Priority Lists). We also expect to complete decisions not to test, negotiate testing agreements, or propose test rules on those chemicals designated for priority testing during 1983 (11th and 12th ITC Priority Lists). During 1984, 10 additional chemical designations for priority testing have been planned from the 13th and 14th Priority Lists. Although the burden placed upon the Chemical Testing program will accelerate during 1984, the Agency has streamlined its review and management of the Section 4 testing program, and expects to execute all responsibilities within the statutory and court ordered deadlines.

EPA expects to review for adequacy 200 test data studies from final test rules or negotiated agreements adopted during fiscal year 1982 and 1983. This will ensure the integrity of data developed pursuant to these testing programs. Resources will also be allocated to identify studies and laboratories in order to target test data development inspections under the enforcement inspection program; to provide scientific review and evaluation of inspection and audit reports; and, to participate in inspections and audits, as appropriate.

1984 also marks the beginning of testing of new chemicals where the probable risk is sufficient to require follow-up, after production is initiated, but not significant enough to warrant a Section 5(e) order, and testing on existing chemicals other than ITC designations. From this testing EPA anticipates that an additional two proposed test rules and two negotiated agreements will be developed.

In 1984, having finished the bulk of test guideline development, resources will be reduced. EPA expects to publish 12 additional health and environmental effects test guidelines and to commence development on an additional 13 testing methodologies. The annual review and update of previously developed guidelines will be conducted to ensure compatibility with state-of-the-art technology and harmonization with guidelines developed by the Organization of Economic Cooperation and Development (OECD). In 1984, 30 guidelines will be reviewed and appropriately updated.

1983 Program

In 1983 the Agency is allocating \$11,982,800 and 93.9 permanent workyears to this program. Of this total, \$3,888,300 is for Salaries and Expenses and \$8,094,500 for Abatement, Control and Compliance. In 1983, test rule and negotiated agreement development is expected to exceed 1982 levels. The Agency anticipates six decisions not to test, three final rules, five proposed rules and ten negotiated agreements. These include decisions on 13 of the remaining 34 ITC backlog chemicals. Also during 1983, test data generated as the result of test rules or negotiated agreements, will require review and evaluation. Personnel resources are being reduced in 1983, principally in the area of test guidelines where the bulk of the initial development work, including the Good Laboratory Practice Standards, has been completed. Efforts to develop and refine guidelines will continue and an annual review of guidelines will be conducted in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$11,982,800 results from the following actions:

-Restructuring. (+\$11,887,800) The Congressionally approved restructuring of the Toxic Substances program elements transfers resources from three former program elements: Testing and Evaluation, Chemical Control, and TSCA Information into three new program elements: New Chemical Review, Existing Chemical Review and Chemical Testing. Each new program element reflects a major program area under TSCA. Under the old structure, outputs were not specifically related to resources within one program element but were related to resources in all three program elements. The new structure establishes three independent program elements that clearly identify resources with program outputs. Overall outputs will not change, however the location of resources will change to permit clearer justification of resources and outputs. The change to the Salaries and Expenses appropriation was +\$3,793,300 and the change to the Abatement, Control and Compliance appropriation was +\$8,094,500.

-Congressional Action. (+\$95,000) This increase includes +\$95,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated \$10,692,900 of which \$4,181,800 was for Salaries and Expenses and \$6,511,100 for Abatement, Control and Compliance. In 1982, the Agency made decisions on eight of the remaining 34 chemicals from the backlog of ITC recommended chemical designations while simultaneously executing its responsibilities under Section 4(e) of the Act to take action within 12 months on all new ITC designated chemicals added to the priority list. These actions included four negotiated testing agreements, seven decisions not to test, one proposed test rule and two advanced notices of proposed rulemaking. The program developed a total of 96 testing methodologies for environmental effects, health effects, mutagenic effects, neurotoxic effects and chemical fate and established a firm foundation of guidelines to support future testing activities.

EXISTING CHEMICAL REVIEW

1984 Program Request

The Agency requests a total of \$10,688,500 and 93.0 permanent workyears for this program of which \$4,609,700 is for the Salaries and Expenses appropriation and \$6,078,800 is for the Abatement, Control and Compliance appropriation. This represents a decrease of 6.0 permanent workyears, an increase of \$2,400 for Salaries and Expenses, and no change for Abatement, Control and Compliance. The decrease in workyears reflects efficiencies gained by employing problem focused rather than comprehensive risk identification and evaluation techniques. The increase in Salaries and Expenses will fund higher personnel costs. The extramural program will support risk assessments, data evaluation, and risk management activities.

In 1984 EPA will receive substantial data from testing, under Section 4 of TSCA, for evaluation under the risk identification component of the Existing Chemical Review program. EPA will determine if either more testing is needed or if the data received are sufficient to assess the risks of the chemical. In addition to the increased responsibility of evaluating test data generated from Section 4 rules or negotiated agreements, EPA must also continue its efforts to evaluate Section 8(e) Substantial Risk Notices, Section 21 Citizen Petitions, and other test data that may trigger a Section 4(f) unreasonable risk determination leading to control action under Sections 5 or 6.

The risk evaluation function will be operating at full capacity by 1984. Decisions not to pursue control will be made for chemicals identified as having only minor problems. All risk assessments and economic analyses will focus on clear problems needing risk management. Information collection will consist of amendments to the Section 8 information collection rules established during prior years and on chemical specific rules or negotiated information collection agreements. The Risk Management Program will be operating at greater efficiency, developing Section 6 rules, Negotiated Control Agreements and/or Risk Management Advisories and Significant New Use Rules when needed. EPA will also provide follow-up on polychlorinated biphenyls (PCB) rulemaking activities consisting of rulemakings for exemptions from the PCB ban and the permitting of PCB disposal facilities.

The PCB rules will generate numerous requests for exemptions. A conservative estimate is that 50 requests for exemptions will be made once the final rule on PCBs is promulgated in 1983 (10 CFC exemption requests will also be processed). To issue permits to PCB disposal facilities in 1984, we will review applications for disposal of PCBs in concentrations over 50 ppm using mobile and standard fixed destruction equipment such as high efficiency boilers, chemical processes, and incinerators. Regional offices will be responsible for review and approval of PCB landfills and unique design stationary PCB incinerators, PCB disposal site monitoring and liaison work (e.g., public hearings) associated with PCB disposal.

1983 Program

In 1983 the Agency is allocating a total of \$10,686,100 and 99.0 permanent workyears to this program. Of this total, \$4,607,300 is for Salaries and Expenses and \$6,078,800 for Abatement, Control and Compliance. We estimate three chemicals will require in-depth risk assessments in 1983 to characterize the scientific and technical dimensions of the problems identified. These three chemicals will undergo an economic options analysis that will support decisions about how to reduce the risk. EPA will also continue to detail the risk and potential economic options of complex chemical problems. EPA will finish publishing the last of the "foundation" of TSCA information collection rules, Section 8(c) Recording of Adverse Reactions rule, and amend other Section 8 rules as needed to support risk evaluation. In the area of risk management, we will develop a uniform PCB disposal permitting process and begin issuing permits for standard destruction systems and mobile incinerators. Also, three risk control agreements and/or advisories on how to reduce risk will be published. This will meet the new Existing Chemical Review program strategy of reducing unreasonable risks without resorting to formal control procedures. Finally, EPA plans to publish at least four exemptions to Section 6 rules on either chlorofluorocarbons (CFCs) or PCBs in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$10,686,100 results from the following actions:

-Restructuring. (+\$10,478,200) The Congressionally approved restructuring of the Toxic Substances program elements transfers resources from three former program elements: Testing and Evaluation, Chemical Control, and TSCA Information into three new program elements: New Chemical Review, Existing Chemical Review and Chemical Testing. Each new program element reflects a major program area under TSCA. Under the old structure, outputs were not specifically related to resources within one program element but were related to resources in all three program

elements. The new structure establishes three independent program elements that clearly identify resources with program outputs. Overall outputs will not change, however the location of resources will change to permit clearer justification of resources and outputs. The change to the Salaries and Expenses appropriation was +\$4,399,400 and the change to the Abatement, Control and Compliance appropriation was +\$6,078,800.

-Congressional Action. (+\$207,900) This increase includes +\$207,900 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

1982 Accomplishments

In 1982, the Agency obligated a total of \$12,677,600, of which \$5,312,600 was for Salaries and Expenses and \$7,365,000 for Abatement, Control and Compliance. EPA received and reviewed 45 Section 8(e) Notices of Substantial Risk and evaluated four Citizen Petitions under Section 21. Of these Citizen Petitions all four were denied. Four in-depth risk assessments on suspect chemicals were performed in 1982 with potential risk management/ control activities to follow in 1983. Formal Section 6 control activities in 1982 resulted in three proposed rules (all PCB), two final rules, (one Asbestos and one PCB) three exemptions to the CFC Aerosol Ban Rule. EPA completed the supporting documentation for a new approach to influence risk reduction without resulting to formal control and began development of documents that will both outline chemical hazards and provide advice on ways to decrease potential risks. These documents are designed to encourage preventive action well before a decision to conduct formal rulemaking is made and will be used in conjunction with the negotiated control agreement process.

NEW CHEMICAL REVIEW

1984 Program Request

The Agency requests a total of \$12,956,300 and 171.1 permanent workyears of which \$7,571,600 is under the Salaries and Expenses appropriation and \$5,384,700 is under the Abatement Control and Compliance appropriation. This represents a decrease of 12.5 permanent workyears. An increase of \$99,600 for Salaries and Expenses representing an increase in personnel compensation costs, and a decrease of \$484,600 for Abatement Control and Compliance. The reductions in workyears and Abatement, Control and Compliance reflect a decrease in exemption rule development and new chemical follow-up activities. This decrease is possible since the program will focus on narrower categories of chemicals, for potential exemption rules and to new chemical follow-up activities as a result of greater efficiency in developing and promulgating Significant New Use (SNUR) and information collection rules. The extramural program will support data analysis, exposure model development and evaluation, and literature searching.

By 1984, the nature of the New Chemical Review program will have changed dramatically, because of an increase in the number of notices submitted on new chemicals and because of the Section 5(h)(4) exemption rules scheduled for promulgation in 1983. Current estimates, based on trend analysis, indicate that EPA will review 660 Premanufacture Notices (PMNs) of the 1,300 new chemical notices received in 1984, compared to 839 PMNs received in 1982. The average chemical received for PMN review in 1984 is likely to be of higher risk and will, therefore require more detailed review than the typical PMN chemical received in 1982 because exemptions will eliminate large chemical classes of low concern.

With the exemption rule for photographic chemicals in place and assuming that the Section 5(h)(4) exemption rules for site-limited intermediate, low volume chemicals, and polymers are in place by the end of 1983, approximately half of the 1,300 new chemical notices submitted to EPA will be abbreviated exemption notices. In addition to these exemption notices, the Agency also anticipates that it will receive 60 Test Marketing Exemption applications which are required to be reviewed

within 45 days of receipt. EPA will respond to at least three separate applications for additional Section 5(h)(4) exemptions from the PMN requirement, and will conduct audits in 1984 in support of existing Section 5(h)(4) exemption rules promulgated in 1982 and 1983. This will ensure that the exemption provisions are working to provide the level of protection as intended.

The PMN review of new chemicals addresses an extremely narrow segment of the risks that a new chemical may eventually pose, because it can only focus on the intended methods of manufacture, production volume, and uses described in the PMN notice. After a new chemical has cleared PMN review, however, unrestricted commercialization, including significant increases in production volume and development of new uses, is possible without further review. In some cases, these new conditions may present significant risks. Therefore, at least five new chemicals will be the subject of formal follow-up action in 1984 which will include either development of SNURs or Section 8(a) information collection rules.

1983 Program

In 1983 the Agency is allocating a total of \$13,341,300 and 183.6 permanent work years to this program. Of this total, \$7,472,000 is for Salaries and Expenses and \$5,869,300 for Abatement, Control and Compliance. We estimate that EPA will receive 1,000 PMN submissions in 1983. Many of these will be subject to Section 5(e) development of information action that will result in voluntary action by industry. EPA has streamlined the review of applications for Test Market Exemptions from PMN requirements, submitted under Section 5(h)(1) of TSCA, so that these applications are now reviewed within the 45-day period required by the TSCA. These and other procedural reforms will be incorporated in final PMN rules, which are scheduled for promulgation in the spring of 1983. The New Chemical Review program will review about 200 more new chemicals than were reviewed in 1982 with the same level of resources. Approximately one half of these new chemicals will qualify under one of the four exemption rules once they are promulgated during this year, while the remaining chemicals will be subject to the full premanufacture review requirement. Approximately 30 chemicals, referred from the PMN program, will be reviewed in 1983 as follow-up candidates for SNUR or Section 8(a) rules.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$13,341,300 results from the following actions:

-Restructuring. (+\$13,441,300) The Congressionally approved restructuring of the Toxic Substances program elements transfers resources from three former program elements: Testing and Evaluation, Chemical Control, and TSCA Information into three new program elements: New Chemical Review, Existing Chemical Review and Chemical Testing. Each new program element reflects a major program area under TSCA. Under the old structure, outputs were not specifically related to resources within one program element but were related to resources in all three program elements. The new structure establishes three independent program elements that clearly identify resources with program outputs. Overall outputs will not change, however the location of resources will change to permit clearer justification of resources and outputs. The change to the Salaries and Expenses appropriation was +\$7,572,000 and the change to the Abatement, Control and Compliance appropriation was +\$5,869,300.

-Reprogrammings. (-\$100,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$100,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$17,621,100 of which \$6,841,500 was for Salaries and Expenses, and \$10,779,600 for Abatement, Control and Compliance. EPA received 839 valid PMN submissions and issued two Section 5(e) orders against new chemicals of concern. These orders required the development of toxicity data

before manufacture could begin. EPA also developed a Section 5(e) Consent Order for two derivatives of industrial cleaning compounds and developed a Section 5(f) Order to prohibit commercialization of a chemical which the submitter subsequently withdrew. In addition, EPA negotiated testing agreements and/or control measures for 19 chemicals. Six Premanufacture Notices were withdrawn in response to EPA concerns.

The Agency reduced the burden of PMN requirements on the chemical industry by developing exemption rules under Section 5(h)(4) for broad categories of new chemicals manifesting low concern. A final rule promulgated on June 4, 1982 will exempt chemicals used in or for instant photographic film articles. In response to a petition from the Chemical Manufacturers Association and other groups, proposed rules were developed exempting low production volume, site-limited intermediate chemicals, and certain polymers from premanufacture review. These exemption rules should become final in 1983. About 50 percent of the new chemicals seen in the New Chemical Review program to date would have been eligible for at least one of these exemptions, thereby reducing direct reporting costs to industry for eligible chemicals by 50 to 90 percent.

Finally, as a major initiative the Agency designed and pursued a selective follow-up program to monitor the commercial development of potentially hazardous new chemicals after manufacture has begun. As many as 45 chemicals referred from the PNM program since its inception were reviewed in 1982 as candidates for Significant New Use (SNUR) or Section 8(a) rules.



Enforcement

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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TOXIC SUBSTANCES

Toxic Substances Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	

(DOLLARS IN THOUSANDS)						
PROGRAM						

Toxic Substances Enforcement						
Salaries & Expenses	\$2,942.5	\$2,425.9	\$2,723.2	\$3,579.2	\$856.0	
Abatement Control & Compliance	\$927.1	\$207.0	\$207.0	\$207.0		
TOTAL	\$3,869.6	\$2,632.9	\$2,930.2	\$3,786.2	\$856.0	
Toxic Substances Enforcement Grants						
Abatement Control & Compliance	\$500.0					
TOTAL	\$500.0					
TOTAL:						
Salaries & Expenses	\$2,942.5	\$2,425.9	\$2,723.2	\$3,579.2	\$856.0	
Abatement Control & Compliance	\$1,427.1	\$207.0	\$207.0	\$207.0		
Toxic Substances Enforcement	TOTAL	\$4,369.6	\$2,632.9	\$2,930.2	\$3,786.2	\$856.0
PERMANENT WORKYEARS						

Toxic Substances Enforcement	72.7	63.9	78.9	87.1	8.2	
TOTAL PERMANENT WORKYEARS	72.7	63.9	78.9	87.1	8.2	
TOTAL WORKYEARS						

Toxic Substances Enforcement	80.6	64.6	79.6	89.0	9.4	
TOTAL WORKYEARS	80.6	64.6	79.6	89.0	9.4	

TOXIC SUBSTANCES

Toxic Substances Enforcement

Budget Request

The Agency requests a total of \$3,786,200 and 87.1 permanent workyears for 1984, an increase of \$856,000 and 8.2 workyears from 1983. Included in this total is \$3,579,200 for Salaries and Expenses, an increase of \$856,000; and \$207,000 for Abatement, Control and Compliance. The increase in resources for this program will support activities, such as sample analysis to support Toxic Substances Control Act (TSCA) inspections and emergency responses involving TSCA regulated chemicals, that were previously conducted by the National Enforcement Investigation Center (NEIC). Resources are also requested for increased import surveillance and liaison with the U.S. Customs Service.

Program Description

This program supports all compliance monitoring and compliance assistance activities under the Toxic Substances Control Act (TSCA), including support to the regulation development effort and Regional polychlorinated biphenyls (PCBs) disposal permitting, compliance monitoring and liaison work.

Toxic Substances Enforcement -- The Toxic Substances Enforcement program ensures compliance with TSCA rules and regulations. Headquarters and Regional offices play distinct but complementary roles in the program's operation. Headquarters provides enforcement support to the TSCA regulatory development process; designs, implements, and oversees compliance monitoring activities by developing guidances, strategies and procedures; and, provides technical compliance assistance and technical support to case development and prosecution activities.

Regional offices respond to special risk situations; inspect facilities that manufacture, process, distribute, or use new or specifically regulated chemicals; and, monitor laboratories performing tests pursuant to TSCA testing rules or voluntary testing agreements. Regional offices also assist the regulated community in complying with all applicable TSCA regulations and seek voluntary remedial action in lieu of enforcement prosecution where appropriate. In cases where voluntary compliance is not achieved, Regional personnel prepare and issue notices of violation and administrative orders. The enforcement program assists and supports the Office of Legal and Enforcement Counsel (OLEC) in the development of civil and criminal referrals. The Regions are also responsible for PCB disposal site monitoring, and permitting of unique stationary incinerators and PCB land fills.

TOXIC SUBSTANCES ENFORCEMENT

1984 Program Request

The Agency requests a total of \$3,786,200 and 87.1 permanent workyears for this program, of which \$3,579,200 is for the Salaries and Expenses appropriation and \$207,000 for the Abatement, Control and Compliance appropriation. This is an increase of \$856,000. The increase reflects the addition of resources to support activities previously conducted by the NEIC. These include sample analysis for TSCA rules, PCB, and dioxin inspections, support for emergency responses involving TSCA regulated chemicals, and for significant inspections of national importance. The increase will also support increased import surveillance of TSCA regulated chemicals to ensure proper compliance with regulations for imports and domestic chemicals. Contract support includes ADP support for the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and TSCA Enforcement System (FATES), the computer system used to store and maintain compliance data.

Headquarters staff will participate in all TSCA rulemaking activities and will develop compliance strategies for each new regulation. Support for Regional compliance monitoring, voluntary compliance assistance, and case development activities under Sections 4, 5, 6, 8, 12 and 13 will be provided. Headquarters will continue to manage the overall program through appropriate guidance and Regional review including on-sight program evaluation.

In 1984, there will be an overall increase in compliance monitoring activities. Regional offices will conduct inspections of facilities subject to chemical control regulations, including requirements for PCB marking and disposal, the PCB rules, the chlorofluorocarbons (CFC) rule, asbestos, and other rules. The Regional offices will conduct good laboratory practice (GLP) and test rule inspections, inspections to determine compliance with new chemical regulations, inspections under TSCA reporting requirements, import inspections, and export inspections. Regional offices will also be responsible for review and approval of PCB landfills and unique design stationary PCB incinerators, PCB disposal site monitoring and liaison work (e.g., public hearings) associated with PCB disposal. Under the Existing Chemical Program, the Office of Toxic Substances will issue permits for all chemical and biological destruction systems, all mobile incinerators and all stationary PCB incinerators that are not of a unique design.

The Toxic Substances Enforcement program will also prepare and issue notices of violation and administrative orders with the concurrence of OLEC and will provide technical assistance and support to OLEC in the prosecution of civil and criminal cases as warranted.

1983 Program

In 1983, the Agency is allocating a total of \$2,930,200 and 78.9 permanent workyears to this program of which \$2,723,200 is for Salaries and Expenses and \$207,000 is for extramural purposes under the Abatement, Control and Compliance appropriation.

Headquarters will manage and execute national programs to monitor compliance with test rules and voluntary testing agreements under Section 4, new chemical regulations under Section 5, Section 6 chemical control rules, Section 8 reporting regulations, and Section 12 export notice requirements. Headquarters will also participate in regulation development directed by the Office of Toxic Substances.

The Regional program will provide direct assistance to firms seeking to voluntarily comply with TSCA requirements. Where violations are detected, firms will be encouraged to take specific remedial actions to achieve compliance. If compliance is not achieved, Regional offices will prepare and issue notices of violation and administrative orders, and will develop and prosecute cases, as warranted. Situations involving substantial threats to human health and the environment will be given priority as they are identified.

The Regional staff will conduct inspections to determine compliance with Section 4 testing; Section 5 new chemical regulations; Section 6 chemical control rules including PCB marking and disposal, the PCB rules, the CFC rule, the dioxin regulation, and the asbestos-in-schools rule; Section 8 reporting rules; and, Section 12 export notice requirements.

Regional offices will also be responsible for PCB site disposal monitoring, liaison work associated with PCB disposal, and the review and approval of PCB landfills and unique design PCB stationary incinerators.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$297,300 results from the following actions:

-Congressional Action. (+\$284,200) This increase includes +\$284,200 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

Reprogrammings. (+\$13,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$13,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,869,600 of which \$2,942,500 was for Salaries and Expenses and \$927,100 for Abatement, Control and Compliance. Extramural funds provided compliance inspection support, chemical analysis of samples, and revision and development of compliance strategies. Compliance monitoring strategies were completed for Section 5(h)(4) exemptions, the Section 6 asbestos-in-schools program, and Section 8(a) reporting. Assistance was provided to the Office of Toxic Substances in the development of new regulations, including good laboratory practice rules for health effects testing and draft ecological effects test guidelines, a chemical control rule for asbestos-in-schools, reporting rules for asbestos and 250 other chemicals, and the PMN rules. Enforcement staff developed inspection target guidance for compliance monitoring associated with Section 5 and Section 6 (dioxin and CFC). Headquarters staff also developed and assisted the Regional offices in developing and prosecuting enforcement cases under Sections 6 and 8(e).

Regional office staff responded to special risk incidents, inspected PCB and CFC establishments, conducted compliance monitoring activities to support Section 5 premanufacture notification review and Section 8(e) substantial risk notification, and developed and prosecuted enforcement cases upon detection of serious violations. Administrative orders were issued in 101 cases; 276 notices of warning were issued.

Both Headquarters and Regional staff were involved in the coordination and handling of several special risk situations such as the PCB contamination of natural gas pipelines.

TOXIC SUBSTANCES ENFORCEMENT GRANTS

1984 Program Request

The Agency requests no resources for this program in 1984. The results and evaluation of the operation of the project in the various States will continue to be made available to other States interested in chemical control.

1983 Program

The Agency is allocating no resources for this program in 1983. The pilot program will be evaluated and the information will be made available to the States.

1982 Accomplishments

In 1982, the Agency obligated a total of \$500,000 for this program, all of which was for extramural purposes under the Abatement, Control and Compliance appropriation. The pilot cooperative grant program with California, Connecticut, Maryland, Michigan, and Ohio was discontinued.



Energy

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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ENERGY

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
APPROPRIATION					

Salaries & Expenses	\$10,163.1	\$7,019.4	\$4,489.7	\$3,694.1	-\$795.6
Research & Development	\$55,499.8	\$27,510.8	\$20,511.2	\$19,836.0	-\$675.2
TOTAL, Energy	\$65,662.9	\$34,530.2	\$25,000.9	\$23,530.1	-\$1,470.8
PERMANENT WORKYEARS	138.9	61.8	36.4	36.8	.4
TOTAL WORKYEARS	196.9	100.1	53.5	54.9	1.4
OUTLAYS	\$90,638.0	\$55,501.0	\$56,424.0	\$42,153.0	-\$14,271.0
AUTHORIZATION LEVELS					

ENERGY

OVERVIEW AND STRATEGY

The overall goal of the Energy research and development program is to provide the scientific information necessary to support the Agency's permitting and standard setting processes and allow for the development of energy sources in an environmentally acceptable manner. Research will be conducted to better understand the phenomena of acid deposition; enhance the Agency's knowledge of the potential health and environmental effects of emerging energy technologies; characterize and evaluate synfuels discharges and expand EPA's knowledge of the performance, reliability and cost of the limestone injection multistage burner (LIMB) technology.

Acid Rain

Many questions still remain unanswered about the causes, effects, and methods of mitigating or controlling acid deposition. The objective of acid deposition research is to develop the necessary data to fully understand the sources and characteristics of acid deposition, the extent of damages or potential damage, and the options for mitigating its effects. This information is needed to develop cost effective, scientifically sound, regulatory policies. Because of the potential national and international implications of the phenomena, we are requesting an increase in resources for our 1984 research program.

For program purposes, acid deposition research activities can be described by five generic categories: man-made sources; atmospheric processes; deposition monitoring; health and environmental effects; and assessment and policy analysis. Research efforts in the man-made sources are designed to improve and consolidate inventories of current and projected emissions of acid precipitation precursors, and to develop capabilities to evaluate the costs and performance of control measures for all major source categories. Research efforts in the atmospheric processes area are designed to address the physical understanding and mathematical description of acidic deposition. In deposition monitoring, efforts are designed to systematically collect dry deposition, rainfall, meteorological and other data at specified sites. In the area of health and environmental effects, research projects are being conducted to understand the impact of acid deposition on crops, forests and soils, drinking water, aquatic systems and materials. Finally, the assessment and policy analysis research efforts perform integrated assessments linking all areas of research under the Federal Interagency Task Force and assess the costs and benefits of alternative mitigation strategies.

Synthetic Fuels

A second major research activity is the development and evaluation of data on the health and environmental impacts of pollutants associated with synthetic fuel processes; the characterization of discharges, and the assessment of emission reduction technology options for mitigating these impacts. These efforts will assist industry and permitting officials in identifying problems with might impede the commercialization of the industry in an environmentally acceptable manner.

LIMB Control Technology

A third major research area is the development of the necessary performance, reliability, and cost data to accelerate the commercialization of innovative or cost-effective energy-related pollution control technologies. The thrust in this area is the development of the limestone injection multistage burner (LIMB) emission reduction technology. The LIMB is a technology which combines SO₂ control with simultaneous NO_x control by mixing coal and limestone together, pulverizing the mixture and combusting the mixture in a low NO_x burner. This technology can potentially lower the capital cost of SO_x control by a factor of 3 to 4 and annual operating costs by 50 percent.



Research and Development

SECTION TAB

ENERGY

Multi-Media Energy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					

Acid Rain					
Salaries & Expenses	\$201.0	\$483.1	\$483.1	\$492.4	\$9.3
Research & Development	\$8,992.1	\$11,546.0	\$12,046.0	\$13,546.0	\$1,500.0
TOTAL	\$9,193.1	\$12,029.1	\$12,529.1	\$14,038.4	\$1,509.3
Technical Information & Liaison					
Salaries & Expenses	\$155.6	\$32.1			
Research & Development	\$24.1				
TOTAL	\$179.7	\$32.1			
Health Effects					
Salaries & Expenses	\$53.2	\$633.4	\$633.4	\$662.1	\$28.7
Research & Development	\$2,591.3	\$1,755.5	\$1,755.5	\$1,704.7	-\$50.8
TOTAL	\$2,644.5	\$2,388.9	\$2,388.9	\$2,366.8	-\$22.1
Environmental Engineering & Technology					
Salaries & Expenses	\$3,577.0	\$3,373.2	\$3,373.2	\$2,539.6	-\$833.6
Research & Development	\$9,243.9	\$6,259.7	\$6,259.7	\$4,585.3	-\$1,674.4
TOTAL	\$12,820.9	\$9,632.9	\$9,632.9	\$7,124.9	-\$2,508.0
Environmental Processes & Effects					
Salaries & Expenses	\$506.2				
Research & Development	\$6,005.1	\$450.0	\$450.0		-\$450.0
TOTAL	\$6,511.3	\$450.0	\$450.0		-\$450.0
TOTAL:					
Salaries & Expenses	\$4,493.0	\$4,521.8	\$4,489.7	\$3,694.1	-\$795.6
Research & Development	\$26,856.5	\$20,011.2	\$20,511.2	\$19,836.0	-\$675.2
Multi-Media Energy TOTAL	\$31,349.5	\$24,533.0	\$25,000.9	\$23,530.1	-\$1,470.8

PERMANENT WORKYEARS

Acid Rain	4.2	7.0	7.0	7.0
Technical Information & Liaison	3.9			

ENERGY

Multi-Media Energy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Health Effects		3.1	3.1	3.1	
Environmental Engineering & Technology	56.8	26.7	26.3	26.7	.4
Environmental Processes & Effects	3.1				
TOTAL PERMANENT WORKYEARS	68.0	36.8	36.4	36.8	.4
TOTAL WORKYEARS					

Acid Rain	4.4	8.0	8.0	8.0	
Technical Information & Liaison	4.3				
Health Effects	.2	9.2	9.2	9.2	
Environmental Engineering & Technology	68.0	37.7	36.3	37.7	1.4
Environmental Processes & Effects	5.5				
TOTAL WORKYEARS	82.4	54.9	53.5	54.9	1.4

ENERGY

Multi-Media Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop Understanding of Acid Rain Needed for Assessments and Policy Analysis.			
Estimate Emissions from Man- Made Sources.			
- Report presenting the historic data base (SO ₂ , NO _x)	4/84	4/84	4/84
- Report on data analysis technique to determine relative source contributions	6/84	6/84	6/84
- Prototype industrial combustion emissions model		5/85	5/85
- AUSM national model design report	11/83	11/83	11/83
Understand Atmospheric Processes.			
- Transport, chemistry and precip- itation modules for nonlinear model	6/84	6/84	6/84
Establish Deposition Monitoring Data Bases.			
- Better development of intensive dry deposition monitor	9/84	9/84	9/84
- Procedures for determining accuracy and precision of acid precipitation measurements	9/84	9/84	9/84
Understand and Quantify Aquatic Effects.			
- Regional Sensitivity Geochemical Model	12/84	12/84	12/84
Understand and Quantify Terrestrial Effects.			
- Report describing application of dendro- chronological methods in determination of long-term changes in forest tree growth associated with chronic exposure to acid deposition and co-occurring gaseous pollu- tants	10/84	10/84	10/84

ENERGY

Multi-Media Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
- Interim report on the effects of acid deposition and mobilization on critical processes in terrestrial vegetation leading to changes in growth, yield or reproduction as a function of acid deposition dose	9/84	9/84	9/84
Understand and Quantify Effects on Materials and Cultural Resources.			
- Final report of BOM-EPA study detailing effects of exposure to various environments	10/84	10/84	10/84
- Finalization of Materials Inventory Coefficients matrix for North America	8/84	8/84	8/84
Integrate Research Assessments and Provide Information for Policy Analysis.			
- Critical Assessment Document Public Review Draft Final Draft	3/83 9/83	3/83 9/83	10/83
- Report on state of knowledge of effects of acid rain on tree growth and soils, with uncertainty factors		9/84	9/84
- Report on effects assessment methodologies/framework for all effects areas	9/84	9/84	9/84
Develop and Evaluate LIMB/Low-NO _x Control Technology.			
- Detailed design analysis of LIMB/Low-NO _x facilities.			6/86
Develop Health and Environmental Risk Analysis			
- Provide an upgraded health and environmental risk analyses for coal gasification, direct and indirect coal liquefaction, and oil shale technologies.	9/85	9/85	9/85
- Assessment of exposure and effects relationship for major synfuel pollutants.	9/85	9/85	9/85
Characterize and Evaluate Synfuels.			
- Prepare integrated monitoring reference manual for Synthetic Fuel Corporation applicants.	6/83	6/83	

ENERGY

Multi-Media Energy

Budget Request

The Agency requests a total of \$23,530,100 and 36.8 permanent workyears for 1984, a decrease of \$1,470,800 from 1983. Included in this total is \$3,694,100 for Salaries and Expenses and \$19,836,000 for Research and Development, with a decrease of \$795,600 and \$675,200 respectively. This decrease occurs in the environmental engineering and technology program element. In addition, the decrease reflects the transfer of \$1,389,000 in exploratory research funds to the Intermedia program.

Program Description

The Multi-Media Energy program addresses those problems originating from energy sources which have the potential to adversely affect the environment in one or more media. The primary goal of this program is to provide the scientific information necessary to permit the development and utilization of this nation's natural resources in an environmentally acceptable manner. The Multi-Media Energy research program has four major objectives which support this goal.

Objective 1. Develop the Understanding of Acid Rain Needed for Assessments and Policy Analysis. The Integrated National Acid Precipitation Assessment Program (INAPAP), created by the Acid Precipitation Act of 1980 (Title VII of P.L. 96-294), was initiated to increase the understanding of the causes and effects of acid deposition so that reliable information can be provided to policy-makers, and timely, cost-effective decisions formulated. Acid deposition research activities at the Environmental Protection Agency (EPA) support this program.

Objective 2. Develop and Evaluate the Limestone Injection Multistage Burner (LIMB)/Low NO_x Control Technology. This objective provides for the evaluation of an effective and inexpensive emission control technology for pulverized coal boilers that will simultaneously remove sulfur oxides (SO_x) and nitrogen oxides (NO_x) from boiler flue gases. This technology is based on the use of low-NO_x combustion techniques in combination with dry sorbent injection into the combustion zone.

Objective 3. Develop Health and Environmental Risk Analyses in Support of Environmental Impact Statements and Permitting Activities. Research under this objective provides integrated risk analyses for priority synfuel industries so that the health and environmental risks of synfuels can be determined and the benefits of pollution control assessed. The results of this research are used by the Regional Offices of EPA, and State and local governments in regulatory planning, focusing on Environmental Impact Statements (EIS) and permitting activities.

Objective 4. Characterize and Evaluate Synfuels Discharges and Control Technologies in Support of Environmental Impact Statements (EIS) and Permitting Activities. The research results of source characterization studies and control technology evaluations provide the means to give States and local authorities support in their review of EISs, permit applications and monitoring plans for proposed coal-based and oil shale synfuel facilities.

ACID RAIN

1984 Program Request

The Agency requests a total of \$14,038,400 and 7.0 permanent workyears for this program, of which \$492,400 is for Salaries and Expenses and \$13,546,000 is for Research and Development. This reflects an increase of \$9,300 and \$1,500,000, respec-

tively, which supports increased efforts in the areas of: (1) deposition monitoring; (2) understanding atmospheric processes involving a comprehensive field experiment; (3) estimating and modeling aquatic effects in watersheds; and (4) developing and applying integrated assessment techniques for benefits analysis utilizing data from all parts of the program.

Develop the Understanding of Acid Rain Needed for Assessments and Policy Analysis. Acid deposition research activities in support of this objective can be described by seven categories outlined below:

1. Estimate Emissions from Man-Made Sources: Research projects will respond to the following questions: (1) What quantities and in what locations are acidic substances and their precursors being emitted? (2) How may each major source or source category respond to different governmental policy options? and (3) What might be the levels of future emissions from major sources? Development and maintenance of detailed emissions inventories focusing principally on SO_x and NO_x , and expanding into volatile organic compounds (VOC's) and carbon monoxide (CO) will be conducted to support planned development of complex regional acid deposition models. Testing of the Advanced Utility Simulation Model for a range of policy applications will be completed, with refinement of the model as necessary. Analytically advanced and efficient models for both industrial combustion emissions and industrial process emissions will be developed to project SO_x , NO_x , and other emissions from major industrial sectors over the next 10 to 20 years as a function of several economic, energy and environmental factors.

2. Understand Atmospheric Processes: Research in this area responds to such questions as: "What sources are most responsible for deposition in areas sensitive to acidification? and "Under what circumstances and in what proportions do local and remote sources contribute to acid deposition?" To help answer these questions, our research will be designed to improve our capability to examine and predict the movement of air masses. The results of the Cross Appalachian Tracer Experiment will be examined and new instruments for measuring inter-layer atmospheric transport in clouds will be field tested. A comprehensive field study using chemical tracers in emissions, recently developed gas measuring instruments, and extensive monitoring will be undertaken to study empirically the movement and transformation of acids and precursors from sources to receptors. To further understand what substances in the atmosphere determine the rate of formation of acid substances, laboratory and field studies to investigate the complex chemical changes and physical scavenging that occur in the atmosphere, particularly in clouds, will be conducted. Modules to characterize the chemistry and wet scavenging will be developed for the advanced acid deposition regional model.

3. Establish Deposition Monitoring Data Base: In performing these monitoring activities EPA will respond to such questions as: (1) How much acid and other substances are being deposited in various regions of North America? (2) Is acid rain getting worse or better? (3) What are the spatial and temporal variations in deposition? and (4) What is the relative importance of wet and dry deposition? Our efforts to establish an operational network to measure dry deposition will be increased significantly. At least one technique will be ready for testing in the field to determine its adequacy and operability as a sensitive monitoring tool. EPA will continue to provide quality assurance and to serve as a repository for the data from deposition monitoring networks in the United States. Efforts will also continue to develop more reliable, accurate and precise methods for measuring the chemical composition of acid precipitation.

4. Understand and Quantify Aquatic Effects: The aquatic effects program responds to such questions as: (1) At what time (e.g., 5 years, 20 years, 25 years, etc.) if ever, will irreversible damage occur in aquatic ecosystems? (2) What specifically causes damage? (3) Under what circumstances can mitigation at the receptor (e.g., liming) be used? and (4) What are the magnitude and extent of the effects of acid deposition occurring today and in the future? For instance, a research project that develops methods to determine trends in acidity and the

sensitivity of bodies of water responds to the first question cited above. Estimating the effects of acid precipitation on interactions between runoff and soil water helps answer both the second and fourth questions. Other studies responding to the above questions include an evaluation of specific mitigation procedures such as watershed liming and studies to understand the effects of acid precipitation on fish populations and other biota.

5. Understand and Quantify Terrestrial Effects: This program will seek to answer questions similar to those of the aquatic effects program. To help understand the magnitude and extent of acid deposition effects occurring today and in the future, a wide variety of field and laboratory studies attempting to estimate and predict the effects of acid precipitation on forests, rangelands, wetlands, wildlife and crops will be conducted. The effects of soil infiltration, soil chemistry, weathering, metal transport, exchange and depletion of nutrients, and soil sensitivity will be addressed. Similarly, further research is needed to understand the factors which cause damages.

6. Understand and Quantify the Effects on Materials and Cultural Resources: To respond to such questions as: "At what time, if ever, will irreversible damages occur to materials?" and "What specifically causes damages?" the effects of acid deposition on construction materials such as metals, masonry and some stone types will be studied in both field and laboratory observation programs. By developing an assay of materials at risk, the research program will have a better understanding of the magnitude and extent of acid deposition effects occurring today and in the future. Through the development of retrospective air quality models and economic models in this area, the research will respond to such questions as those cited above.

7. Integrate Research Assessment and Provide Information for Policy Analysis: This program responds to questions that cut across several research objectives and relate to the decision-making needs of policy makers. In 1984, the following projects will be supported: (1) development of advanced methods for performing integrated assessment functions; (2) application of systems analysis to all acid deposition phenomena in order to characterize mass flows of all important constituents from point of release to final sink; (3) assessment of possible NO_x control strategies relative to possible SO_2 control strategies; (4) assessment of primary sulfate emissions relative to sulfate formation in the atmosphere in affecting potentially sensitive areas; (5) an analysis of the effectiveness and costs of controlling damage at the receptor sites versus control of emissions at source sites; and (6) application of integrated assessment methods for optimal mitigation solutions which combine a selection of strategies and technologies.

1983 Program

In 1983, the Agency is allocating a total of \$12,529,100 and 7.0 permanent work-years to this program, of which \$483,100 is under the Salaries and Expense appropriation and \$12,046,000 is for extramural purposes under the Research and Development appropriation.

Develop the Understanding of Acid Rain Needed for Assessments and Policy Analysis. 1. Estimate Emissions from Man-Made Sources: Inventories of the man-made emissions of acid rain precursors such as SO_x and NO_x and oxidant precursors such as hydrocarbons are being analyzed and improved by EPA. In addition, models are being constructed for electric utilities and other important industrial sectors, and will provide comprehensive costs and emission changes for alternative control strategies.

2. Understand Atmospheric Processes: Intensive research is being conducted at EPA to improve our capability to examine and predict the movement of air masses and pollutants through the use of tracer experiments and computer modeling. Laboratory and field studies are being conducted to investigate the complex chemical and physical changes that occur in the atmosphere (particularly within clouds) and the role of oxidants in acid formation. EPA is evaluating several operational trajectory

models and comparing their performance with monitoring data. This evaluation will determine which model(s) will be maintained for use by policy makers. An Advanced Acid Deposition Eulerian model framework is being formulated to serve as the main integrating mechanism for the atmospheric processes program.

3. Establish Deposition Monitoring Data Base: Monitoring networks are being expanded, standardized and integrated into a well designed National Trends Network. EPA has the role of providing quality assurance and serving as a repository of data from which long-term trends will be documented and studied. Efforts are underway at EPA to develop methods to measure dry deposition accurately. Once proved acceptable, these techniques will be incorporated into the National Trends Network so that the amount and composition of dry deposition can be measured reliably.

4. Understand and Quantify Aquatic Effects: Research is being conducted on lakes, streams and wetlands to determine the factors controlling acidification. The impacts on foodchains and organisms ranging from fish to microscopic plants are being investigated. Seven agencies are conducting research in this area with EPA having the lead role. Surveys are being made of water resources, soils, geology and other factors to improve our knowledge of what areas and resources may be vulnerable to damage. The number of lakes, streams, and groundwaters that are susceptible to acidification is being documented and the problems and techniques associated with mitigating the effects are being investigated.

5. Understand and Quantify Terrestrial Effects: The potential impacts of acid deposition on forests, rangelands, wetlands, wildlife, crops and soils are being studied. Emphasis is being placed on developing methods to estimate the historical growth patterns in forests and to identify the significant parameters (e.g., precipitation, pH, plant age, climate) affecting growth. The interactive effects of fertilizer, gaseous pollutants, climate, pests and drought on crops are being examined.

6. Understand and Quantify the Effects on Materials and Cultural Resources: The effects of acid deposition on materials such as building stone, metals, and paints are being examined. Techniques to differentiate the effects of various pollutants are being developed, and the cost of damage to man-made structures and cultural resources is being estimated.

7. Integrate Research Assessments and Provide Information for Policy Analysis: An in-depth Critical Assessment Document of existing scientific information is being completed, and annual reports prepared by the Task Force will be used to continually update that information and describe the current implications. Analyses are being made of the effectiveness, costs and feasibility of controlling emissions of acidic components, precursors and oxidants. New technologies and diverse strategies to control emissions are being examined and optimal solutions combining various technologies and strategies are being explored. EPA is developing an improved methodology for integrated assessment of all aspects of the acid deposition phenomenon. This will allow cost/benefit comparisons of alternative mitigation measures.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$500,000 results from the following action:

-Congressional Action. (+\$500,000) Congress added a general increase of +\$8,526,200 to the Research and Development appropriation for priority activities at the discretion of the Agency. This specific increase supports acid rain research which was targeted as a high priority action by Congress in the Conference Report in our 1983 Appropriation's Bill.

1982 Accomplishments

In 1982, the Agency obligated a total of \$9,193,100 for this program, of which \$201,000 was under the Salaries and Expense appropriation and \$8,992,100 was for extramural purposes under the Research and Development appropriation.

Develop the Understanding of Acid Rain Needed for Assessments and Policy Analysis. 1. Estimate Emissions from Man-Made Sources: Accomplishments under this objective included establishment of a technical panel, plans for an Advanced Utilities Simulation Model, an operational state level version of the model and a complete plan for an emissions inventory as well as an inventory of emissions from utilities.

2. Understand Atmospheric Processes: A project to develop a plan to produce an advanced acid deposition model was begun, requiring assessment of the state of the art and identification of key parameters. Analysis of studies of Oxidation and Scavenging Characteristics of April Rains provided evidence of the critical role of oxidants in wet scavenging.

3. Establish Deposition Monitoring Data Bases: Efforts were concentrated in three areas: (1) determining the accuracy and precision of procedures at existing deposition monitoring sites; (2) developing an integrated data base (merging data from existing systems); and (3) comparing existing techniques for estimating dry deposition.

4. Understand and Quantify Aquatic Effects: Efforts in 1982 concentrated on synoptic surveys, the development of historical data as well as the acquisition of data to be used in model development and mapping efforts. Efforts to develop an understanding of the effects of acid deposition on aquatic biota were begun.

5. Understand and Quantify Terrestrial Effects: Studies were initiated to inventory forest stands and species while selecting sites for a multi-year monitoring program aimed at estimating the long-term effects of acid deposition on natural terrestrial ecosystems. In addition, studies were initiated to determine which stage in the forest life cycle was most sensitive and to quantify the relationships. Agricultural studies included development of a prototype site and initiation of studies examining the problems associated with extrapolation of laboratory and greenhouse data to field situations.

6. Understand and Quantify Effects on Materials and Cultural Resources: Agency efforts concentrated on expanding the field studies of materials deterioration conducted with the Bureau of Mines, and on developing the technology of the static monitors for measuring gaseous deposition. Contractors were also selected to begin the development of a materials inventory and to estimate the past air pollution levels at selected materials exposure sites. A report detailing methodology for determining the rate of degradation by monitoring tombstones was received.

7. Integrate Research Assessments and Provide Information for Policy Analysis: Studies were begun to develop models for estimating the relative significance of anthropogenic versus man-made, and local versus distant emissions as well as the cost/benefit of control techniques. In addition, drafts of the Critical Assessment Document (an authoritative evaluation of the published literature relative to Acidic Deposition) were prepared.

TECHNICAL INFORMATION AND LIAISON

1982 Accomplishments

In 1982, the Agency obligated a total of \$179,700 for this program, of which \$155,600 was under the Salaries and Expenses appropriation and \$24,100 was for extramural purposes under the Research and Development appropriation. This activity, which supports research programs across all media, was consolidated into the Intermedia program in 1983. Thus, the Program Description, 1984 Program Request, 1983 Program, and 1982 Accomplishments narrative sections appear there.

HEALTH EFFECTS

1984 Program Request

The Agency requests a total of \$2,366,800 and 3.1 permanent workyears for this program, of which \$662,100 is for Salaries and Expenses and \$1,704,700 is for Research and Development. This reflects an increase of \$28,700 in Salaries and Expenses and a decrease of \$50,800 for Research and Development. The net reduction reflects completion of research on the comparative carcinogenicity of various synfuel chemicals.

Develop Health and Environmental Risk Analyses in Support of EIS and Permitting Activities. The integrated health and environmental risk analysis program for synfuel industries provides a framework through which scientifically documented risk can be utilized in making regulatory and enforcement decisions and for determining the degree to which pollution abatement processes and devices are required. Risk analysis methodologies for evaluating population level impacts of synfuel pollutants on health and the environment are developed through the integration of exposure and effects assessments.

During 1984, the research will focus on upgrading and evaluating the documentation of the health and environmental effects of critical classes of synfuel pollutants. This includes upgrading the risk analysis methodologies developed in 1982. Specific areas to be addressed are: (1) the refinement and application of models for evaluating exposure pathways in atmospheric, terrestrial and aquatic media; (2) the evaluation of synfuel pollutant uptake by key organisms in the human food-chain; and (3) the evaluation of human exposure and effects data on synfuel pollutants to develop dose/response functions for cancer and reproductive risk analyses.

1983 Program

In 1983, the Agency is allocating a total of \$2,388,900 and 3.1 permanent workyears to this program, of which \$633,400 is under the Salaries and Expenses appropriation and \$1,755,500 is for extramural purposes under the Research and Development appropriation.

Develop Health and Environmental Risk Analyses in Support of EIS and Permitting Activities. The initial risk assessment data generated in 1982 is being peer reviewed, updated and, where necessary, completed. Chemical compounds associated with synfuel technologies have been categorized and grouped into about 40 categories of chemical classes called Risk Analysis Units (RAUs). Data are being generated and evaluated in an effort to estimate the total exposure of humans and other organisms to specific synfuel related RAUs through atmospheric, aquatic and food-chain routes. Toxicological data on health and environmental effects are also being assessed in an effort to demonstrate cause and effect relationships. The program is also applying previously developed risk assessment methodologies to various pollutant control technology processes and options to evaluate their relative efficacies and merits.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,644,500 for this program, of which \$53,200 was under the Salaries and Expenses appropriation and \$2,591,300 was for extramural purposes under the Research and Development appropriation.

Develop Health and Environmental Risk Analyses in Support of EIS and Permitting Activities. Chemical components or elements associated with synfuel technologies were initially categorized and grouped into about 40 categories. These categories were designated as RAUs. An initial assessment of the health and environmental risks of selected RAUs was made, largely through a compilation and synthesis of existing data. The exposure assessment portion of the program utilized the best available data from source/pollutant characterization research as the starting point for industry specific risk analysis assessment. Methodologies for exposing test organisms to selected RAUs were developed and tested.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

In 1984, the Agency requests a total of \$7,124,900 and 26.7 permanent workyears for this program, of which \$2,539,600 is for Salaries and Expenses and \$4,585,300 is for Research and Development. This reflects a decrease of \$833,600 and \$1,674,400 respectively. This reduction reflects the de-emphasis of synfuels research based on the slower commercialization of this industry and the transfer of exploratory research resources to the Intermedia program.

Develop and Evaluate LIMB/Low NO_x Control Technology. Existing pulverized coal-fired utility and large industrial boilers are the major source of SO_x and NO_x emissions. Existing control technology for SO_x is expensive for new systems and difficult to retrofit for existing systems. Thus, the LIMB technology will be evaluated to achieve: (1) substantial reductions in SO_x and NO_x emissions at about one-fifth of the cost of conventional flue gas desulfurization systems; (2) 50 to 70 percent SO_x control and NO_x emission levels of 0.3 to 0.4 lb/million Btu thermal input for retrofitting existing boilers; and (3) 50 to 70 percent SO_x control and NO_x emission levels of 0.2 to 0.3 lb/million Btu for new boiler applications.

A systematic development is necessary to bring the LIMB technology to the point where industry would be willing to commercialize it. To accomplish this, the 1984 program will encompass the following: research on the reaction mechanisms; systematic research at the small bench and pilot scale for a wide range of boiler and fuel types; pilot scale testing to extrapolate the performance to commercial scale; detailed analysis to identify potential operability and reliability problems; and field application of the technology to representative boilers. Although the LIMB program will not encompass federally funded full-scale demonstrations, EPA will acquire and analyze performance data, and disseminate results to the potential users of LIMB systems.

Characterize and Evaluate Synfuels Discharges and Control Technologies in Support of Environmental Impact Statements (EIS) and Permitting Activities. Extensive environmental data is required for the construction and operation of United States synthetic fuel plants. The timely commercialization of these plants in an environmentally acceptable manner necessitates that the Agency give technical assistance to State and Regional permitting officials. This assistance is based on expertise gained by Agency research on source characterizations of synfuel plant emissions and control technology evaluations.

As the synthetic fuels industry begins construction and operation of their plants, engineering support will be provided to State and Regional authorities in their review of EISs, permit application and Synthetic Fuels Corporation (SFC) required monitoring plans. Consultation with the Agency by SFC applicants is required by the 1980 Energy Security Act (Public Law 94-294), Section 131 (e) for preparation of their environmental monitoring plans. Emphasis is being placed on technical assistance since some synthetic fuel plants will be operational and evaluation will be possible of the pollution control systems associated with these commercial scale operations.

The Agency's waste water and air pollution control systems will be utilized to test more sophisticated pollution controls and analyze waste streams. We plan to test and evaluate controls and waste streams at two of the four commercial scale United States coal conversion plants currently under construction and an active United States oil shale plant.

The Agency will be refining procedures for comparative combustion/sampling testing of liquid synthetic and petroleum based fuels. Further studies of these fuels will analyze vaporization of hazardous organics from them in transportation, handling and storage.

1983 Program

In 1983, the Agency is allocating a total of \$9,632,900 and 26.3 permanent workyears to this program, of which \$3,373,200 is under the Salaries and Expenses appropriation and \$6,259,700 is for extramural purposes under the Research and Development appropriation.

Develop and Evaluate LIMB/Low NO_x Control Technology. The performance of LIMB system components process in a one million BTU tangentially-fired and a one million BTU wall-fired furnace is being tested. Boiler conditions are being simulated, and various types of coals are being used and evaluated.

An assessment of a low NO_x burner at Utah Power and Light Company is being conducted, and an evaluation of a prototype distributed mixing low NO_x coal burner is being conducted at pilot plant scale to determine the extent of NO_x capture in both wall-fired and tangentially-fired boilers. A variety of coal types are being used and analyzed. These data are needed to review NSPS for utility boilers. Field evaluations are being conducted for a low NO_x burner at the 25 MW Eastern Illinois Cooperative utility wall-fired boiler test site.

Characterize and Evaluate Synfuels Discharges and Control Technologies in Support of Environmental Impact Statement (EIS) and Permitting Activities. In the design and construction phase of United States synthetic fuel plants, there are a large number of EISs, permits and SFC required monitoring plans. The Agency will continue to provide technical assistance to State and Regional officials in their review of these documents, applications and plans. Technical assistance is expanding since the Pollution Control Technical Manuals and the Monitoring Reference Manual have been published, and more environmental research data now is available from synfuel pilot plant process technologies. Research in source characterization and control technology evaluation is being conducted utilizing the Agency's mobile test facility and stationary facilities at the University of North Carolina and North Carolina State University.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$12,820,900 for this program, of which \$3,577,000 was under the Salaries and Expenses appropriation and \$9,243,900 was for extramural purposes under the Research and Development appropriation.

Develop and Evaluate LIMB/Low NO_x Control Technology. Support for Federal and State regulatory compliance was provided to the California Air Resources Board for issuing construction permits for heavy oil/low NO_x burners, to the Office of Air Quality Standards for the industrial combustion modification program, and the low NO_x emissions program wherein lean burning conditions are being examined. Regional support in State Implementation Plan compliance was provided through the preparation of a operations and maintenance practice manual for boilers. A pilot evaluation of a one million Btu per hour wall-fired furnace with simulated boiler conditions was conducted to test SO₂ removal by the LIMB process.

Characterize and Evaluate Synfuels Discharges and Control Technologies in Support of Environmental Impact Statement (EIS) and Permitting Activities. Six process specific draft Pollution Control Technical Manuals (PCTMs) and a Control Technology Appendix for coal based and oil shale fuels were completed. The process technologies addressed in the manuals are direct and indirect coal liquefaction, and three different combinations of oil shale retorting and mining operations. The PCTMs will be very useful to the synfuel industry and permitting officials since they represent unique and specific environmental data on emissions and controls for synfuels process technologies.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests no resources for this program in 1984.

1983 Program

In 1983, the Agency is allocating \$450,000, all for extramural purposes under the Research and Development appropriation.

Conduct Cold Climate Research. Research is being completed on the impacts of energy development and use in cold climate areas. Emphasis is being placed on evaluating the effects of carbon monoxide emissions from mobile sources and assessing the impacts of oil and gas energy-related activities on permafrost soils.

1983 Explanation of Changes from Budget Estimate

There is no change from the Budget Estimate.

1982 Accomplishments

In 1982, the Agency obligated a total of \$6,511,300 for this program, of which \$506,200 was under the Salaries and Expenses appropriation and \$6,005,100 was for extramural purposes under the Research and Development appropriation.

Risk Analysis for the Synfuel Industry. Preliminary environmental risk analyses were peer reviewed to determine the adequacy of the technique being tested. Initial atmospheric studies on synfuel plant emissions and transformation rates were initiated. This data will be utilized in the exposure portion of the Integrated Risk Analysis Program. Preliminary toxicity results of studies on complex organic fuel mixtures from various pilot and demonstration synfuel facilities were completed. This information will be utilized in the effects of portion of the Integrated Risk Analysis Program.

Conduct Cold Climate Research. Two reports were completed. They were entitled: (1) An Assessment of Solid Waste Disposal Practices in Alaska, and (2) EPA's Cold Climate Research Needs.

ENERGY

Oxidants Energy

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Environmental Engineering & Technology

Salaries & Expenses	\$1,585.0	\$410.9		
Research & Development	\$11,851.4	\$966.9		
TOTAL	\$13,436.4	\$1,377.8		

TOTAL:

Salaries & Expenses	\$1,585.0	\$410.9		
Research & Development	\$11,851.4	\$966.9		

Oxidants Energy	TOTAL	\$13,436.4	\$1,377.8	
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PERMANENT WORKYEARS

Environmental Engineering & Technology	20.5	5.3
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TOTAL PERMANENT WORKYEARS	20.5	5.3
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TOTAL WORKYEARS

Environmental Engineering & Technology	31.0	8.4
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TOTAL WORKYEARS	31.0	8.4
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ENERGY

Oxidants Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Research and Assess Emission Reduction Technologies			
- Report on the applicability of in-furnace NO _x reduction to domestically designed boiler and U.S. coals (Env. Technology)	12/83		
- Report on performance testing of combustion modifications applicable to spreader stoker boilers (Env. Technology)	12/82		

ENERGY

Oxidants Energy

Budget Request

The Agency requests no resources for this program in 1984.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1983 Program

The research in this program has been transferred to the Air Oxidants program in 1983, except for resources associated with the limestone injection multi-stage burner (LIMB) which were consolidated in the Multi-Media Energy program.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$1,377,800 results from the following action:

-Restructuring. (-\$1,377,800) The Congressionally approved restructuring eliminated the Gases and Particles and the Oxidants - Energy program elements and moved them into the Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory program effort; and, the end products are air regulations. The change to the Salaries and Expenses appropriation was -\$410,900; and, the change to the Research and Development appropriation was -\$966,900.

1982 Accomplishments

In 1982, the Agency obligated a total of \$13,436,400 to this program, of which \$1,585,000 was under the Salaries and Expenses appropriation and \$11,851,400 was for extramural purposes under the Research and Development appropriation.

Research and Assess Emission Reduction Technologies to Support Permitting, New Source Performance Standards (NSPS), and Compliance Activities. A burner manufacturer was selected to produce a commercial version of the heavy oil/low NO_x burner; and, the field evaluation program was conducted. The applicability of in-furnace NO_x reduction to domestically designed boilers and United States coals was evaluated. Performance testing of combustion modifications that are applicable to spreader stoker boilers was completed. Combustion modification technologies, such as reduced primary air, modification of fuel injection velocities, etc., was evaluated on a coal-fired kiln. Experiments to identify how the physical properties of coal are related to NO_x emissions under fuel-lean burning conditions were conducted. An operations and maintenance practice manual was developed for burner manufacturers and boiler owners and operators to assure compliance with regulations and to assure that equipment is operated in a safe and reliable manner. A pilot evaluation of a one million BTU per hour wall-fired furnace with simulated boiler conditions was conducted to test SO₂ removal by the LIMB process.

ENERGY

Gases and Particles Energy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Environmental Engineering & Technology

Salaries & Expenses	\$1,935.2	\$1,803.7
Research & Development	\$7,546.0	\$3,282.2
TOTAL	\$9,481.2	\$5,085.9

Environmental Processes & Effects

Salaries & Expenses	\$514.1	\$283.0
Research & Development	\$5,325.5	\$3,250.5
TOTAL	\$5,839.6	\$3,533.5

TOTAL:

Salaries & Expenses	\$2,449.3	\$2,086.7
Research & Development	\$12,871.5	\$6,532.7

Gases and Particles Energy	TOTAL	\$15,320.8	\$8,619.4
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PERMANENT WORKYEARS

Environmental Engineering & Technology	25.5	18.7
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Environmental Processes & Effects	1.4	1.0
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TOTAL PERMANENT WORKYEARS	26.9	19.7
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TOTAL WORKYEARS

Environmental Engineering & Technology	37.1	31.2
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Environmental Processes & Effects	11.5	5.6
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TOTAL WORKYEARS	48.6	36.8
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ENERGY

Gases and Particles Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Research and Assess Emissions Reduction Technologies			
- Report on pilot field SO _x capture evaluations of spray-dryer/fabric filter systems for 1985 NSPS review.	9/82		
- Report on full scale adipic acid enhanced limestone FGD technology for 1985 NSPS review.	9/82		
Develop and Validate Air Quality Models			
- A regional visibility model for developing visibility regulations.	9/82		
- Report on the results of Small Hill Plume Impaction Study Number 1 for devel- opment of a complex terrain model.	9/82		

ENERGY

Gases and Particles Energy

Budget Request

The Agency requests no resources for this program in 1984.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1983 Program

Resources for this program have been transferred to the Gases and Particles Air program in 1983, except for resources associated with the limestone injection multi-stage burner (LIMB) which have been consolidated in the Multi-Media Energy program.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$5,085,900 results from the following actions:

-Restructuring. (-\$5,085,900) The Congressionally approved restructuring eliminated the Gases and Particles and the Oxidants - Energy program elements and moved them into the Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory program effort; and, the end products are air regulations. The change to the Salaries and Expenses appropriation was -\$1,803,700 and the change to the Research and Development appropriation was -\$3,282,200.

1982 Accomplishments

In 1982, the Agency obligated a total of \$9,481,200 for this program, of which \$1,935,200 was under the Salaries and Expenses appropriation and \$7,546,000 was for extramural purposes under the Research and Development appropriation.

Research and Assess Emission Reduction Technologies to Support Permitting and Compliance Activities. During 1982 major technology transfer efforts included conducting the Seventh Flue Gas Desulfurization (FGD) Symposium, co-sponsored with the Electric Power Research Institute, and the Fourth Symposium on the Transfer and Utilization of Particle Control Technology, to transfer the latest findings to the regulated and regulating communities.

An initial assessment on the use of adipic acid to enhance limestone FGD systems in use confirmed that SO_x removal can be increased from 70% to 90% and that the use of the technology should permit compliance with SO_x emission regulations for utility boilers.

The cost-effective advantage of combined SO_x and particle control using dry-scrubbing with fabric filter baghouses was assessed and found to be superior to conventional FGD systems for low and medium sulfur content coals.

A fundamental research effort was initiated to determine the basic mechanisms of, and to account for, the exceptional performances of two-stage electrostatic precipitators (ESP's) and electrostatically enhanced fabric filters (ESFF). Testing of alternative types of two-stage ESP's in a flexible engineering scale pilot plant was initiated to determine their potential for low sulfur coal fly ash collection, and an ESFF baghouse was tested in a pilot unit. Both technologies show

that up to a 50% reduction in operating and capital costs can be expected. The limestone injection multistage burner (LIMB) process was tested on a tangentially-fired pilot furnace.

ENVIRONMENTAL PROCESSES AND EFFECTS

1983 Program

Resources for this program have been transferred to the Gases and Particles Air program in 1983.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$3,533,500 results from the following actions:

-Restructuring. (-\$3,483,500) The Congressionally approved restructuring eliminated the Gases and Particles and the Oxidants - Energy program elements and moved them into the Air program elements. This allows for better management and accountability of resources because both Energy and Air have the same regulatory program effort and the end products are air regulations. The change to the Salaries and Expenses appropriation was -\$233,000 and the change to the Research and Development appropriation was -\$3,250,500.

-Reprogrammings. (-\$50,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$50,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$5,839,600 for this program, of which \$514,100 was under the Salaries and Expenses appropriation and \$5,325,500 was for extramural purposes under the Research and Development appropriation.

Develop and Validate Air Quality Models to Support Implementation, Maintenance, and Enforcement of NAAQS. Research on the development of improved air quality dispersion models for use in complex terrain concentrated on plume impaction on elevated terrain, involving both field studies and physical modeling experiments. The results of Small Hill Plume Impaction Study Number 1 were published in the fall of 1982, and Study Number 2 was initiated. A study of plume impaction on a two-dimensional ridge was conducted. The Green River Ambient Model Assessment Study's first modeling output, a mountain valley air quality model, was completed. In addition, a simple regional visibility model for use in developing visibility protection regulations was completed.

ENERGY

Water Quality Energy

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Environmental Processes & Effects

Salaries & Expenses	\$645.0
Research & Development	\$2,756.6
TOTAL	\$3,401.6

TOTAL:

Salaries & Expenses	\$645.0
Research & Development	\$2,756.6

Water Quality Energy	TOTAL	\$3,401.6
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PERMANENT WORKYEARS

Environmental Processes & Effects	6.3
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TOTAL PERMANENT WORKYEARS	6.3
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TOTAL WORKYEARS

Environmental Processes & Effects	10.4
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TOTAL WORKYEARS	10.4
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ENERGY

Water Quality Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Risk Analysis for Water Pollution			
- A report describing the factors which affect the mobilization, transport, and bioavailability of mercury in reservoirs located in the upper Missouri River Basin. (Env. Proc.)	8/82		
- A report describing the effects of sediment-borne fuel oils on intertidal faunal recruitment. (Env. Proc.)	8/82		

ENERGY

Water Quality Energy

Budget Request

The Agency requests no resources for this program in 1984.

ENVIRONMENTAL PROCESSES AND EFFECTS

1983 Program

No resources are allocated for this program in 1983. Resources for this program have been transferred to the Multi-Media Energy program to conduct research in support of the development of health and environmental risk assessments for synfuels, and to the Hazardous Waste program to conduct hazardous site assessment research.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,401,600 for this program, of which \$645,000 was under the Salaries and Expenses appropriation and \$2,756,600 was for extramural resources under the Research and Development appropriation.

Risk Analysis for Water Pollution. Reports were completed on the following: (1) a non-equilibrium approach to modeling heavy metals in acid flowing waters; (2) the effects of sediment-borne fuel oils on intertidal fauna recruitment; and (3) the factors affecting mobilization, transport, and bioavailability of mercury in reservoirs of the upper Missouri River Basin. Each of these reports will assist various Regions and States in the establishment of more realistic waste load allocations for conservative materials, such as metals, and help establish the need for more stringent State water quality standards.

ENERGY

Industrial Wastewater Energy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Environmental Engineering & Technology

Salaries & Expenses	\$870.8
Research & Development	\$757.7
TOTAL	\$1,628.5

TOTAL:

Salaries & Expenses	\$870.8
Research & Development	\$757.7

Industrial Wastewater Energy	TOTAL \$1,628.5
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PERMANENT WORKYEARS

Environmental Engineering & Technology	13.7
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TOTAL PERMANENT WORKYEARS	13.7
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TOTAL WORKYEARS

Environmental Engineering & Technology	21.0
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TOTAL WORKYEARS	21.0
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ENERGY

Industrial Wastewater Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Evaluate technologies for reducing pollution caused by fuel extraction			
- Complete evaluations of cooling water effluents from stream electric power plants - used for the effluent guidelines data base	9/82		

ENERGY

Industrial Wastewater Energy

Budget Request

The Agency requests no resources for this program in 1984.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1983 Program

The Agency allocated no resources for this program in 1983. The research was completed in 1982 and any additional requirements are being conducted in the base research program.

1982 Accomplishments

In 1982; the Agency obligated a total of \$1,628,500 to this program, of which \$870,800 was under the Salaries and Expenses appropriation and \$757,700 was for extramural purposes under the Research and Development appropriation.

Evaluate technologies for reducing pollution caused by fuel extraction. The fuel extraction program was completed in 1982 with the final evaluation of technologies for reducing pollution to surface and groundwater caused by the surface mining of coal in the Northern Great Plains area.

ENERGY
Municipal Spills Energy

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					

PROGRAM

Environmental Engineering & Technology		
Salaries & Expenses		\$120.0
Research & Development		\$406.1
TOTAL		\$526.1
TOTAL:		
Salaries & Expenses		\$120.0
Research & Development		\$406.1
Municipal Spills	TOTAL	\$526.1
Energy		

PERMANENT WORKYEARS

Environmental Engineering & Technology		3.5
TOTAL PERMANENT WORKYEARS		3.5

TOTAL WORKYEARS

Environmental Engineering & Technology		3.5
TOTAL WORKYEARS		3.5

ENERGY

Municipal Spills Energy

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Develop techniques and procedures to prevent and contain hazardous spills			
- Develop impoundment/waste lagoon spillage controls	9/84		
- Develop guidelines for using dispersants for controlling spills	9/84		
- Evaluate sorbents to contain hazardous spills	1/84		
- Develop manuals on spill prevention	12/82		
- Evaluate foam/chemical layers to control air dispersion from spills	12/82		
- Develop manuals for Shoreline cleanup of spills	9/82		
- Develop fire control handbook for hazardous substances	12/83		

ENERGY

Municipal Spills Energy

Budget Request

The Agency requests no resources for this program in 1984.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1983 Program

This program has been transferred to the Hazardous Waste program in 1983.

1982 Accomplishments

In 1982, the Agency obligated a total of \$526,100 for this program, of which \$120,000 was under the Salaries and Expenses appropriation and \$406,100 was for extramural purposes under the Research and Development appropriation.

Develop Techniques and Procedures to Prevent and Contain Hazardous Spills.
Research in 1982 supported the regulatory requirements for spill prevention, control and countermeasure plans for all facilities engaged in the production, storage, refining, processing and distribution of hazardous materials.



Management and Support

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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MANAGEMENT AND SUPPORT

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

APPROPRIATION

Salaries & Expenses	\$221,237.8	\$230,273.8	\$231,484.0	\$232,022.7	\$538.7
Operations, Research & Facilities	\$114.4				
TOTAL, Agency Management & Support	\$221,352.2	\$230,273.8	\$231,484.0	\$232,022.7	\$538.7
PERMANENT WORKYEARS	2,293.8	2,098.8	2,204.1	2,116.7	-87.4
TOTAL WORKYEARS	2,860.7	2,632.8	2,723.6	2,627.4	-96.2
OUTLAYS	\$211,634.0	\$235,438.0	\$228,861.0	\$225,901.0	-\$2,960.0
AUTHORIZATION LEVELS					

MANAGEMENT AND SUPPORT

OVERVIEW AND STRATEGY

Management and Support provides executive direction for all EPA programs, associated staff and management activities, and those Agencywide administrative and support services which are not associated with one specific program.

The scope of management and support activities is largely a function of the programs they serve. The level of funding requested for this medium, therefore, supports the planned level of program activity. Further, the request reflects the belief that, by eliminating duplicative functions, focusing on essential services, increasing efficiency, and introducing a strong accountability system, the Agency can provide more effective management activities at less cost than would otherwise occur.

The major components in this medium are Program Management, Agency Management, Regional Management, and Support Costs.

The Program Management component includes policy development, program development and oversight, and the associated management activities for the Agency's environmental program offices. These include the Offices of Air, Noise, and Radiation; Water; Pesticides and Toxic Substances; Research and Development; and Solid Waste and Emergency Response.

The Agency Management component contains the Offices of the Administrator, Policy and Resource Management, Legal and Enforcement Counsel, and Administration.

The Regional Management component includes the Offices of the Regional Administrators and those centralized management and administrative functions performed in each Region.

The Support Costs component contains nonpersonnel costs for Agency services such as laboratory and office supplies, building operations and maintenance, local telephone service and other utilities, telecommunications, rental costs for our facilities, and central computer services. There are three categories within this general component: Agency; Regional; and, Program Support Services. Agency Support Services include all office and building services for Headquarters, Research Triangle Park, North Carolina (RTP), and Cincinnati, Ohio, as well as certain Agencywide services which are managed on a centralized level, e.g., facility rentals, Federal Telecommunications Services, and ADP support costs. Regional Support Services provide common services in the Regional Offices, such as office supplies, equipment, printing, and local telephones. Program Lab Support funds provide general operating services to specific program facilities or laboratories.

AREAS OF MAJOR EMPHASIS

The Executive Offices, which include the Immediate Office of the Administrator, are emphasizing better internal management to allow more focused responsiveness to the Administrator's priorities. Priorities in 1984 will include improved relations with States and local governments to facilitate program delegation as well as other integrated approaches to environmental regulation; greater scientific credibility in regulatory decision-making through the increased emphasis on reviews by the Science Advisory Board; improved coordination among major outreach staff offices to ensure that EPA's external activities reflect the interests and policies of the Administrator; and, continued efforts to eliminate the backlog of construction grant final audits.

In the Office of Policy and Resource Management (OPRM), the Agency is developing a framework for a well-run strategic planning and management process to ensure that EPA's program objectives and environmental goals are clearly defined and met.

The emphasis will be toward a stronger and more coherent regulatory development and review process. This will subsequently improve both the process and substance of regulatory decision-making by enhancing our ability to measure the benefits associated with major regulations, and improving the scientific and engineering analysis that supports the regulation development process.

The Office of Legal and Enforcement Counsel (OLEC) performs both general management and legal services in this medium. In addition to providing routine legal support to the various offices of the Agency, OLEC efforts in 1984 will focus on developing policies to assure consistent Agencywide legal interpretations, elimination of duplicative legal reviews, and adequate legal support to States seeking to assume environmental programs. In addition, emphasis will be placed on coordination with enforcement efforts to assure the success of the Agency's civil and criminal litigation or other noncompliance remedies.

In 1984, the Office of Administration (OA), building upon initiatives begun in 1982 and 1983, will continue to institutionalize a cost-consciousness in all the various functions and activities for which we have responsibility. We will work to improve EPA's financial management system so that it is more controlled and disciplined, though still responsive to both Agency-wide and program-specific needs. We will consolidate management and control over Agency ADP systems in a central office within OA to eliminate duplicative systems and redirect resources to improve access to automated data bases and efficient electronic communications systems. We will continue to automate systems, wherever practical, and to upgrade the information available to EPA's senior managers. By simplifying and streamlining our procurement and contracting processes in a fiscally sound way, we will make it easier for EPA programs to achieve their missions without sacrificing financial integrity. Lastly, OA will develop a human resources management system designed to meet EPA's policies and goals, which ensures that we have an adequately trained and skilled workforce in the most cost-effective manner.

In the Regional management areas, resources provide services consistent with Regional program workforce levels. With our commitment to strengthen Regional environmental programs, we have maintained strong Regional planning, resources planning and analysis, and management efforts.

We are requesting full funding for those fixed costs carried within the Support Services accounts. At the same time, we are developing strategies to contain those costs over which we have control. In Headquarters, for instance, we are consolidating Agency space holdings and have instituted accountability systems for telephone and mail services. We are building upon cost containment strategies developed and implemented during 1982 and 1983, including initiatives such as centralizing our distribution functions, strengthening ADP audits, maintaining a tight strategy for training EPA employees which assures maximum benefit to the Agency, and continuing to control our printing activities.



Program Management

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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PROGRAM MANAGEMENT

Program Management

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Program Management -
Air, Noise and
Radiation

Salaries & Expenses	\$2,136.7	\$2,147.7	\$2,143.8	\$2,163.0	\$19.2
TOTAL	\$2,136.7	\$2,147.7	\$2,143.8	\$2,163.0	\$19.2

Program Management -
Water

Salaries & Expenses	\$2,477.3	\$2,570.5	\$2,566.7	\$2,411.4	-\$155.3
TOTAL	\$2,477.3	\$2,570.5	\$2,566.7	\$2,411.4	-\$155.3

Program Management -
Pesticides and Toxic
Substances

Salaries & Expenses	\$2,428.4	\$2,693.1	\$2,698.1	\$2,464.8	-\$233.3
TOTAL	\$2,428.4	\$2,693.1	\$2,698.1	\$2,464.8	-\$233.3

Program Management -
Research & Development
Salaries & Expenses
Operations, Research &
Facilities

	\$3,710.2	\$4,011.5	\$3,996.8	\$3,949.3	-\$47.5
	\$28.3				
TOTAL	\$3,738.5	\$4,011.5	\$3,996.8	\$3,949.3	-\$47.5

Program Management -
Solid Waste and
Emergency Response

Salaries & Expenses	\$786.2	\$463.4	\$850.1	\$1,352.5	\$502.4
TOTAL	\$786.2	\$463.4	\$850.1	\$1,352.5	\$502.4

TOTAL:

Salaries & Expenses	\$11,538.8	\$11,886.2	\$12,255.5	\$12,341.0	\$85.5
Operations, Research & Facilities	\$28.3				

Program Management	TOTAL	\$11,567.1	\$11,886.2	\$12,255.5	\$12,341.0	\$85.5
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PERMANENT WORK YEARS

Program Management -
Air, Noise and
Radiation

44.4	37.2	37.2	37.2
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Program Management -
Water

40.3	39.6	41.6	39.6	-2.0
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PROGRAM MANAGEMENT

Program Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Program Management - Pesticides and Toxic Substances	50.4	40.0	42.0	40.0	-2.0
Program Management - Research & Development	63.4	49.2	48.9	47.2	-1.7
Program Management - Solid Waste and Emergency Response	11.5	6.6	20.5	21.6	1.1
TOTAL PERMANENT WORKYEARS	210.0	172.6	190.2	185.6	-4.6
TOTAL WORKYEARS					

Program Management - Air, Noise and Radiation	49.1	47.8	46.8	47.8	1.0
Program Management - Water	45.0	56.6	54.3	48.6	-5.7
Program Management - Pesticides and Toxic Substances	60.2	59.3	57.9	56.3	-1.6
Program Management - Research & Development	80.6	66.8	65.0	63.8	-1.2
Program Management - Solid Waste and Emergency Response	17.2	8.7	22.6	27.0	4.4
TOTAL WORKYEARS	252.1	239.2	246.6	243.5	-3.1

MANAGEMENT AND SUPPORT

Program Management

Budget Request

The Agency requests a total of \$12,341,000 for Salaries and Expenses and 185.6 permanent workyears for 1984. This reflects an increase of \$85,500 and a decrease of 4.6 permanent workyears. Overall, the decrease in workyears results from a reduction in administrative and management overhead as well as the emphasis on allocating resources to higher priority programs.

Program Description

The Program Management component provides resources generally for the Assistant Administrators, Office Directors and their immediate staffs, for EPA's five major program Offices; Air, Noise and Radiation; Water; Pesticides and Toxic Substances; Research and Development; and Solid Waste and Emergency Response. Resources provide for formulation of overall management and programmatic policy, and centralized planning and budgeting. Activities also include the coordination and integration of programs throughout the Agency as well as performing liaison activities with Congress, OMB and other Federal Agencies and States.

PROGRAM MANAGEMENT - AIR, NOISE AND RADIATION

1984 Program Request

The Agency requests a total of \$2,163,000 and 37.2 permanent workyears for this program, all of which is for Salaries and Expenses. This represents an increase of \$19,200 from 1983 to fund increased personnel costs for public health service employees. In 1984, the emphasis of the program will once again be on effective and efficient general management; strategic planning; administrative and budget support; and policy development and direction. This program will continue to develop policies related to legislative mandates.

1983 Program

In 1983, the Agency is allocating \$2,143,800 and 37.2 permanent workyears for this program, all of which is for Salaries and Expenses. Major program emphases for 1983 are implementation of the Clean Air Act Amendments of 1977, the Atomic Energy Act, the Uranium Mill Tailings Radiation Control Act, and development of major policies related to these acts.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$3,900 results from the following action:

-Congressional Action. (-\$3,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$2,136,700 for this program, all of which was for Salaries and Expenses. The program provided executive management, strategic planning and analysis, and budget and administrative support to OANR programs. Work continued on reauthorization of the Clean Air Act and the orderly phase-out of the Noise Office was completed.

PROGRAM MANAGEMENT - WATER

1984 Program Request

The Agency requests \$2,411,400 for Salaries and Expenses and 39.6 permanent workyears. This represents a decrease of \$155,300 and 2.0 permanent workyears. This reduction is attributable to the anticipated completion of work by a staff task force which reports to the Intra-Agency Sludge Policy Committee. The Committee recommendations will be implemented in 1984 by the appropriate program offices. The request supports the continued development and implementation of a reoriented national regulatory program for the Water Quality and Drinking Water media and for their enforcement program. Resources are provided for developing strategies for water programs throughout the Agency; management directions and supervision of organizations; management of the Office of Water operating guidance and accountability system; development of program plans and budget for implementation of Agency policies and programs and tracking of budget execution; administrative management, and analysis of policy issues and monitoring of program performance from both a scientific and programmatic perspective.

1983 Program

In 1983, the Agency is allocating \$2,566,700 for Salaries and Expenses and 41.6 permanent workyears. The Agency will continue to focus on the reauthorization process for the Clean Water Act, the Safe Drinking Water Act and the Marine Protection and Sanctuaries Act; accompanying that process will be the development of strategies to implement amendments. Also in this program is a task force on municipal sludge policy which reports to the Intra-Agency Sludge Policy Committee. The task force will prepare guidance on the disposal and utilization of sludge and will review the need for, and possible structure of, additional or altered EPA regulations governing sludge management activities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$3,800 results from the following action:

-Congressional Action. (-\$3,800) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, this program obligated \$2,477,300 for Salaries and Expenses. A major focus was to improve Office of Water management through increased and better program integration and redirection of major activities such as Construction Grants. Another focus was the Construction Grants amendments to the Clean Water Act and the implementation of these amendments.

PROGRAM MANAGEMENT - PESTICIDES AND TOXIC SUBSTANCES

1984 Program Request

The Agency requests \$2,464,800 for Salaries and Expenses and 40.0 permanent workyears, a reduction of \$233,300 and 2 permanent workyears. The decreases reflect reduced requirements for general administration and oversight. These resources will provide for senior level management of the pesticides and toxic substances program as well as for the immediate office of the Assistant Administrator for Pesticides and Toxic Substances. Senior management will continue to emphasize sound scientific judgment in decision making and maintenance of backlog levels at or near zero.

1983 Program

In 1983, the Agency is allocating \$2,698,100 in Salaries and Expenses and 42.0 permanent workyears for this program. Management will build on the efforts begun in 1982 to reduce backlogs and will emphasize the use of sound scientific judgment.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$5,000 results from the following actions:

-Congressional Actions. (+\$55,000) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$59,700) This increase includes +\$59,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$4,700) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$50,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, the Agency obligated \$2,428,400 for this program, all under the Salaries and Expenses appropriation. The major accomplishment in 1982 was the large reduction in pesticides and toxic substances processing backlogs achieved under the policy and direction of senior level management.

PROGRAM MANAGEMENT - RESEARCH AND DEVELOPMENT

1984 Program Request

The Agency requests a total of \$3,949,300 for Salaries and Expenses and 47.2 permanent workyears, decreases of \$47,500 and 1.7 permanent workyears from 1983. These decreases result from the implementation of an automated planning and tracking system which will monitor ORD program resources and link performance and outputs with budget plans.

In 1984, efforts will continue to ensure the integration of research efforts at Headquarters, in laboratories and field sites, as well as to coordinate the research program planning cycle for ORD, including the development of research strategies and program plans and conducting program reviews when appropriate. Resources requested will continue to provide on-site coordination and support for the ORD laboratories in Cincinnati and Research Triangle Park. Also included are resources to operate and enhance the ORD information systems.

1983 Program

In 1983, the Agency is allocating a total of \$3,996,800 for Salaries and Expenses and 48.9 permanent workyears to this program. The activities provided for by these resources are required on a continuing basis to provide overall direction and support for the scientific, technical, and administrative management of EPA's research and development programs.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$14,700 results from the following action:

-Congressional Action. (-\$14,700) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,738,500 of which \$3,710,200 was in the Salaries and Expenses appropriation and \$28,300 was in the Operations, Research and Facilities appropriation. These resources provided for, among other activities, the scientific, technical and administrative management of ORD's programs, the coordination and integration of its research efforts, general administrative and planning and budget support.

PROGRAM MANAGEMENT - SOLID WASTE AND EMERGENCY RESPONSE

1984 Program Request

The Agency requests \$1,352,500 for Salaries and Expenses and 21.6 permanent workyears, an increase of 1.1 permanent workyears and \$502,400. This Salaries and Expense increase reflects increased payroll costs and support to the Office of Solid Waste and Emergency Response's (OSWER) management information systems. The request supports the development and implementation of the Hazardous Waste and Superfund programs. The request also provides for the review of policy and proposed regulations for conformity to law, executive orders, and Administrator's guidance and to monitor program performance. In addition, this function is supported by resources from the Hazardous Substance Response Trust Fund.

1983 Program

In 1983, the Agency is allocating \$850,100 for Salaries and Expenses and 20.5 permanent workyears. Expected accomplishments include: implementation of an overall OSWER management plan, including measures of accountability and effectiveness; integration of Hazardous Waste and Superfund activities; and the introduction of new policies designed to reduce regulatory burdens without sacrificing protection to public health and the environment.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$386,700 results from the following actions:

-Congressional Action. (+\$386,700) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$387,200) This increase includes +\$387,200 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time work-years provided to the Agency.

(-\$500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$786,200 for Salaries and Expenses. Major emphasis was placed on those activities which attend the creation of any new office: staffing, defining goals and objectives, and determining responsibilities. Major activities and accomplishments included developing management plans to implement both the Hazardous Waste and Superfund programs, proposing hazardous waste land disposal regulations, and publishing the National Contingency Plan.

Agency Management

SECTION TAB

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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AGENCY MANAGEMENT

Office of the Administrator/Executive Offices

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PROGRAM					

Immediate Office of the Administrator					
Salaries & Expenses	\$2,299.7	\$2,276.7	\$2,183.1	\$2,012.0	-\$171.1
TOTAL	\$2,299.7	\$2,276.7	\$2,183.1	\$2,012.0	-\$171.1
Regulatory Information Service Center					
Salaries & Expenses	\$863.5	\$550.0	\$546.9	\$568.3	\$21.4
TOTAL	\$863.5	\$550.0	\$546.9	\$568.3	\$21.4
Administrator's Representation Fund					
Salaries & Expenses	\$2.4	\$3.0	\$3.0	\$3.0	
TOTAL	\$2.4	\$3.0	\$3.0	\$3.0	
Office of Executive Secretariat					
Salaries & Expenses			\$401.6	\$459.8	\$58.2
TOTAL			\$401.6	\$459.8	\$58.2
Office of Management Services					
Salaries & Expenses			\$474.5	\$526.8	\$52.3
TOTAL			\$474.5	\$526.8	\$52.3
Science Advisory Board					
Salaries & Expenses	\$526.1	\$1,088.7	\$1,059.9	\$1,064.6	\$4.7
TOTAL	\$526.1	\$1,088.7	\$1,059.9	\$1,064.6	\$4.7
Office of Legislation					
Salaries & Expenses	\$1,292.9	\$959.5	\$1,720.7	\$1,811.6	\$90.9
TOTAL	\$1,292.9	\$959.5	\$1,720.7	\$1,811.6	\$90.9
Office of Legislation					
Salaries & Expenses		\$835.9			
TOTAL		\$835.9			
Office of International Activities					
Salaries & Expenses	\$1,086.1	\$1,028.3	\$953.3	\$1,035.8	\$82.5
TOTAL	\$1,086.1	\$1,028.3	\$953.3	\$1,035.8	\$82.5
Office of Civil Rights					
Salaries & Expenses	\$1,106.8	\$1,008.1	\$1,012.2	\$1,094.6	\$82.4
TOTAL	\$1,106.8	\$1,008.1	\$1,012.2	\$1,094.6	\$82.4

AGENCY MANAGEMENT

Office of the Administrator/Executive Offices

		ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
<hr/>						
(DOLLARS IN THOUSANDS)						
Civil Rights Investigations						
Salaries & Expenses			\$154.3			
	TOTAL		\$154.3			
Federal Women's Program						
Salaries & Expenses			\$10.7			
	TOTAL		\$10.7			
Office of Public Affairs						
Salaries & Expenses		\$1,527.3	\$1,421.1	\$1,297.3	\$1,393.1	\$95.8
	TOTAL	\$1,527.3	\$1,421.1	\$1,297.3	\$1,393.1	\$95.8
Office of Federal Activities						
Salaries & Expenses		\$1,406.2	\$1,189.1	\$1,268.7	\$1,643.9	\$375.2
	TOTAL	\$1,406.2	\$1,189.1	\$1,268.7	\$1,643.9	\$375.2
Office of Administrative Law Judges						
Salaries & Expenses		\$561.0	\$626.9	\$645.0	\$701.8	\$56.8
	TOTAL	\$561.0	\$626.9	\$645.0	\$701.8	\$56.8
Office of Intergovernmental Liaison						
Salaries & Expenses		\$451.7	\$352.7	\$556.4	\$532.2	-\$24.2
	TOTAL	\$451.7	\$352.7	\$556.4	\$532.2	-\$24.2
Office of Regional Liaison						
Salaries & Expenses			\$109.5			
	TOTAL		\$109.5			
Office of Small & Disadvantaged Business Utilization						
Salaries & Expenses		\$198.5	\$162.5	\$189.0	\$207.1	\$18.1
	TOTAL	\$198.5	\$162.5	\$189.0	\$207.1	\$18.1
Office Of Inspector General						
Salaries & Expenses		\$11,530.2	\$11,564.2	\$11,956.5	\$12,163.1	\$206.6
	TOTAL	\$11,530.2	\$11,564.2	\$11,956.5	\$12,163.1	\$206.6
TOTAL:		22,852.4	23,341.2	24,268.1	25,217.7	949.6
Salaries & Expenses						
Office of the Administrator/ Executive Offices	TOTAL	22,852.4	23,341.2	24,268.1	25,217.7	949.6

AGENCY MANAGEMENT

Office of the Administrator/Executive Offices

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
(DOLLARS IN THOUSANDS)					
PERMANENT WORKYEARS					
Immediate Office of the Administrator	48.5	48.6	45.6	37.6	-8.0
Regulatory Information Service Center	6.3	5.0	5.0	5.0	
Office of Executive Secretariat			11.0	11.0	
Office of Management Services			10.0	10.0	
Science Advisory Board	8.6	16.1	14.1	14.1	
Office of Legislation	26.5	23.4	33.9	31.9	-2.0
Office of Legislation		15.5			
Office of International Activities	18.9	15.0	14.0	14.0	
Office of Civil Rights	19.9	16.6	14.6	14.6	
Office of Public Affairs	32.2	18.9	20.1	20.1	
Office of Federal Activities	27.7	24.2	24.2	24.2	
Office of Administrative Law Judges	13.6	15.0	15.0	15.0	
Office of Intergovernmental Liaison	6.3	4.9	8.4	6.4	-2.0
Office of Regional Liaison		1.5			
Office of Small & Disadvantaged Business Utilization	4.6	3.1	4.1	4.1	
Office Of Inspector General	135.6	140.7	153.7	140.7	-13.0
TOTAL PERMANENT WORKYEARS	348.7	348.5	373.7	348.7	-25.0

AGENCY MANAGEMENT

Office of the Administrator/Executive Offices

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
TOTAL WORKYEARS					

Immediate Office of the Administrator	60.8	59.3	49.3	41.3	-8.0
Regulatory Information Service Center	7.4	5.0	5.0	5.0	
Office of Executive Secretariat			15.8	15.8	
Office of Management Services			14.2	14.2	
Science Advisory Board	12.0	25.9	23.9	23.9	
Office of Legislation	35.4	31.0	44.6	43.4	-1.2
Office of Legislation		19.4			
Office of International Activities	27.7	23.0	22.0	22.0	
Office of Civil Rights	27.6	23.8	21.8	21.8	
Office of Public Affairs	35.9	24.3	25.5	25.5	
Office of Federal Activities	34.3	30.3	29.3	29.3	
Office of Administrative Law Judges	13.6	15.6	15.6	15.6	
Office of Intergovernmental Liaison	9.1	7.1	11.7	9.7	-2.0
Office of Regional Liaison		2.6			
Office of Small & Disadvantaged Business Utilization	5.4	3.9	4.9	4.9	
Office Of Inspector General	156.8	170.7	183.7	170.7	-13.0
TOTAL WORKYEARS	426.0	441.9	467.3	443.1	-24.2

MANAGEMENT AND SUPPORT

Agency Management

Office of the Administrator/Executive Offices

Budget Request

The Agency requests a total of \$25,217,700 for the Salaries and Expenses appropriation and 348.7 permanent workyears for the Office of the Administrator in 1984. This is an increase of \$949,600 and a decrease of 25.0 permanent workyears from 1983. Workyear reductions occur primarily in the Office of Inspector General and in the Immediate Office of the Administrator. The resources will support stronger executive management in the form of firmer policy guidance, more effective relations with Congress, and better quality scientific advice for the entire Agency.

Program Description

This program includes the salaries and associated costs for the Immediate Office of the Administrator, the staff offices which report directly to the Administrator, and the Office of Inspector General, the latter of which comprises 48 percent of total office resources. The Administrator and Deputy Administrator are responsible for providing policy and direction to the Agency and ensuring implementation of their policies; the staff offices provide cross-cutting Agency guidance for scientific review of regulations and research, Congressional and intergovernmental liaison activities, international environmental initiatives, as well as civil rights, public affairs, administrative law hearings, and audit and investigative functions.

Immediate Office of the Administrator -- This office includes: the Administrator and Deputy Administrator, special assistants to the Administrator in the various program areas, a Judicial Officer, speech writers, clerical support staff, drivers and messengers.

Regulatory Information Service Center -- The Center is responsible for tabulating and compiling information provided by other Federal agencies concerning their regulatory efforts.

Administrator's Representation Fund -- The Fund is used for official receptions, meetings, and affairs hosted primarily by the Administrator for domestic and foreign officials.

Office of Executive Secretariat -- This office is responsible for handling, processing, and tracking all of the Administrator's correspondence, Deputy Administrator's correspondence, Congressional correspondence, and Freedom of Information (FOI) correspondence.

Office of Management Services -- This office provides centralized budget planning and implementation, resource management, personnel, and administrative support services to the Administrator and staff offices.

Science Advisory Board -- The Board consists of a Director, professional and clerical staff, and approximately 50 independent scientists and engineers who advise the Administrator on the scientific and technical bases of the Agency's decisions. They review the scientific basis of regulatory proposals, the adequacy of Agency research and the research planning process, the five-year research and development plan, as well as special requests from the Administrator, the Deputy Administrator and the Congress. The SAB prepares findings and recommendations in technical reports which are legally required to be sent directly to the Administrator and to the Congress.

Office of Legislation -- This office serves as the principal point of Congressional contact for the Agency. It provides summaries of Congressional activities throughout EPA and assists the Administrator and senior policy officials in developing plans for the Agency's legislative program. The office is responsible for preparing draft legislation and testimony to the Congress. In addition, it reviews all Congressional correspondence, responds to Congressional requests for information and coordinates grant and contract announcements.

Office of International Activities -- This office provides guidance and management for the Agency's international activities and programs with Western European countries, Japan, Brazil, and the Caribbean nations, in addition to the Agency's Scientific Activities Overseas (SAO) Program. The office also manages agreements with Canada and Mexico on cross-boundary environmental issues and oversees Agency involvement in the activities of international organizations such as the United Nations Environmental Program, the World Health Organization, and the Organization for Economic Cooperation and Development (OECD). Finally, the office plays a strong role in formulating and implementing Agency policies that affect the international marine environment.

Office of Civil Rights -- This office manages the Agency's civil rights programs. It provides policy guidance to the Administrator and evaluates activities required to carry out the Agency's responsibilities to assure equal opportunity and prohibit discrimination in employment at EPA. This program also supports the area Civil Rights Directors at major research and field installations in Cincinnati, Research Triangle Park, and Las Vegas, the activities of the Agency's Federal Women's Program Committee, and processing of discrimination complaints lodged by Agency employees and applicants for employment.

Office of Public Affairs -- This office develops Agency policy for media relations and public information. Its activities include: preparing press releases and feature material for media distribution; responding to press inquiries; conducting press conferences and briefings; coordinating media appearances of key Agency officials; and compiling daily and weekly news clips of national press coverage. In addition, under the EPA Peer and Administrative Review Control System, the office reviews all public information materials for conformance to policy and to the Agency's Graphics Standards System.

Office of Federal Activities -- This office develops national policies for dealing with environmental issues and problems associated with Federal agencies. Specifically, the Office of Federal Activities is responsible for ensuring that EPA and other Federal agencies carry out their activities in an environmentally sound manner pursuant to the National Environmental Policy Act and Section 309 of the Clean Air Act. In this capacity, OFA files and publishes notices of all Environmental Impact Statements. Additionally, in concert with the Army Corps of Engineers, OFA manages the Dredge and Fill program under Section 404 of the Clean Water Act. OFA also oversees Federal facilities compliance with environmental requirements, and specifically with Executive Order 12088.

Office of Administrative Law Judges -- Judges from this office preside over and conduct hearings required by the Administrative Procedures Act related to appeals of Agency regulations and decisions.

Office of Intergovernmental Liaison -- This office serves as the Agency's principal point of contact with major national public interest groups and State and local governments. It also serves to emphasize the Administrator's concern with developing cooperation and support for delegating more responsibility for Agency programs to State and local governments. To these ends, it assists State and local officials with their requests for information, arranges meetings with them, and encourages State and local involvement in EPA's regulatory process.

Office of Small and Disadvantaged Business Utilization -- This office provides Agency-wide oversight in implementing programs under Sections 8 and 15 of the Small Business Act (as amended) to further the utilization of EPA procurement and financial assistance programs by small and disadvantaged businesses. It develops national policy for EPA and serves as the focal point for providing guidance for implementing the Agency-wide minority and women's business enterprise policy under grants and cooperative agreements.

Office of Inspector General -- This office, the largest single component of the Office of the Administrator, is responsible for: conducting, supervising, and coordinating audits and investigations relating to EPA programs and operations; promoting economy and effectiveness in the administration of EPA programs; preventing and detecting fraud and abuse in EPA programs and operations; keeping the Administrator and Congress fully informed about problem areas and related corrective action; and reviewing EPA regulations and legislation.

IMMEDIATE OFFICE OF THE ADMINISTRATOR

1984 Program Request

The Agency requests a total of \$2,012,000 and 37.6 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents a decrease of \$171,100 and 8.0 permanent workyears resulting from work achieved with 1983 resources for developing and implementing improvements in coordination of EPA's outreach activities. The major focus of activity in 1984 will be to ensure better internal management, continue regulatory reform, pursue delegation of programs to States and local governments, and support enhanced science as a basis for decision-making.

1983 Program

In 1983, the Agency is allocating a total of \$2,183,100 and 45.6 permanent workyears to this office, all of which is for the Salaries and Expenses appropriation. In 1983, resources will be applied to improve coordination among our major outreach staff offices and ensure that EPA external activities reflect the overall interests and positions of the Administrator, as well as to improve Agency communication on issues with major outside organizations, Congress, and public interest groups. Staff resources will also be devoted to a workforce planning initiative to provide policy guidance and support to the Administrator in evaluating reorganizations and staffing considerations. The Agency will consider alternatives for continuing these activities beyond 1983.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$93,600 results from the following actions:

-Reorganization. (-\$514,400) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Actions. (+\$201,200) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$203,400) This increase includes +\$203,400 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$2,200) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$219,600) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$219,600 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,299,700 for this program, all of which was for the Salaries and Expenses appropriation. The Immediate Office completed the consolidation of administrative, resource, personnel and correspondence activities through a reorganization of functions and the creation of the Offices of Management Services and Executive Secretariat. Work was completed on the newly operational Executive Correspondence Tracking system.

REGULATORY INFORMATION SERVICE CENTER

1984 Program Request

The Regulatory Information Service Center requests a total of \$568,300 and 5.0 permanent workyears, all of which is for the Salaries and Expenses appropriation. This is an increase of \$21,400 and is no change in permanent workyears. The Center will publish two editions of the Unified Agenda of Federal Regulations and will maintain an automated data base of Federal Government regulatory activity. The Center will also continue its monthly analysis of Federal Register Statistics.

1983 Program

The Regulatory Information Service Center is allocating a total of \$546,900 and 5.0 permanent workyears, all of which is for the Salaries and Expenses appropriation. The Center produced the first Unified Agenda of Federal Regulations in October 1982. The second edition of the Unified Agenda will be published in April 1983. The Center will also place into operation an automated data base of Federal regulatory activity, as well as continue its monthly analysis of the Federal Register's Statistics.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$3,100 results from the following action:

-Congressional Action. (-\$3,100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$863,500 for this program, all of which was in the Salaries and Expenses appropriation. The Center produced the final edition of the Calendar of Federal Regulations, developed a prototype of the Unified Agenda of Federal Regulations, and performed the development work for the automation of Federal regulatory activity. The Center also instituted an analysis of Federal Register Statistics, which was continually refined during the course of the year.

ADMINISTRATOR'S REPRESENTATION FUND

1984 Program Request

The Agency requests a total of \$3,000 for this program, all of which is used under the Salaries and Expenses appropriation. This reflects no change from the 1983 level.

1983 Program

In 1983, the Agency is allocating a total of \$3,000 to this program, all of which is under the Salaries and Expenses appropriation.

1983 Explanation of Changes from Budget Estimate

There is no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,400 for this function under the Salaries and Expenses appropriation.

OFFICE OF EXECUTIVE SECRETARIAT

1984 Program Request

The Agency requests a total of \$459,300 and 11.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$58,200 and no permanent workyears from 1983 levels. This office will continue to manage the Administrator's correspondence, Deputy Administrator's correspondence, Congressional correspondence, and Freedom of Information (FOI) correspondence.

1983 Program

In 1983, the Agency is allocating a total of \$401,600 and 11.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. Through the newly completed Executive Correspondence Tracking System, the office will track and monitor all incoming and outgoing Agency correspondence. The office will prepare a yearly report to Congress on the cost to the Agency and to the public of administering the Freedom of Information Act. A reorganization of activities, approved by the Congress, resulted in the establishment of this program element beginning in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$401,600 results from the following actions:

-Reorganization. (+\$335,100) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$300) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$66,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$66,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

No resources were obligated by this office in 1982. Activities and resources supporting this program in 1982 were performed in the Immediate Office of the Administrator, and the Office of Legislation.

OFFICE OF MANAGEMENT SERVICES

1984 Program Request

The Agency requests a total of \$526,800 and 10.0 permanent workyears, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$52,300 and no additional permanent workyears from 1983 levels. This office will continue to provide administrative, personnel management and budget support to staff offices in the Office of the Administrator. Activities will focus on improving resource and personnel utilization by centralizing financial management and automating personnel records.

1983 Program

In 1983, the Agency is allocating a total of \$474,500 and 10.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. The Office will monitor resource expenditures, develop planning studies to save space and lessen resource demands, provide uniform personnel and administrative support services, and assist staff offices with recruitment and staffing and property control. A reorganization of activities, approved by the Congress, resulted in the establishment of this program element beginning in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$474,500 results from the following actions:

-Reorganization. (+\$380,000) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$300) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$94,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$94,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

No resources were obligated by this office in 1982. Activities and resources supporting this program in 1982 were performed in the Immediate Office of the Administrator, and the staff offices.

SCIENCE ADVISORY BOARD

1984 Program Request

The Agency requests a total of \$1,064,500 and 14.1 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$4,700 and no permanent workyears from 1983 levels. This increase will be used to expand the number of meetings held to address selected issues. The Deputy Administrator will identify 15-25 major regulatory issues for the Science Advisory Board to review in 1984. This program will enable the Administrator and the Agency to gain greater credibility by basing regulatory decisions on scientific and technical data which has been reviewed by the Science Advisory Board (SAB).

1983 Program

The Agency is allocating a total of \$1,059,900 and 14.1 permanent workyears to this program, all of which is for the Salaries and Expenses appropriation. The SAB will be involved in a number of reviews during 1983. Included among these will be High Level Radioactive Waste Disposal Standards; Site-specific Water Quality Criteria; Guidelines for Mutagenicity Risk Assessment; Maximum Contaminant Levels for Volatile Organic Chemicals in Drinking Water; Health Advisories on Aldicarb and on Unregulated Contaminants in Drinking Water; Effluent Guidelines for the Pesticide Industry; EPA's Sludge Management Guidelines; proposed revisions

to the Agency's Secondary Treatment Regulations; Air quality criteria documents for lead and ozone published under Section 108, and national primary and secondary ambient air quality standards, published under Section 109 of the Clean Air Act; Critical Assessment Document for Acidic Deposition; Health Risk Assessment Methodology for Alternative National Ambient Air Quality Standards; review of proposals to reorganize EPA's research laboratories; EPA's Five Year Research and Development Plan; and review of Health Assessment Documents for Hazardous Pollutants.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$28,800 results from the following actions:

-Congressional Actions. (+\$1,200) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$3,400) This increase includes +\$3,400 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$2,200) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$30,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$30,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$526,100 for this program, all of which was under the Salaries and Expenses appropriation. During 1982, the SAB provided advice on the scientific and technical aspects of a variety of environmental issues, as requested by the Administrator and as mandated by Congress. Among the issues reviewed by the Board during 1982 were the following: scientific and technical bases of the August 1982 proposed regulations to control the use of lead in gasoline; the proposed Effluent Guidelines for the organic chemicals and plastics and synthetic fibers industries; multiple-exceedence approach for a carbon monoxide national ambient air quality standard; draft Health Assessment Document for Toluene; Carcinogen Assessment of Coke Oven Emissions; in addition to numerous other health assessment documents and issues.

OFFICE OF LEGISLATION

1984 Program Request

The Agency requests a total of \$1,811,600 and 31.9 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$90,900 and a decrease of 2.0 permanent workyears over 1983 levels. During 1984, the office will realize efficiencies in dealing with Congressional and Agency requests due to automation of legislative research functions. The budget request will enable the office to provide day-to-day liaison with the Congress and will ensure that legislation, testimony and reports on legislation are provided to the Congress in a timely manner.

1983 Program

The Agency is allocating a total of \$1,720,700 and 33.9 permanent workyears to this office, all of which is for the Salaries and Expenses appropriation. The Office of Legislation provides leadership and support for special working groups established within the Agency to draft legislative initiatives in key areas. It ensures that testimony, drafting of legislation, and reports on pending and enacted

legislation will be performed in a timely fashion. Special attention will be devoted to reauthorization of the Clean Air, Clean Water, and Safe Drinking Water Acts. The Office is also responsible for representing the Agency in all day-to-day contacts with Congress. In 1983, this program contains the resources which previously supported both the Office of Legislation and Office of Congressional Liaison.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$74,700 results from the following actions:

-Reorganization. (-\$123,100) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$1,700) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$50,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$50,100 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,292,900 for this program, all of which was for the Salaries and Expenses appropriation.

In 1981, the Office of Legislation was separated into two components -- the Office of Congressional Liaison remained in the Executive Offices and the Office of Legislation was moved into the Office of Policy and Resource Management. During the mid-year review, it became apparent that closer links needed to be maintained between the analysis and tracking of legislation performed in the Office of Legislation, and day-to-day liaison with individual Congressmen and committees as performed in the Office of Congressional Liaison. The Administrator, therefore, approved a reorganization on September 5, 1982 which consolidated these offices into one within the Executive Offices. The Office of Legislation now consists of the Immediate Office of the Director, the Congressional Liaison Division and the Legislative Division.

The former Office of Congressional Liaison was responsible for all day-to-day Congressional contacts. The former Office of Legislation reviewed legislative suggestions from the program offices for consistency with the Administrator's overall goals and policies and recommended to the Administrator a package of legislative amendments to be pursued in 1983 and 1984. In addition, the Office of Legislation handled 90 hearings and associated testimony, and submitted seven formal legislative proposals.

OFFICE OF INTERNATIONAL ACTIVITIES

1984 Program Request

The Agency requests a total of \$1,035,800 and 14.0 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$82,500 and no permanent workyears from 1983 levels. Efforts will be directed toward the implementation of transboundary pollution control agreements with Canada and Mexico. The office will take further steps to

optimize the Agency's participation in the Organization for Economic Cooperation and Development (OECD) and United Nations related activities. Increased emphasis will be placed on existing bilateral scientific agreements with West Germany, Japan, and China.

1983 Program

The Agency is allocating a total of \$953,300 and 14.0 permanent workyears to this office, all of which is for the Salaries and Expenses appropriation. Relations with Canada will continue to dominate the focus of OIA. This includes continuing negotiations on a transboundary air quality agreement, a joint plan to reduce phosphorous levels in the Great Lakes, and cooperative efforts to remedy the pollution in the Niagara River Basin. Negotiations are under way with Mexico concerning a new border agreement on natural resources and the environment. New initiatives will be taken in support of the President's special interest in bilateral relations with West Germany, Brazil, China, and Caribbean nations. Participation in international organizations is highlighted by the Administrator's chairing of the U.S. delegation to the OECD's second High-Level meeting on chemicals in November and EPA's chairing of the U.S. delegation to the meeting of the London Dumping Convention in February.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$75,000 results from the following actions:

-Reorganization. (-\$25,900) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$1,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$47,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$47,200 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,086,100 for this program, all of which was for the Salaries and Expenses appropriation. Internationally, acid deposition received widespread attention through additional negotiations with Canada, EPA leadership of both the U.S. delegation to the Stockholm Conference on Acidification of the Environment, and the US and Dutch NO_x Symposium. The Administrator co-chaired the U.S. delegation to the tenth anniversary meeting in Nairobi of the United Nations Environment program. The Administrator also hosted the fifth meeting of the US and Japan environmental coordination committee and held discussions in Mexico City with EPA's counterpart organization. EPA continued its active participation in the OECD Environment Committee and its subsidiary expert groups.

OFFICE OF CIVIL RIGHTS

1984 Program Request

The Agency requests a total of \$1,094,600 and 14.6 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This is an increase of \$82,400 and no permanent workyears from 1983 levels. The increase

will be used to continue to meet the Agency's goal of zero inventory growth in Equal Employment Opportunity (EEO) complaints; implement the Agency's plan for historically Black Colleges and Universities; continue EPA's negotiations with the Department of Labor to eliminate the backlog of complaints filed under the Contract Work Hours and Standards Act; and to develop a strategy to assist the Regional Offices in eliminating the buildup of cases filed under Section 504 of the Rehabilitation Act of 1974.

1983 Program

The Agency is allocating a total of \$1,012,200 and 14.6 permanent workyears, all of which is for the Salaries and Expenses appropriation. The Office of Civil Rights is: arranging an EEO Officers Planning Conference; providing assistance to EPA program offices in developing the Agency's plan for support to Historically Black Colleges and Universities; publishing, as a final rule, the consolidated non-discrimination regulation directed toward recipients of Agency financial assistance; implementing a more effective Headquarters EEO counseling program; developing an Agency-wide Affirmative Action Plan in accordance with Equal Employment Opportunity Commission requirements and monitoring the Agency's compliance with affirmative action goals; and continuing its efforts to achieve the Agency's goal of zero inventory growth in EEO complaints. In 1983, with approval from the Congress, the Federal Women's Program and Civil Rights Investigations activities are now included in this component.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$160,900 results from the following actions:

-Reorganization. (-\$31,700) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$2,400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$126,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$126,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,038,300 for this program, all of which was in the Salaries and Expenses appropriation. The Congressionally approved restructuring consolidated program elements with related functions within the Office of Civil Rights into one element to promote greater efficiency in resource management. It moved the Federal Women's Program and Civil Rights Investigations into a program element entitled Office of Civil Rights.

In addition, the functions of this office were realigned during the latter part of 1982 to strengthen and improve the administration and cost-effectiveness of the discrimination complaints process. This realignment and the subsequent improvement of the EEO counseling program have resulted in a 48 percent reduction in the number of EEO complaints filed.

The office provided assistance to EPA program offices in developing the Agency's plan for support to Historically Black Colleges and Universities, developed an Agencywide Affirmative Action Plan, and monitored the Agency's compliance with affirmative action goals. The Headquarters Special Emphasis program sponsored cultural awareness activities for Black History Month and Hispanic Heritage Week. Managerial and supervisory workshops were held during National Secretaries' week and Women's week. An Agencywide conference for Federal Women's Program Managers and Special Emphasis Program Managers was held which focused on integrating the Special Emphasis Program with the total Affirmative Action Program.

The Office's External Compliance Staff completed negotiations with the Department of Justice on the Agency's consolidated non-discrimination regulation. The regulation was placed in the Agency's formal review process at the end of 1982. A plan has been developed to assist in its implementation. A National EEO Officers Planning Conference was held with the Department of Justice and EPA participants to familiarize them with the regulation and its impact at the Regional and State levels.

OFFICE OF PUBLIC AFFAIRS

1984 Program Request

The Agency requests a total of \$1,393,100 and 20.1 workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$95,800 and no permanent workyears from 1983 levels. In 1984, the Office of Public Affairs will continue to inform the public of Agency activities and to promote better understanding of the Administrator's objectives and goals as well as the Agency's mission.

1983 Program

The Agency is allocating a total of \$1,297,300 and 20.1 workyears for this office, all of which is for the Salaries and Expenses appropriation. In addition to its primary responsibilities of working with the news media as well as conducting other public information activities, the Office of Public Affairs will: (1) produce a biweekly external newsletter which will communicate the Administrator's goals and actions to the public; (2) produce a biweekly internal newsletter which will keep employees informed and aware of Agency activities and actions as they affect EPA's mission and its employees; and (3) handle an expanding community relations program shared with the Superfund program.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$123,800 results from the following actions:

-Congressional Action. (+\$37,700) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$40,700) This increase includes +\$40,700 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$3,000) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$161,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$161,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,527,300 for this program, all of which was for the Salaries and Expenses appropriation. In addition to its regular duties, the office assisted in the production of an annual Administrator's Report to the President; published a new booklet as a guide to the Agency and its activities; initiated a more comprehensive daily news briefs publication for the use of top Agency officials; developed a four-page biweekly newsletter for employees; implemented the Agency's Peer Review and Administrative Control System; and directed an Agencywide publication review to eliminate unnecessary Agency publications.

OFFICE OF FEDERAL ACTIVITIES

1984 Program Request

The Agency requests a total of \$1,643,900 and 24.2 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$375,200 and no permanent workyears. This reflects increased automated data processing support for the Federal Facility Information System (previously funded by the Office of Legal and Enforcement Counsel) and office equipment purchases. The Office of Federal Activities (OFA) anticipates that it will continue to prepare and review the necessary environmental documents for compliance with the National Environmental Policy Act (NEPA), such as Environmental Impact Statements (EISs), review other Federal agencies' projects and actions including their EISs, direct activities to assure compliance by other Federal agencies with all environmental statutes pursuant to Executive Order 12088, review the budget plans of other agencies to assure adequate funding of abatement projects pursuant to the Office of Management and Budget Circular A-106 and manage the Dredge and Fill program.

1983 Program

In 1983, the Agency is allocating \$1,268,700 and 24.2 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. The Office of Federal Activities develops guidance and directs implementation of EPA policies associated with other Federal agencies; it anticipates increasing liaison activities with these agencies. OFA plans to continue working on regulatory reform initiatives, particularly streamlining of procedural requirements of the Dredge and Fill and NEPA programs. In addition, the office continues to review and prepare EISs, review other Federal actions, and direct activities pursuant to Executive Order 12088 and Office of Management and Budget Circular A-106 related to compliance of Federal installations with environmental regulations. Emphasis will be placed on the cleanup of hazardous waste sites owned or operated by the Federal Government.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$79,600 results from the following actions:

-Reorganization. (-\$20,000) The Congressionally approved reorganization within the staff offices created the Office of Management Services which consolidated the budget, financial management, planning, and administrative services functions into one office. It also created the Executive Secretariat, which because of the Administrator's interest in improving the effectiveness of the correspondence tracking functions, consolidated Freedom of Information, Executive Correspondence, and Congressional Correspondence functions.

-Congressional Action. (-\$1,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$101,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$101,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,406,200 for this program, all of which was for the Salaries and Expenses appropriation. The Office of Federal Activities (OFA) focused its activity on regulatory reform within the Dredge and Fill program and on development and implementation of Agency policies and guidance associated with other Federal agencies. Specifically, OFA reviewed 54 Environmental Impact Statements (EISs) and 150 proposed rules and regulations pursuant to the National Environmental Policy Act and Section 309 of the Clean Air Act. OFA continued to direct activities to assure compliance of Federal facilities with all environmental mandates.

OFFICE OF ADMINISTRATIVE LAW JUDGES

1984 Program Request

The Agency requests a total of \$701,800 and 15.0 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$56,800 and no permanent workyears from 1983 levels. In 1984, this office will continue to preside over and conduct hearings required by the Administrative Procedures Act related to enforcement actions initiated by the Agency. Preliminary estimates indicate a significant number of new Section 120, Clean Air Act, and Resource Conservation and Recovery Act cases in 1984. The Administrative Law Judges will also continue to adjudicate civil rights cases investigated by the Office of Civil Rights.

1983 Program

The Agency is allocating a total of \$645,000 and 15.0 permanent workyears to this program, all of which is for the Salaries and Expenses appropriation. The total number of cases expected from EPA Regional Offices in 1983 is 276 cases. This represents 114 more cases than 1982, or an increase in case workload of 57 percent. In addition, the office will handle cases originating at Headquarters including suspensions, cancellations, Section 3(c)(1)(D) of the Federal Insecticide, Fungicide, and Rodenticide Act and Clean Air Act cases, and Civil Rights cases.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$18,100 results from the following actions:

-Congressional Action. (-\$100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$18,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$18,200 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$561,000 for this program, all of which was for the Salaries and Expenses appropriation. For 1982, this office maintained a docket of 217 cases, most of which required only a small time investment, while a relative few constituted the majority of the judges' workload.

For instance, one case - Applications to Use Sodium Fluoroacetate (Compound 1080) to Control Predators - necessitated the full time service of one Judge involving 74 days of hearings. This case originated on December 22, 1981, and an initial decision was issued on October 22, 1982. During the year, 61 cases were settled by Consent Agreement and Final Order. Seventeen initial decisions were issued. Through a realignment of Civil Rights functions, this office was given responsibility for adjudicating Civil Rights cases.

OFFICE OF INTERGOVERNMENTAL LIAISON

1984 Program Request

The Agency requests a total of \$532,200 and 6.4 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This represents a decrease of \$24,200 and 2.0 permanent workyears from 1983 levels. In 1984, the office expects to continue to enhance its program of communication and liaison with State and local elected officials and major intergovernmental constituency organizations (ICOs). In addition to these ongoing responsibilities, the office expects to develop an environmental law handbook and to conduct an environmental seminar for State legislators and other elected officials. The office also expects to expand its program of liaison with business groups.

1983 Program

In 1983, the Agency is allocating a total of \$556,400 and 8.4 permanent workyears, all of which is for the Salaries and Expenses appropriation. The current program includes activities which support one of the Administrator's primary goals, to pursue delegation of EPA programs to State and local governments. The office will improve communication with elected State and local officials by completing the installation of an automated mailing system; maintaining regular contact with intergovernmental constituent organizations; representing the Agency at meetings conducted by ICO environmental committees and assisting in the development of ICO environmental policy statements; developing an Agency policy on the review of ICO contract and grant requests to ensure relevant and cost-effective work products; participating in Agencywide workgroups on EPA policy management issues; communicating on a regular and frequent basis with elected State and local officials; and providing advice on State and local concerns to senior Agency officials.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$94,200 results from the following actions:

-Congressional Action. (+\$67,000) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$67,800) This increase includes +\$67,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$800) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$27,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$27,200 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$451,700 for this program, all of which was in the Salaries and Expenses appropriation. During 1982, the office completed an internal reorganization, finalized details of a cost-effective computer-

ized mailing system, established and improved working relationships with fifteen intergovernmental constituency organizations, attended and/or addressed numerous meetings of 100 environmental committees, began a series of informal meetings with various business groups, and communicated on a daily basis with numerous elected State and local officials. The Congressionally approved shift of resources from the former Office of Regional Liaison to the Office of Intergovernmental Liaison reflected the Administrator's decision to support an increased emphasis on delegation of EPA programs to the States.

OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION

1984 Program Request

The Agency requests a total of \$207,100 and 4.1 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$18,100 and no permanent workyears from 1983 levels. In 1984, the Office will continue to comply with the Presidential directive to increase our level of preferential contracting efforts and to initiate a program to assure reasonable minority business participation in procurement under assistance programs. Guidance, training and technical assistance will be provided to Agency program and Regional Offices as well as to grant recipients and minority business contractors.

1983 Program

The Agency is allocating a total of \$189,000 and 4.1 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. In 1983, the office will comply with the Presidential directive to assure increased minority business participation in contracting under grants and cooperative agreements. Extensive assistance to program and Regional Offices, grant recipients, and minority contractors is anticipated.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$26,500 results from the following actions:

-Congressional Action. (-\$100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$26,600) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$26,600 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$198,500 for this program, all of which was for the Salaries and Expenses appropriation. The Agency awarded \$261.8 million in direct procurement contracts which were subject to our preferential contracting efforts. This total exceeded the Agency's Small Business prime contracting goal by 6.5 percent and met or exceeded its goals for Women's Business Enterprise and Section 8(a) contracting.

OFFICE OF INSPECTOR GENERAL

1984 Program Request

The Agency requests a total of \$12,163,100 and 140.7 permanent workyears for this office, all of which is for the Salaries and Expenses appropriation. This reflects an increase of \$206,600 and a decrease of 13.0 permanent workyears from

1983 levels. The reduction in workyears results from progress we expect to make with 1983 resources in reducing the backlog of construction grant final audits as well as from efficiencies achieved through the revised auditing process. In 1984, eliminating the remainder of the backlog of construction grant final audits will remain the first priority for the Office of Inspector General. The office plans to conduct investigations of fraud against the Government, particularly of contractor bid-rigging. In addition, the Office of Inspector General will be involved in suspension and debarment activities in those cases where firms or individuals have been indicted and convicted. The Office of Inspector General has ongoing responsibility for audits and investigations of the Agency programs and operations which include audits of grants and contracts, internal and management reviews, investigations of illegal activities and misconduct of EPA employees, grantees and contractors.

1983 Program

In 1983, the Agency is allocating a total of \$11,956,500 and 153.7 permanent workyears to this office, all of which is for the Salaries and Expenses appropriation. Contract resources are used for auditing services provided by other Federal agencies and CPA firms. Although the Office of Inspector General has continuing responsibility for conducting pre-award, interim, and final audits and investigations of EPA programs and operations, it has identified its first priority for 1983 as that of implementing the revised audit procedures to expedite closeouts and eliminate backlogs of construction grant projects. In addition, auditors will concentrate on 1) identification of unliquidated obligations for inactive construction grants, 2) Regional and State management of the construction grant program under Section 205(g) delegation, and 3) reviews of weaknesses on internal controls disclosed by Agency vulnerability assessments. Continued efforts to encourage use of the Office of Inspector General hotline will uncover instances of suspected fraud, waste, and mismanagement. Investigative efforts will be directed to high-potential cases in the areas of antitrust violations, contract fraud, travel, and time and attendance violations.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$392,300 results from the following actions:

-Congressional Action. (+\$392,300) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$440,600) This increase includes +\$440,600 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$48,300) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$11,530,200 for this program, all of which was for the Salaries and Expenses appropriation. The Office of Inspector General issued 1,651 audit reports questioning \$508 million of the \$4.8 billion audited. During 1982, the Office of Inspector General opened 140 new investigations and closed 76 cases, which resulted in seven indictments and convictions. The office completed the initial phase of coordinating vulnerability assessment for all Agency programs and began work to reduce the backlog of construction grant projects awaiting final audit. To eliminate this backlog, the Office of Inspector General revised its audit approach to discontinue broad-scope audits in favor of limited scope audits directed at large construction grants, and specifically the areas most vulnerable to waste and abuse within those grants.

AGENCY MANAGEMENT

Office of Policy & Resource Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	
<hr/>						
(DOLLARS IN THOUSANDS)						
<hr/>						
PROGRAM						
<hr/>						
Program Management - Policy & Resource Management						
Salaries & Expenses	\$905.7	\$724.0	\$1,052.4	\$950.9	-\$101.5	
TOTAL	\$905.7	\$724.0	\$1,052.4	\$950.9	-\$101.5	
Office of the Comptroller						
Salaries & Expenses	\$2,485.3	\$2,063.5	\$2,399.6	\$2,227.8	-\$171.8	
Operations, Research & Facilities	\$81.7					
TOTAL	\$2,567.0	\$2,063.5	\$2,399.6	\$2,227.8	-\$171.8	
Program Integration Project						
Salaries & Expenses	\$2,388.7	\$3,667.0	\$3,516.2	\$3,341.6	-\$174.6	
TOTAL	\$2,388.7	\$3,667.0	\$3,516.2	\$3,341.6	-\$174.6	
Office of Policy Analysis						
Salaries & Expenses	\$8,098.1	\$8,433.0	\$8,362.8	\$8,070.9	-\$291.9	
TOTAL	\$8,098.1	\$8,433.0	\$8,362.8	\$8,070.9	-\$291.9	
Office of Standards & Regulations						
Salaries & Expenses	\$3,683.9	\$3,574.0	\$3,844.9	\$4,020.2	\$175.3	
TOTAL	\$3,683.9	\$3,574.0	\$3,844.9	\$4,020.2	\$175.3	
Office of Management Systems & Evaluation						
Salaries & Expenses	\$1,995.7	\$2,155.1	\$2,185.0	\$2,250.1	\$65.1	
TOTAL	\$1,995.7	\$2,155.1	\$2,185.0	\$2,250.1	\$65.1	
TOTAL:						
Salaries & Expenses	19,557.4	20,616.6	21,360.9	20,861.5	-499.4	
Operations, Research & Facilities	81.7					
Office of Policy and Resource Management	TOTAL	\$19,639.1	20,616.6	21,360.9	20,861.5	-499.4

AGENCY MANAGEMENT

Office of Policy and Resource Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PERMANENT WORKYEARS					

Program Management - Policy & Resource Management	11.7	14.0	21.0	16.0	-5.0
Office of the Comptroller	46.5	45.0	56.0	45.0	-11.0
Program Integration Project	6.6	21.0	17.7	12.0	-5.7
Office of Policy Analysis	36.2	32.1	31.8	31.1	-.7
Office of Standards & Regulations	27.2	29.3	40.0	40.0	
Office of Management Systems & Evaluation	32.1	36.2	37.1	37.1	
TOTAL PERMANENT WORKYEARS	160.3	177.6	203.6	181.2	-22.4
TOTAL WORKYEARS					

Program Management - Policy & Resource Management	14.8	19.1	25.5	21.1	-4.4
Office of the Comptroller	59.4	56.7	67.7	58.7	-9.0
Program Integration Project	10.5	21.0	17.7	14.0	-3.7
Office of Policy Analysis	57.2	55.3	55.0	54.3	-.7
Office of Standards & Regulations	53.7	53.5	64.2	66.5	2.3
Office of Management Systems & Evaluation	44.6	47.1	48.0	48.0	
TOTAL WORKYEARS	240.2	252.7	278.1	262.6	-15.5

MANAGEMENT AND SUPPORT

Agency Management

Office of Policy and Resource Management

Budget Request

The Agency requests a total of \$20,861,500 and 181.2 permanent workyears for 1984, a decrease of \$499,400 and 22.4 permanent workyears from 1983. Workyear reductions occur primarily in the Office of the Comptroller, the Program Integration Project, and in Program Management. All resources are under the Salaries and Expenses appropriation.

Program Description

The Office of Policy and Resource Management (OPRM), under the guidance of the Associate Administrator, directs the Agency's regulation development and review process, formulates Agency policy, and allocates the Agency's resources.

Specifically, OPRM reviews all EPA regulations to ensure consistency with Agency policy, coordinates all internal Agency reviews of regulations, and leads the Agency's regulatory reform activities.

In addition, OPRM's analyses of the economic, energy, and environmental effects of EPA's regulations, policies, and programs, as well as evaluations of the effectiveness of ongoing Agency programs, stimulate policy formulation. Through these programs, the Agency is developing a framework for a well-run strategic planning and management process, and ensuring that EPA's program objectives and environmental goals are clearly defined and met. OPRM also provides special studies and analyses to support Agency decisionmaking processes in both management and program areas.

Finally, OPRM controls the Agency's central planning and budgeting process which allocates workyear and financial resources among program areas and ensures adequate fund control. A brief description of each of the program elements included in OPRM follows.

Program Management - Policy and Resource Management -- This program element supports the Associate Administrator's Immediate Office and provides senior management, policy direction, program planning, and budgeting and resource management within OPRM.

Office of the Comptroller -- This component develops and operates EPA's program planning and budgeting system; analyzes and prepares Agency budgets for submission to Congress and OMB; and maintains the Agency's allocation, control, and review system for all workyear and financial resources.

Program Integration Project -- This project is developing an analytic framework for integrating the toxics control activities of EPA's major programs.

Office of Policy Analysis -- This program element contains resources to analyze all EPA regulations, policies, and programs from the perspective of their economic, energy, and environmental impacts and benefits.

Office of Standards and Regulations -- This office manages the Agency's regulation development and review process, analyzes all of EPA's regulations to ensure technical quality and consistency with Agency policy, designs the Agency's regulatory reform activities, and develops innovative approaches to regulation.

Office of Management Systems and Evaluation -- This program operates the Agency's accountability system, evaluates program effectiveness in meeting Agency goals, and designs and implements necessary management reforms, including a system to manage for environmental results.

PROGRAM MANAGEMENT - POLICY AND RESOURCE MANAGEMENT

1984 Program Request

The Agency requests a total of \$950,900 and 16.0 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects a decrease of \$101,500 and 5.0 permanent workyears from 1983. This program will continue to provide overall policy direction and will conduct the activities necessary to manage the component offices of the Office of Policy and Resource Management, including special studies and analyses to support the OPRM decisionmaking process.

1983 Program

In 1983, the Agency is allocating a total of \$1,052,400 and 21.0 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation. These funds support the basic budgetary, administrative, analytic, and planning activities necessary to manage the Office of Policy and Resource Management.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$328,400 results from the following actions:

-Congressional Action. (+\$191,600) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$192,000) This increase includes +\$192,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$136,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$136,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$905,700 for this program, all of which was under the Salaries and Expenses appropriation. These resources allowed the formulation of OPRM's policy direction, program planning, the conduct of special analyses, and the development of OPRM's budget and management of its resources.

OFFICE OF THE COMPTROLLER

1984 Program Request

The Agency requests a total of \$2,227,800 and 45.0 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects a decrease of \$171,800 and 11.0 permanent workyears from 1983. With these resources, the Office of the Comptroller (OC) will direct the planning and budgeting process used by top management to resolve major policy and resource allocation issues for the 1985 budget process; provide resource analyses, information, and assistance to all Headquarters and Regional management offices; manage and continually update the ob-

ligations and outlays forecasting system; and conduct analyses of resource trends (including a thorough study of the Agency's support accounts) to provide a better link between planning, budgeting, and resource use.

1983 Program

In 1983, the Agency is allocating a total of \$2,399,600 and 56.0 workyears to this program, all of which is under the Salaries and Expenses appropriation. With these funds, the Office of the Comptroller is providing an improved analytic base for the projection of outlays. To support development of the 1984 Operating Plan and the 1985 Budget Request, OC is implementing management improvements in the budget process including review and enhancement of the Agency's workload models and activity pricing schemes. The Comptroller is providing special analyses to support top Agency management in effective decision-making regarding key resource and policy issues.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$336,100 results from the following actions:

-Congressional Action. (+\$336,100) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$338,800) This increase includes +\$338,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$2,700) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,567,000 for this program, of which \$2,485,300 was for the Salaries and Expenses appropriation and \$81,700 was for the Operations, Research, and Facilities appropriation. This Office initiated the effort to develop its analytic base for projecting outlays and took steps to simplify and otherwise advance the budget process as well as to improve the quality of the Agency's workload models.

PROGRAM INTEGRATION PROJECT

1984 Program Request

The Agency requests a total of \$3,341,600 and 12.0 permanent workyears for this program, all of which is for Salaries and Expenses. This represents a decrease of \$174,600 and 5.7 permanent workyears from 1983, reflecting the progress achieved by the Program Integration Project (PIP) in completing the development of industrial models strategy options. The resources provided will control the undertaking of new industry studies to better assess the cost-effectiveness of all environmental regulations for particular industrial sectors. Also, in 1984, PIP will work on a third geographic study area to further development of strategies for enabling Federal, State, and local governments to jointly develop efficient environmental control for particular geographic areas. In addition, resources for this program will allow for analyses to determine the most effective manner in which to transfer the application of the geographic approach to Regional Offices and States.

1983 Program

In 1983, the Agency is allocating a total of \$3,516,200 and 17.7 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation. These resources are being used to focus on and further refine the industry

and geographic methodologies formulated in 1981 and 1982. PIP is developing a mathematical programming model that will make possible the estimation of the most cost-effective pollution control strategies for the industry under study. An enhanced geographic approach is being introduced as a demonstration in the Philadelphia region and work is commencing on applying such methodology to a second demonstration site.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$150,800 results from the following actions:

-Congressional Action. (-\$27,800) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$123,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$123,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,388,700 for this program, all of which was under the Salaries and Expenses appropriation. These funds allowed the further development of an integrated framework for toxics control and the formulation of industry and geographic methodologies. Preliminary refinements of these approaches were undertaken; the statistical validity of certain aspects of the models were analyzed; and both were extended to cover ecological effects.

OFFICE OF POLICY ANALYSIS

1984 Program Request

The Agency requests a total of \$8,070,900 and 31.1 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects a decrease of \$291,900 and .7 permanent workyears from 1983. In 1984, the Office of Policy Analysis (OPA) will focus on reviewing existing regulations and standards, which will require intensified cost-benefit and cost-effectiveness analysis. OPA will place additional emphasis on intra-industry and cross-industry cost-effectiveness comparison. To effectively support this activity, the office will thoroughly review its existing data base and upgrade and expand it as necessary. The Agency will be reviewing all the National Ambient Air Quality Standards as well as many of its recently promulgated effluent guidelines. Amendments to the Clean Air and Clean Water Acts may lead to even more extensive regulatory reviews. OPA will continue its strategic studies which examine the cumulative macroeconomic impacts of EPA's regulations on major industries. OPA will also initiate a new Congressionally mandated "Cost of Clean Air and Water" report.

1983 Program

The Agency is allocating a total of \$8,362,800 and 31.8 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation. In 1983, OPA is continuing to oversee the Agency's implementation of Executive Order 12291, working closely with program offices to evaluate the costs, economic impact, and benefits of prospective regulatory requirements or changes. OPA is analyzing the economic impact of potential amendments to the Clean Air and Water Acts and is completing the "Cost of Clean Air and Water" report. Work is also being concluded on the permitting progress of important energy projects. Also, a study of the macroeconomic impacts of all EPA regulations is being initiated.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$70,200 results from the following actions:

-Congressional Action. (-\$61,400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$8,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$8,800 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$8,098,100 for this program, all of which was under the Salaries and Expenses appropriation. In 1982, OPA focused on regulatory reform which was consistent with the Administration's overall economic revitalization program. These efforts included identifying opportunities for regulatory reform through the revision of specific existing regulations and ensuring that program offices developed regulations in which the marginal benefits accrued exceeded the marginal costs imposed.

OFFICE OF STANDARDS AND REGULATIONS

1984 Program Request

The Agency requests a total of \$4,020,200 and 40.0 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects an increase of \$175,300 and no change in permanent workyears from 1983. This level of resources will allow the Office of Standards and Regulations (OSR) to continue its effective management and oversight of the regulation development and review process ensuring compliance with Executive Order 12291, the Regulatory Flexibility Act, the Paperwork Reduction Act, and Federal Register requirements. In 1984, OSR will intensify regulatory reform and relief efforts and will continue to concentrate on improving the scientific, engineering, and statistical base for regulations and policies.

1983 Program

The Agency is allocating a total of \$3,844,900 and 40.0 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation. In 1983, OSR is initiating efforts to improve the scientific, engineering, and statistical base of the Agency's regulations and policies. In addition, OSR procedural improvements include earlier and more substantive technical, economic, and policy review of Agency regulations, standards, and criteria. State involvement in the rule development process is also being enhanced. OSR is continuing to reduce excessive paperwork burdens imposed by EPA regulations through the application of rigorous independent analysis as well as to review new and existing rules and policies. OSR is institutionalizing indirect offsets, implementing fully the water bubble program, and developing reform initiatives in the pesticides program.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$270,900 results from the following actions:

-Congressional Action. (+\$280,900) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$297,600) This increase includes +\$297,600 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$16,700) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$10,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$10,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,683,900 for this program, all of which was under the Salaries and Expenses appropriation. OSR reviewed four major Agency data collection activities and made recommendations to reduce the reporting burden and improve the practical utility of information collected. OSR coordinated reviews of existing rules to ease the burden on small business and issued detailed operating guidance. The quality and efficiency of the Agency's internal review process was improved and OSR provided technical and statistical policy oversight of the Agency's regulations under review. OSR developed a "bubble" approach to water regulation; institutionalized the environmental auditor concept; and prepared a strategy for indirect offsets.

OFFICE OF MANAGEMENT SYSTEMS AND EVALUATION

1984 Program Request

The Agency requests a total of \$2,250,100 and 37.1 permanent workyears for this program, all of which is for Salaries and Expenses. This reflects an increase of \$65,100 from 1983 to fund anticipated personnel compensation needs in 1984. This level of funding will allow the Office of Management Systems and Evaluation (OMSE) to assess the Agency's effectiveness in meeting program goals and commitments by conducting evaluations of major programs; running the management accountability system; performing a number of quality assurance reviews; and developing and recommending corrective actions where the need for improvement is identified. Also in 1984, OMSE will develop mechanisms for connecting the accountability system, which measures each program's progress in meeting its goals and commitments, with other Agency management systems such as performance standards, merit pay, managing for environmental results, and the budget process. In addition, OMSE will work with Headquarters and Regional Offices to develop improved indicators of environmental status and trends, and improved monitoring strategies.

1983 Program

In 1983, the Agency is allocating a total of \$2,185,000 and 37.1 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation. OMSE is completing the development of an Agency strategic plan for program delegation to the States and is involved in developing other issue specific integrated management plans through work on the Administrator's management guidance for 1984 and 1985. OMSE is also expanding its efforts to implement and refine the accountability system for the Administrator, to conduct in-depth quality assurance reviews of programs, and to promote the adoption of baseline measures in environmental quality to assess performance and guide the Agency's allocation of resources toward actions which help provide the greatest return in terms of environmental results.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$29,900 results from the following actions:

-Congressional Action. (+\$24,900) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$29,800) This increase includes +\$29,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$4,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$5,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$5,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,995,700 for this program, all of which was under the Salaries and Expenses appropriation. OMSE completed five evaluations of Agency-wide issues and monitored implementation of changes resulting from earlier studies. Work continued on a comprehensive delegation policy and on efforts with various programs to encourage the development of State capabilities to administer delegated programs. The Administrator's accountability system was initially implemented and through this system, OMSE helped evaluate Agency performance, recommending corrective action in areas where commitments were not met. In addition, OMSE began development of environmental indicators for assessing Agency progress in controlling and cleaning up pollution.

AGENCY MANAGEMENT

Office of Legal and Enforcement Counsel

		ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)						
PROGRAM						

Program Management - Legal and Enforcement Counsel Salaries & Expenses		\$1,891.7	\$676.3	\$675.8	\$784.2	\$108.4
	TOTAL	\$1,891.7	\$676.3	\$675.8	\$784.2	\$108.4
General Counsel Salaries & Expenses		\$5,078.9	\$6,326.1	\$6,320.3	\$6,172.5	-\$147.8
	TOTAL	\$5,078.9	\$6,326.1	\$6,320.3	\$6,172.5	-\$147.8
Regional Counsel Salaries & Expenses		\$2,971.8	\$2,474.7	\$2,572.4	\$3,125.6	\$553.2
	TOTAL	\$2,971.8	\$2,474.7	\$2,572.4	\$3,125.6	\$553.2
TOTAL: Salaries & Expenses		\$9,942.4	\$9,477.1	\$9,568.5	\$10,082.3	\$513.8
Office of Legal and Enforcement Counsel	TOTAL	\$9,942.4	\$9,477.1	\$9,568.5	\$10,082.3	\$513.8
PERMANENT WORKYEARS						

Program Management - Legal and Enforcement Counsel		31.7	10.9	12.0	15.0	3.0
General Counsel		108.8	126.2	126.3	119.0	-7.3
Regional Counsel		69.7	61.4	63.4	70.2	6.8
TOTAL PERMANENT WORKYEARS		210.2	198.5	201.7	204.2	2.5
TOTAL WORKYEARS						

Program Management - Legal and Enforcement Counsel		45.1	15.4	16.4	19.5	3.1
General Counsel		122.4	134.8	134.6	129.5	-5.1
Regional Counsel		79.3	68.7	70.1	78.2	8.1
TOTAL WORKYEARS		246.8	218.9	221.1	227.2	6.1

MANAGEMENT AND SUPPORT

Agency Management

Office of Legal and Enforcement Counsel

Budget Request

The Agency requests a total of \$10,082,300 for Salaries and Expenses and 204.2 permanent workyears for 1984, an increase of \$513,800 and 2.5 permanent workyears from 1983. The increase is due primarily to new management responsibilities resulting from a realignment of Regional Counsel structure.

Program Description

The Agency Management portion of the Office of Legal and Enforcement Counsel (OLEC) includes the Associate Administrator, his immediate office, and the legal services components of OLEC. The Associate Administrator's office provides executive management for the Office of the General Counsel and the Office of Enforcement Counsel. Legal services include advice and assistance to the Administrator, Regional Administrators, and other Agency managers through the Office of the General Counsel and the offices of the ten Regional Counsels. This program provides interpretations of statutes, reviews major regulatory actions to assure legal defensibility, coordinates with EPA's enforcement efforts, and handles, with the Department of Justice, all litigation activities in which EPA is a defendant.

Program Management - Legal and Enforcement Counsel -- This program element provides program direction and administrative and management support to the Office of Legal and Enforcement Counsel. It services both Headquarters and Regional components of the Office of Legal and Enforcement Counsel (OLEC). It includes executive management, planning, budgeting, financial management, and administrative services for the Office of Legal and Enforcement Counsel, including the Offices of Regional Counsels.

General Counsel -- This program element provides Agency program offices with interpretations of EPA statutes and other applicable laws; legal advice on all major regulatory decisions and other Agency actions; and coordination with the Agency's legal enforcement efforts. With the Department of Justice, it also handles all litigation activities in which EPA is a defendant.

Regional Counsel -- The ten Offices of Regional Counsel assist the Regional Administrators in ensuring that their decisions are legally defensible and consistent with national legal interpretations. They represent the Regional Offices in defensive litigation activities; review Regional rulemakings; assist States in obtaining the proper legal authority to assume responsibility for administering environmental protection programs; and support the Regional enforcement litigation program.

PROGRAM MANAGEMENT - LEGAL AND ENFORCEMENT COUNSEL

1984 Program Request

The Agency requests a total of \$784,200 and 15.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$108,400 and 3.0 permanent workyears due primarily to new responsibilities in providing management and administrative services to the Regional Counsel Offices.

The request will provide for executive management and a basic level of planning, management analysis, budgeting, financial management, and administrative support services to the Office of Legal and Enforcement Counsel. The program will operate in an integrated fashion to enable the Associate Administrator and General Counsel to coordinate the Agency's legal functions and manage the legal resources of the Agency. It also includes a new function of providing certain fiscal and administrative support for Regional components of the Office of Legal and Enforcement Counsel.

1983 Program

In 1983 the Agency is allocating a total of \$675,800 and 12.0 permanent work-years to this program, all of which is for the Salaries and Expenses appropriation.

The program provides administrative, management, and analytical support to the Office of Legal and Enforcement Counsel. Emphasis is placed on issuing policy and procedural guidelines governing the Regional operations of the Office of Legal and Enforcement Counsel. Improved fiscal and personnel management procedures are being instituted to allow the Office of Legal and Enforcement Counsel to effectively manage available resources. The program also provides for executive management and a basic level of planning, budgeting, fiscal, and administrative management to the Office of Legal and Enforcement Counsel.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$500 results from the following action:

-Congressional Action. (-\$500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,891,700 for this program, all of which was for Salaries and Expenses. Reorganization of the Agency's enforcement efforts during 1982 moved this program from the Office of Enforcement to the new Office of Legal and Enforcement Counsel.

Activities focused on providing executive management, planning, analytical support, budgeting, financial management, and administrative services to the Office of Enforcement. Emphasis was placed on implementing a hazardous waste enforcement program, conducting cross-cutting policy analyses, and developing the capability to use criminal sanctions under EPA statutes, as appropriate. This component operated and maintained an enforcement docket system.

GENERAL COUNSEL

1984 Program Request

The Agency requests a total of \$6,172,500 and 119.0 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. The decrease of \$147,800 and 7.3 permanent workyears reflects a shift in workyears to the Regions to meet the demands of Regional caseload.

The 1984 Headquarters program will be devoted to defensive litigation of existing regulations, review of legality of enforcement policies, response to challenges to enforcement activities, and advice on legal defensibility and requirements of proposed regulations, and other Agency actions or operations. Special emphasis will be placed on Hazardous Waste, Air, and Water programs. The Office of General Counsel will be prepared for review of new regulations which may be necessary under possible new Clean Water and Clean Air Act legislation.

The Office of the Deputy General Counsel will also provide greater support to the enforcement litigation program, through such activities as review of proposed pleadings and review of certain enforcement referrals to the Department of Justice, to ensure consistent interpretation of the law.

1983 Program

In 1983, the Agency is allocating a total of \$6,320,300 and 126.3 permanent workyears to this program, all of which is for Salaries and Expenses.

The 1983 program provides continued support to Agency media program priorities through legal advice and assistance, handling defensive litigation, and participating in selected administrative proceedings. The 1983 program also incorporates coordination with the Office of Enforcement Counsel and support to the Regional enforcement litigation program.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$5,800 results from the following action:

-Congressional Action. (-\$5,800) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$5,078,900 all of which was for Salaries and Expenses.

In 1982, the General Counsel supported Agency priorities by providing legal advice and support to Agency managers and defending the Agency in all litigation filed against it. OGC also reviewed selected regulatory actions to ensure legal defensibility and advised on other actions, such as grants, contracts, and personnel actions.

REGIONAL COUNSEL

1984 Program Request

The Agency requests a total of \$3,125,600, all of which is for Salaries and Expenses, and 70.2 permanent workyears for 1984, an increase of \$553,200 and 6.8 permanent workyears from 1983. The increase reflects a shift in workyears from the General Counsel to meet the demands of legal workload in the Regions.

The 1984 Regional program will provide legal advice and consultation to Regional programs and will act as lead EPA attorneys on defensive litigation involving principally Regional issues. Other major activities include reviewing State legal authorities and advising States in program assumption matters related to the Resource Conservation and Recovery Act (RCRA) and other statutes; providing support to the construction grants program; and assisting States in making changes in statutes and regulations resulting from amendments to environmental statutes. The Regional Counsels also manage and review the work of the Regional enforcement litigation program to ensure that legal procedures and enforcement policies are consistently followed.

1983 Program

In 1983, the Agency is allocating a total of \$2,572,400 and 63.4 permanent workyears to this program, all of which is for Salaries and Expenses. The Regional program includes assistance in furthering the assumption of environmental protection programs by States by providing advice and assistance to State agencies. On an ongoing basis, in the construction grants area, it handles administrative pro-

ceedings, such as bid protests and grant appeals, and advises on problems arising from outstanding grants. The 1983 program also incorporates coordination with the Office of Enforcement Counsel and support to the Regional enforcement litigation program.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$97,700 results from the following actions:

-Congressional Action. (-\$1,600) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$99,300) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$99,300 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,971,800, all of which was for Salaries and Expenses. In 1982, the Regional Counsels supported Agency priorities by providing legal advice and support to Regional managers and defending the Agency in all litigation filed against it. They also advised on actions such as grants, contracts, and personnel actions. Additionally, Regional Counsel activities included advising State agencies on the legal requirements for assuming environmental protection programs, assisting in drafting appropriate regulatory language, and helping negotiate and document the terms of delegation agreements.

AGENCY MANAGEMENT

Office of Administration

		ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)						
PROGRAM						

Program Management - Administration						
Salaries & Expenses		\$1,315.3	\$2,188.2	\$2,136.9	\$1,908.4	-\$228.5
	TOTAL	\$1,315.3	\$2,188.2	\$2,136.9	\$1,908.4	-\$228.5
Financial Management - Headquarters						
Salaries & Expenses		\$6,528.4	\$6,482.2	\$3,887.0	\$3,460.8	-\$426.2
	TOTAL	\$6,528.4	\$6,482.2	\$3,887.0	\$3,460.8	-\$426.2
Contracts and Grants Management						
Salaries & Expenses		\$6,250.6	\$5,508.0	\$7,116.2	\$8,088.6	\$972.4
	TOTAL	\$6,250.6	\$5,508.0	\$7,116.2	\$8,088.6	\$972.4
Personnel and Organization Services						
Salaries & Expenses		\$5,946.7	\$4,596.2	\$6,089.7	\$6,631.1	\$541.4
	TOTAL	\$5,946.7	\$4,596.2	\$6,089.7	\$6,631.1	\$541.4
Facilities & Management Services						
Salaries & Expenses		\$6,148.6	\$4,463.1	\$5,669.1	\$5,807.0	\$137.9
	TOTAL	\$6,148.6	\$4,463.1	\$5,669.1	\$5,807.0	\$137.9
Information Systems & Services						
Salaries & Expenses		\$6,382.6	\$5,258.3	\$4,077.2	\$4,652.8	\$575.6
	TOTAL	\$6,382.6	\$5,258.3	\$4,077.2	\$4,652.8	\$575.6
Occupational Health & Safety						
Salaries & Expenses			\$441.7			
	TOTAL		\$441.7			
TOTAL:						
Salaries & Expenses		\$32,572.2	\$28,937.7	\$28,976.1	\$30,548.7	\$1,572.6
Office of Administration	TOTAL	\$32,572.2	\$28,937.7	\$28,976.1	\$30,548.7	\$1,572.6

AGENCY MANAGEMENT

Office of Administration

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PERMANENT WORKYEARS					

Program Management - Administration	18.2	31.0	34.0	32.0	-2.0
Financial Management - Headquarters	142.1	146.0	91.3	89.8	-1.5
Contracts and Grants Management	153.8	131.0	166.7	165.3	-1.4
Personnel and Organization Services	128.2	106.4	127.1	125.1	-2.0
Facilities & Management Services	183.6	140.6	165.5	160.5	-5.0
Information Systems & Services	135.7	112.6	92.3	89.3	-3.0
Occupational Health & Safety		8.0			
TOTAL PERMANENT WORKYEARS	761.6	675.6	676.9	662.0	-14.9
TOTAL WORKYEARS					

Program Management - Administration	28.3	43.0	44.7	43.0	-1.7
Financial Management - Headquarters	184.8	185.1	110.7	111.0	.3
Contracts and Grants Management	184.9	152.5	205.3	206.6	1.3
Personnel and Organization Services	177.9	147.8	176.6	173.6	-3.0
Facilities & Management Services	211.6	162.6	188.7	181.1	-7.6
Information Systems & Services	167.0	137.1	109.1	106.1	-3.0
Occupational Health & Safety		8.0			
TOTAL WORKYEARS	954.5	836.1	835.1	821.4	-13.7

MANAGEMENT AND SUPPORT

Agency Management

Office of Administration

Budget Request

The Agency requests a total of \$30,548,700 of Salaries and Expenses funds and 662.0 permanent workyears for the Office of Administration in 1984, an increase of \$1,572,600 and a decrease of 14.9 permanent workyears from 1983. The dollar increase fully funds workyear costs including the Medicare tax, while the workyear reduction reflects savings in administrative expenditures consistent with the Agency's overall workyear level.

Program Description

The Office of Administration (OA) performs Agencywide administrative management and support functions and provides administrative services to Headquarters and our two largest operations--Research Triangle Park (RTP), North Carolina and Cincinnati, Ohio. In addition, the OA provides certain administrative support services for the entire Agency, including buildings and facilities management and nationwide support functions.

The immediate office of the Assistant Administrator provides overall direction for all OA activities as well as Agencywide policy regarding administrative and support services. There are five organizational components under the Assistant Administrator for Administration. The Office of Fiscal and Contracts Management is responsible for the Agency's financial accountability, contracts administration, and grants management. The Office of Personnel and Organization provides services in the areas of personnel administration and organizational analysis, and administers the Agency's occupational health and safety program. The Office of Management Information and Support Services provides management of the Agency's ADP resources, library management, facilities acquisition and management, and general supporting services. The OA at RTP and Cincinnati provide services and support similar to those at Headquarters to the environmental programs at EPA's major field locations. A brief description of each of the program elements included in OA follows.

Program Management - Administration -- This program element consists of the Assistant Administrator's immediate office which provides service delivery oversight, planning functions, and performs all of the budgeting and resource management activities within OA.

Financial Management - Headquarters -- This component includes financial management policy and accounting, and financial reporting activities for Headquarters and non-Regional field offices.

Contracts and Grants Management -- This program element provides resources to establish Agencywide contracts and grants policy; to award and administer contracts and small purchases at headquarters, RTP, and Cincinnati; and to award and manage Headquarters grants and other financial assistance programs.

Personnel and Organization Services -- This program provides resources for Agencywide personnel policy guidance and personnel services such as staffing, classification, and training to headquarters and non-Regional field offices; Agencywide management analysis and directives management; and the Agency's occupational health and safety program designed to maintain safe working conditions and to protect the health of our employees.

Facilities and Management Services -- This program element provides resources for facilities acquisition, maintenance, and management; audiovisual and printing operations; personnel security and property maintenance and protection; management of the Nationwide Support, Headquarters Support, and Buildings and Facilities accounts; and the immediate offices of the Directors of the Office of Management Information and Support Services, and the Offices of Administration at Cincinnati and Research Triangle Park.

Information Systems and Services -- Included in this program element are resources for the Agency's centralized ADP systems management and data processing support staff; the Library Systems Staff, which maintains the Agency's libraries at headquarters, Cincinnati, and Research Triangle Park; and the ADP services component within the Office of Administration at Cincinnati.

PROGRAM MANAGEMENT - ADMINISTRATION

1984 Program Request

The Agency requests \$1,908,400 from Salaries and Expenses and 32.0 permanent workyears for this program; the decrease of \$228,500 and 2.0 permanent workyears reflect savings gained through improved management. This level of funding will allow us to maintain current service levels for the basic budgetary, administrative, analytical, and strategic planning needs of the Office of Administration (OA). In 1984, the Office will provide overall direction of the OA, manage and control OA's resources, and continue to develop and initiate strategies to enhance the efficiency and effectiveness of OA.

1983 Program

In 1983 the Agency is allocating \$2,136,900 from Salaries and Expenses and 34.0 permanent workyears for this program. This program is providing senior management support for OA initiatives to centralize EPA's ADP management and systems; strengthen EPA's financial management, including cash and credit management; provide guidance and stimulation for grant and contract regulation simplification efforts; and improve the control and management of the Agency's Support Services funds. In addition, this office is continuing to manage the Agency's cost reduction programs and evaluate EPA's utilization of capital assets.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$51,300 results from the following actions:

-Congressional Actions. (+\$54,700) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$59,800) This increase includes +\$59,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$5,100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$106,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$26,600 to the Salaries and Expenses appropriation.

The Congressionally approved change of -\$132,600 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

In 1982, the Agency obligated \$1,315,300 from Salaries and Expenses for this program. The Office oversaw the development of several priority actions within the OA: improved contracts and grants management, cost reduction and containment strategies, better financial management, analysis of ADP consolidation, capital asset management, position management planning, and improved service delivery. In addition, we achieved improved service and efficiencies from the consolidation within the immediate office of the Assistant Administrator of the OA's administrative, budgetary, analytical, and long-range planning resources.

FINANCIAL MANAGEMENT - HEADQUARTERS

1984 Program Request

The Agency requests \$3,460,800 from Salaries and Expenses and 89.8 permanent workyears for this program, a decrease of \$426,200 and 1.5 permanent workyears. The dollar decrease reflects the transfer of financial management computer services to the Support Services program. Through this program element, we will standardize financial and accounting transaction processing so that it is controlled though still responsive to both Agencywide and program-specific needs and provides the services to the Agency necessary to meet our statutory requirements. These services include, but are not limited to: basic accounting and payroll support; accountability throughout the Financial Management System; support to enhance OPRM's efforts in budget execution and resource control at the allowance level; processing of grant, contract, purchase order, travel, and other vouchers and claims; and financial reporting required to meet Agency fund control requirements. These resources will also support our efforts to refine Agency accounting and financial policies; increase operational productivity through automation; improve internal day-to-day financial service; provide controls which permit us to detect and prevent fraud, waste, and abuse; and perform a full range of cash management reviews.

1983 Program

The Agency is allocating \$3,887,000 from Salaries and Expenses and 91.3 permanent workyears for this program. This Office is increasing automated services to further reduce the necessity for individual systems at the fund control activity level; meeting external reporting requirements of OMB, Treasury, and the Congress; implementing OMB Circular 83-6, which requires establishing a policy for accelerating the processing and deposit of receipts; improving control over disbursements; and eliminating idle cash balances. Through further automation, we expect to continue to reduce paperwork within the financial management area. For example, the expansion of our automated commitment entry system at the program office level will eliminate excessive paper transactions.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$2,595,200 results from the following actions:

-Restructuring. (-\$1,799,500) The Congressionally approved restructuring transferred the grants activities previously in this program element into the Contracts Management program element which was then retitled Contracts and Grants Management. This program element, which was retitled Financial Management provides resources for the Director of the Office of Fiscal and Contracts Management and the Financial Management Division.

-Congressional Action. (-\$8,500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$787,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$105,100 to the Salaries and Expenses appropriation.

The Congressionally approved change of -\$682,100 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$6,528,400 from Salaries and Expenses for this program, which included the grants function in 1982. In addition to routine financial management activities, we began to implement an automated travel information system which provides better management of travel dollars and serves as a basis for the Agency to more equitably distribute its travel ceiling. We revised our reporting systems to provide information in a more useful format to Agency line managers. We have strengthened our efforts to collect interest and overdue accounts receivable and, in 1982, we collected \$621,000. We have also reduced our own overdue accounts payable by over 90%.

In the Federal assistance area, we initiated projects to consolidate and simplify EPA's grant programs, provided administrative and technical assistance to EPA Regional offices and assistance recipients, and administered the Headquarters grants program, including the award process. We continued our grant regulation reforms to eliminate unnecessary reporting requirements and red tape, and we introduced a pilot program to consolidate and simplify the administrative handling of State grants. The results of these activities included resource savings, clearer accountability, and simplified, more efficient communication with State and local governments.

CONTRACTS AND GRANTS MANAGEMENT

1984 Program Request

The Agency requests \$8,088,600 from Salaries and Expenses and 165.3 permanent workyears for this program, a decrease of 1.4 permanent workyears, and an increase of \$972,400. The increase in dollars will support increases in workyear costs, ADP contract support for the Automated Procurement System, and an expanded training program for project officers.

In the Contracts area, our request will enable us to: process contract awards and purchase orders; close out existing contracts; conduct cost evaluations of contractor cost proposals; process contract terminations and claims; and provide technical review, policy compliance, and administrative management to three contracting and purchasing offices. These resources also will support an automated procurement document system and the project officers training course, initiated in 1983. In the Grants and other financial assistance area, these funds will allow us to: develop and interpret policy and procedural guidance for Agencywide assistance programs; award and administer headquarters grants; respond to requests for ad hoc assistance by Regions, programs, and federal assistance recipients; simplify our grant regulations; increase in-house audit and cost analyses; and, continue efforts begun in 1983 to debar and suspend persons who abuse the privileges of Federal assistance. These resources will also support cost and benefit analyses on grant regulations and Grants Information and Control System data verification.

1983 Program

The Agency is allocating \$7,116,200 from Salaries and Expenses and 166.7 permanent workyears for this program. In the Contracts area, we anticipate awarding contract actions totalling \$223 million and processing purchase order actions for \$50 million. Our key objectives are managing contracts (as opposed to just awarding them), increasing productivity and simplifying tasks in contracts processing and administration, further automating the procurement system, and instituting a project officer training and certification program that will aid in producing more understandable Requests for Procurement against which our vendors bid.

In the federal assistance area, we are streamlining the regulations to eliminate unnecessary and duplicative requirements and to reduce the information burdens our regulations impose on grantees. We also are developing guidance for

EPA managers and our grantees on the revised (simplified) regulations. We are continuing to administer grants funded by Headquarters program offices and as part of our efforts to manage the Agency's audit coordination function, we are identifying and tracking all exceptions from point of issue to final resolution. We will ensure debarment or suspension of persons who abuse the privileges of Federal assistance through waste, poor performance, or corrupt practices. This will result in greater efficiency, program integrity, and a significant dollar savings to the Government. In addition, the responsibility of managing the Agency's Inter-governmental Agreements will be transferred to our grants division in 1983.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,608,200 results from the following actions:

-Restructuring. (+\$1,799,500) The Congressionally approved restructuring transferred the grant activities previously in the Financial and Grants Management program element into the Contracts Management program element, which was then retitled Contracts and Grants Management. The Financial Management program element provides resources for the Director of the Office of Fiscal and Contracts Management and the Financial Management Division. The Contracts and Grants Management program element now includes the resources for the Procurement and Contracts Division, the Contracts Management Staff located at RTP and Cincinnati and the Grants Administration Division.

-Congressional Actions. (+\$40,600) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$48,000) This increase includes +\$48,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$7,400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$231,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$61,000 to the Salaries and Expenses appropriation.

The Congressionally approved change of -\$292,900 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$6,250,600 from Salaries and Expenses for this program, which did not include the grants function in 1982. With these resources, we awarded contract actions totaling \$260 million and purchase order actions totalling \$47 million. We began to implement streamlined contracting procedures which expedite contract processing. We also began to automate the procurement system on a pilot basis at headquarters, resulting in greater efficiency and shorter processing time. We continued to negotiate overhead rates with EPA contractors and assistance recipients in support of our own operations and OMB Circular A-87 (regarding indirect costs for State and local governments). We also continued our participation with OMB in the implementation of the Federal Acquisition Regulations.

PERSONNEL AND ORGANIZATION SERVICES

1984 Program Request

The Agency requests \$6,631,100 from Salaries and Expenses and 125.1 permanent workyears for this program, an increase of \$541,400 and a decrease of 2.0 permanent workyears. The increase in dollars will fund increased workyear costs and contractor support to supplement the Management and Organization Division's analytical efforts. With these resources, the Personnel Management Division will provide basic personnel services required by law and will continue its productivity assessment and Performance Management System activities, as well as training, records processing, and personnel systems support. These activities are designed to further enhance a total human resource management program for EPA. The Management and Organization Division will continue to provide an array of organizational and administrative services to Agency managers including its organizational process review studies to improve program effectiveness and efficiency. The Occupational Health and Safety Staff will fully service all established health and safety programs.

1983 Program

The Agency is allocating \$6,089,700 from Salaries and Expenses and 127.1 permanent workyears for this program.

In 1983, the Personnel Management Division will assure effective workforce planning and position management; maintain a positive and strong labor relations program to deal effectively with employee unions; assure efficient and effective administration of the Performance Management System mandated by the Civil Service Reform Act; and maintain a viable program review, evaluation, and analytic capability to assure that EPA personnel policies and programs meet the needs of the Agency. Our personnel management services will continue to meet statutory and programmatic requirements. We are consolidating the Personnel Management Division's special programs and external employment activities to utilize resources more effectively; reducing personnel staffing and classification capacities to reflect a reduced Agency workforce; and focusing training and executive development programs to strengthen Agency management and to re-train employees to improve the skill mix in our workforce. These activities will combine to form a strong and comprehensive human resource management program, which we are initiating in 1983.

The Management and Organization Division is expanding its organizational process review studies of Agency offices to improve program effectiveness and efficiency.

In 1983, the Occupational Health and Safety Staff is conducting job hazard analyses, administering the Headquarters safety program, maintaining an automated information system for accident and medical data, monitoring the Agencywide medical monitoring program, and updating Agency health and safety directives.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,051,800 results from the following actions:

-Restructuring. (+\$1,020,900) The Congressionally approved restructuring combined resources from this program element, formerly titled Personnel Management, with resources from other program elements for the Office of Health and Safety, Management and Organization Division and the Immediate Office of the Director of Personnel and Organization. The expanded program element was retitled Personnel and Organization Services. This provides improved resource management by combining offices with functions related to personnel matters into one program element, i.e., personnel policies, organization analyses, and health and safety policies.

-Congressional Actions. (+\$95,000) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$100,400) This increase includes +\$100,400 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$5,400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$64,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$115,100 to the Salaries and Expenses appropriation.

The Congressionally approved change of +\$51,000 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$5,946,700 from Salaries and Expenses in this program element, which contained only the Personnel Management Division (PMD) in 1982. PMD completed implementation of a performance appraisal system for General Schedule employees and initiated efforts to make the personnel system, primarily the Performance Management System, more accomplishment-oriented in order to improve personnel planning and productivity throughout the Agency. At the same time, we met statutory and programmatic requirements which included: processing staffing, classification, and other personnel and payroll actions; maintaining basic personnel programs including employment and training policy, labor and employee relations, and personnel program evaluation; assisting in workforce planning; and leading position management studies. We also significantly improved our delivery of services to Agency managers and employees.

In 1982, the Occupational Health and Safety Staff developed industrial hygiene standards for laboratory operations. We expanded our safety programs for those EPA employees who faced serious safety and health threats. Our training and education efforts emphasized the delivery of specialized training to meet the diverse needs of our employees. We also strengthened our medical monitoring activities, which included preemployment, preplacement, and fitness medical evaluations, to protect individual workers and co-workers. Finally, we continued our efforts to inspect and evaluate EPA facilities.

FACILITIES AND MANAGEMENT SERVICES

1984 Program Request

The Agency requests \$5,807,000 from Salaries and Expenses and 160.5 permanent workyears for this program, an increase of \$137,900 and a decrease of 5.0 permanent workyears. The increase in dollars reflects anticipated increases in workyear costs. The decrease in requested workyears reflects a reduction in our audio-visual and printing needs due to Agencywide elimination of unnecessary publications. The resources requested will provide general office and building services for Headquarters, Cincinnati, and Research Triangle Park (RTP), and management direction for the Office of Information Systems and Support Services and the Offices of Administration at Cincinnati and RTP. We will continue current service levels and we will maintain our commitment to ensuring the most effective and cost

efficient facilities management possible, including our commitment to use contractors only where cost-effective. We will continue efforts to improve contractor management, and ensure maximum efficiency and benefit from both in-house and private sector services. We will strengthen property and supply management and continue to upgrade the physical conditions at Waterside Mall.

1983 Program

The Agency is allocating \$5,669,100 from Salaries and Expenses and 165.5 permanent workyears to this program. We are completing efforts begun in 1982 to control costs in telecommunications, mail, space management, and facilities engineering and construction, while maintaining the overall current level of basic services. We are strengthening Headquarters contract and project management to assure more cost-effective use of contract dollars and enhanced delivery of services. In addition, we are emphasizing cost containment and accountability in the provision of nationwide guidance for administrative support services; providing operational support and housekeeping service for the EPA facilities located at headquarters, Cincinnati, and RTP; managing the Agency's Nationwide Support and the Buildings and Facilities accounts; and providing facilities engineering and construction expertise to all Agency programs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$1,206,000 results from the following actions:

-Restructuring. (+\$477,900) The Congressionally approved restructuring transferred some discrete activities previously in the Other Management Services program element into the Facilities and Support Services program element. The resources previously included in Other Management Services for the Immediate Office of Management Information Systems and Services and the Office Directors at RTP and Cincinnati were transferred into Facilities and Support Services. This program element was then retitled Facilities and Management Services.

-Congressional Actions. (+\$98,100) EPA's application of Congressional action to this activity resulted in the following changes.

(+\$100,000) This increase includes +\$100,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$1,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$630,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$15,100 to the Salaries and Expenses appropriation.

The Congressionally approved change of +\$614,900 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$6,148,600 from Salaries and Expenses to this program. We initiated major cost containment efforts in three operational areas (mail, telecommunications, and copying and duplicating), implemented nationwide management/user accountability systems to collect better user data and to permit full

job costing and consistency in the delivery of services, and implemented an umbrella support services contract at Headquarters. We also began to improve working conditions at Waterside Mall through an aggressive facilities maintenance management and inspection program.

INFORMATION SYSTEMS AND SERVICES

1984 Program Request

The Agency requests \$4,652,800 from Salaries and Expenses and 89.3 permanent workyears, an increase of \$575,600, reflecting higher personnel costs in this program, and a decrease of 3.0 permanent workyears. Our central ADP management group sets Agencywide ADP policy; assists EPA programs in developing and maintaining computerized information systems; operates the Agency's timesharing computer center at Research Triangle Park, North Carolina (RTP); and coordinates Agencywide ADP services to assure more effective, efficient, and responsible use of our ADP services. These resources will enable us to manage EPA's data center facility in RTP, maintain a financing mechanism and accounting methodology for central time-sharing services, develop Agencywide information management policies and procedures, and maintain data standards to ensure the data integrity which is critical to EPA's mission and program objectives. In 1984, we will begin to address data base applications and the distributed processing network (Regional and laboratory minicomputers and telecommunications) throughout the Agency, and strengthen our centralized management of the Agency's ADP investment begun in 1983.

The Library Systems Staff will provide reference information, loan and literature search services, public information services, contract management for library services, and administrative management of the Agencywide library system. In addition to traditional library services, these resources will enable us to maintain the Information Clearinghouse, which coordinates all Agency environmental data bases.

1983 Program

The Agency is allocating \$4,077,200 from Salaries and Expenses and 92.3 permanent workyears for this program. These resources support ADP activities including managing EPA's data center facility and maintaining those systems which are essential to the Agency's mission. We provide ADP planning and system design assistance to program offices, focusing our resources toward high priority systems. We are emphasizing the improved compatibility and efficiency of the Agency's automated systems and the development of a prototype office automation system. We are initiating an effort to consolidate the management and control over Agency ADP systems in a central office within OA to eliminate duplicative systems and redirect resources to improve access to automated data bases and efficient electronic communications systems.

In 1983, library systems and services include: basic loan and reference services; completion of a single automated catalog of Agency library holdings; and, in response to requests from the public, provision of rules, hearing records, comments on Agency rule-makings, and publications. Library procurement activities are being centralized, and the Information Clearinghouse is being maintained and operated as a reference service for EPA information managers.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$1,181,100 results from the following actions:

-Restructurings. (-\$1,498,800) The Congressionally approved restructuring of -\$477,900 transferred some discrete activities included in this program element, previously titled Other Management Services into the Facilities and Support Services program element. The resources transferred included the Immediate Office of Management Information Systems and Services and the Office Directors at RTP and Cincinnati.

The Congressionally approved restructuring of -\$1,020,900 transferred resources from this program element for the Management and Organization Division and the Immediate Office of the Director of Personnel and Organization to the new program element entitled Personnel and Organization Services. The balance of this program element which includes the central ADP systems staff and the Library staff, was retitled Information Systems and Services.

-Congressional Action. (-\$2,200) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$319,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$121,800 to the Salaries and Expenses appropriation.

The Congressionally approved change of +\$441,700 realigned PC&B and workyears among program elements in the Office of Administration reflecting current workyear and salary projections. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$6,382,600 from Salaries and Expenses for this program in 1982 to support information management activities, library systems, the Management and Organization Division, and the immediate offices of the Directors of the Office of Management Information and Support Services and the Offices of Administration at Cincinnati and Research Triangle Park. In 1982, this program element was titled Other Management Services.

During 1982, our ADP management division provided general systems oversight and managed EPA's data center. It also maintained those ADP systems that were critical to the Agency's mission and performed the feasibility study on the consolidation of EPA's ADP activities.

The library staff began to implement a single on-line data base of all Agency library holdings and to write guidelines for the bibliographic management of all EPA generated reports that support program offices. The Information Clearinghouse conducted an on-going inventory of all EPA environmental measurement data. Data search and referral services performed by the Clearinghouse were available to all EPA employees.

The Management and Organization Division provided internal administrative and organizational analytical services to all Agency offices. This division's responsibilities included advising the Administrator on reorganization issues and providing analytical support to senior managers, as well as administrative and technical assistance for directives and forms management.



Regional Management

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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REGIONAL MANAGEMENT

Regional Management

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

PROGRAM

Regional Management					
Salaries & Expenses		\$9,617.8	\$9,087.0	\$8,913.5	\$8,926.6
TOTAL		\$9,617.8	\$9,087.0	\$8,913.5	\$8,926.6
					\$13.1
Planning, Evaluation & Analysis - Regions					
Salaries & Expenses		\$3,668.2	\$4,646.2	\$4,077.6	\$4,291.8
TOTAL		\$3,668.2	\$4,646.2	\$4,077.6	\$4,291.8
					\$214.2
Financial Management - Regions					
Salaries & Expenses		\$2,375.0	\$2,433.7	\$2,390.4	\$2,558.8
TOTAL		\$2,375.0	\$2,433.7	\$2,390.4	\$2,558.8
					\$168.4
Personnel Management - Regions					
Salaries & Expenses		\$2,952.1	\$2,764.1	\$2,859.4	\$2,664.4
TOTAL		\$2,952.1	\$2,764.1	\$2,859.4	\$2,664.4
					-\$195.0
Administrative Management - Regions					
Salaries & Expenses		\$5,904.9	\$5,398.2	\$5,136.7	\$5,119.4
TOTAL		\$5,904.9	\$5,398.2	\$5,136.7	\$5,119.4
					-\$17.3
TOTAL:					
Salaries & Expenses		\$24,518.0	\$24,329.2	\$23,377.6	\$23,561.0
Regional Management	TOTAL	\$24,518.0	\$24,329.2	\$23,377.6	\$23,561.0
					\$183.4

PERMANENT WORKYEARS

Regional Management	192.4	140.3	160.3	160.3	
Planning, Evaluation & Analysis - Regions	97.3	94.2	106.2	97.2	-9.0
Financial Management - Regions	81.8	73.8	73.8	73.8	
Personnel Management - Regions	86.1	80.6	80.6	72.6	-8.0

REGIONAL MANAGEMENT

Regional Management

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
Administrative Management - Regions	145.4	137.1	137.1	131.1	-6.0
TOTAL PERMANENT WORKYEARS	603.0	526.0	558.0	535.0	-23.0
TOTAL WORKYEARS					

Regional Management	250.0	200.0	217.7	198.2	-19.5
Planning, Evaluation & Analysis - Regions	108.8	95.2	108.9	103.6	-5.3
Financial Management - Regions	93.4	81.8	82.4	82.4	
Personnel Management - Regions	106.4	98.7	99.1	86.1	-13.0
Administrative Management - Regions	182.5	168.3	167.3	159.3	-8.0
TOTAL WORKYEARS	741.1	644.0	675.4	629.6	-45.8

MANAGEMENT AND SUPPORT

Regional Management

Budget Request

The Agency requests a total of \$23,561,000 from the Salaries and Expenses Appropriation and 535.0 permanent workyears in 1984, an increase of \$183,400 and a decrease of 23.0 permanent workyears from 1983. The decrease in permanent workyears is located in: Planning, Evaluation and Analysis; Personnel Management; and Administrative Management. This level of resources in the Regional administrative offices provides services consistent with our Regional program workforce levels.

Program Description

This component covers the salaries and expenses of the ten Regional Administrators, their immediate staffs, and the staff offices reporting directly to them. Additional activities include Regional central management functions such as program planning, budgeting, analysis and evaluation; financial and personnel management; and administrative services.

Regional Management -- This unit includes the Regional Administrators and their immediate staffs, as well as the basic staff functions of civil rights, public affairs, Congressional, and intergovernmental activities.

Planning, Evaluation, and Analysis - Regions -- Resources in this program element provide analytical support to the Regional Administrators to assure the efficient and effective operation of EPA Regions. Activities include planning, budget development, accountability reporting, program evaluation, economic analysis, management, and Regional participation in EPA's regulatory process.

Financial Management - Regions -- This program element provides financial accounting and reporting services for the Regional Offices.

Personnel Management - Regions -- These resources provide basic personnel services, including staffing, classification, and training, to the Regional Offices.

Administrative Management - Regions -- This group of activities includes mini-computer systems management, library support, safety, security, printing and copying, facilities management, small purchases, and other administrative functions.

REGIONAL MANAGEMENT

1984 Program Request

The Agency requests a total of \$8,926,600 and 160.3 permanent workyears for this program, all of which is for the Salaries and Expenses appropriation. This represents an increase of \$13,100 and no change in permanent workyears from 1983 levels. The budget request will enable the program to continue to provide senior management and policy direction for the Regional Offices, to shape and articulate policies defining Regional relationships with State and local governments, respond to inquiries from Congress, the news media and the public, establish regular communications with public interest, environmental, and business groups, and maintain Civil Rights and Freedom of Information programs.

1983 Program

In 1983, the Agency is allocating a total of \$8,913,500 and 160.3 permanent workyears to this function, all of which is for the Salaries and Expenses appropriation. Basic press services and media relations activities are being maintained as

well as policy guidance and executive direction for the Region as a whole. The program will continue the processing of Freedom of Information requests, issuing critical news releases, maintaining a Regional Civil Rights program, responding to Congressional inquiries, and coordinating EPA involvement in major State environmental issues.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$173,500 results from the following actions:

-Congressional Action. (+\$416,500) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$426,800) This increase includes +\$426,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$10,300) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$590,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$590,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$9,617,800 all of which was from the Salaries and Expenses appropriation. This program provided support for the Regional Administrators and their immediate staffs, as well as for the basic staff functions of civil rights, public affairs, Congressional and intergovernmental activities.

PLANNING, EVALUATION, AND ANALYSIS - REGIONS

1984 Program Request

The Agency requests a total of \$4,291,800 and 97.2 permanent workyears for this program, of which all is for Salaries and Expenses. This reflects an increase of \$214,200 and a decrease of 9.0 permanent workyears from 1983. The decrease in workyears results from work completed with 1983 resources for instituting management for environmental results and accelerating regulatory reform. In 1984, resources will allow the Regions to execute essential Regional planning, resource management, program evaluation, and analytic activities. The Regions will place special emphasis on fiscal management and control, streamlining budgetary processes, and shifting Regional programs from an implementation to an oversight role.

1983 Program

In 1983, the Agency is allocating a total of \$4,077,600 and 106.2 permanent workyears to this program, all of which is under the Salaries and Expenses appropriation, to conduct the planning, evaluation, budgeting, and analysis functions in the ten Regional Offices. Resources for 1983 reflect the increased importance of budget execution and control functions, plus the Regional component of the Agency-wide initiative to implement measures for regulatory reform and to institute management for environmental results. These resources allow Regional Administrators to effectively and efficiently manage their Regions by providing sound analysis concerning Regional policy, process, and resource management. The Regions are continuing to focus on accountability reports, program evaluation, economic analysis, and improvement of Regional planning, analytic, and management capabilities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$568,600 results from the following actions:

-Congressional Action. (+\$248,900) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$253,800) This increase includes +\$253,800 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$4,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$817,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$817,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$3,668,200 for this program, all of which was under the Salaries and Expenses appropriation. These resources were used to design and implement the Regional component of the Administrator's new accountability system and to manage organization studies to adjust the Regions to projected program, policy, and resource changes. The Agency also implemented procedures designed to expedite permit issuance in the Regions.

FINANCIAL MANAGEMENT - REGIONS

1984 Program Request

The Agency requests \$2,558,800 from Salaries and Expenses and 73.8 permanent workyears for this program. This is an increase of \$168,400 but no change in work-years. It reflects increased workyear costs. At this level of funding, Regional finance offices will provide basic services and maintain ongoing and routine financial management functions. This includes maintenance of GAO-approved accounting and internal control systems, processing obligation transactions, processing voucher payments, conducting payroll activities, preparing billings and processing collections, providing monthly fund control and financial reports, and processing and paying claims for travel. Further automation of EPA's financial management processes will free resources to strengthen our cash and credit management, internal control initiatives, and data integrity and quality assurance.

1983 Program

The Agency is allocating \$2,390,400 from Salaries and Expenses and 73.8 permanent workyears to this program. With these resources, the Regional finance offices continue to provide all basic accounting, payment processing, and payroll support activities, and are increasing resources for audit coordination and follow-up activities. This includes tracking all audit exceptions from point of issue to final resolution. We are continuing efforts to detect abuse of Federal funds; strengthening credit management to ensure timely and economical collection of all monies owed EPA; and implementing an Agencywide data integrity assurance program to provide timely, complete, and accurate financial reports.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$43,300 results from the following actions:

-Congressional Action. (+\$10,100) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$12,000) This increase includes +\$12,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time workyears provided to the Agency.

(-\$1,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$53,400) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net decrease of -\$53,400 to the Salaries and Expenses appropriation.

1982 Accomplishments

The Agency obligated \$2,375,000 from Salaries and Expenses for this program in 1982. With these resources, Regional finance offices began to strengthen the automated financial control systems and implement an internal control system to improve EPA's defense against the misuse of Federal resources. They also ensured that billing and collection activities met the President's commitment to cash management. Other activities supported by this program included: payroll and fiscal support services; timely collection of monies owed EPA; data integrity and quality assurance programs; and timely, accurate financial reports to support Regional management.

PERSONNEL MANAGEMENT - REGIONS

1984 Program Request

The Agency requests \$2,664,400 from Salaries and Expenses and 72.6 permanent workyears, the decrease of \$195,000 and 8.0 permanent workyears reflecting overall Regional workforce reductions and fewer hiring actions. These resources will allow us to maintain ongoing and routine personnel management activities and to fulfill statutory requirements. Regional personnel offices will continue to process staffing actions, classification, payroll and personnel actions, and training requests; administer the Performance Management System training for all General Schedule employees; conduct nondiscretionary labor relations activities; and provide management studies and organizational analyses to support Regional managers.

1983 Program

The Agency is allocating \$2,859,400 from Salaries and Expenses and 80.6 permanent workyears to this program. The Regional personnel offices are providing basic personnel services as well as Region-specific management and organization assistance to Regional managers. They are conducting position management studies, organizational analyses, and training programs to assist managers in optimizing personnel resources. Regional personnel offices also counsel Regional employees affected by workforce adjustments (e.g., transfers, relocations, outplacement) and provide training to facilitate the transfer of personnel among Regional programs. Current labor relations activities include negotiations and consultations with employee unions, on-site negotiations, grievance and arbitration representation, and unfair labor practice charge processing. We are also refining the Performance Management and Merit Pay program required by the Civil Service Reform Act, and operating the Federal Equal Opportunity Recruitment Program required by Title 5.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$95,300 results from the following actions:

-Congressional Action. (-\$1,200) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$96,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$96,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

The Agency obligated \$2,952,100 from Salaries and Expenses for this program. We provided quality personnel management services to Regional managers in order to support the Regions' mission and programs; assured effective planning for Regional workforce adjustments resulting from organizational and program changes; provided advice and assistance to employees; and represented the Agency with employee unions. Regional personnel offices continued to provide basic personnel services, which included: processing staffing, classification, payroll and personnel actions, and training requests; providing Performance Management System training for all General Schedule employees; conducting day-to-day non-discretionary labor relations activities; providing supervisory and management training programs; undertaking position management studies to assist managers in establishing effective organizational structures; and providing special emphasis programs to support Agency missions and policies.

ADMINISTRATIVE MANAGEMENT - REGIONS

1984 Program Request

The Agency requests \$5,119,400 from Salaries and Expenses and 131.1 permanent workyears for this program, a decrease of \$17,300 and 6.0 permanent workyears. This decrease reflects a savings realized in general office services, property and supply management and information management activities. These resources will support ongoing activities such as basic ADP service, Regional Office and laboratory facility management, general office services and management, Regional libraries, space management activities, mail service, and property and supply management. The Regions will maintain the current level of effort in contracting and purchasing activities, and will continue to ensure the safety and security of Regional personnel and property.

1983 Program

The Agency is allocating \$5,136,700 from Salaries and Expenses and 137.1 permanent workyears to provide Regional administrative support in the following areas: administrative information systems, minicomputer systems, ADP services, library support, safety and security, purchasing, property and supply management, mail, space management, printing and copying, facilities management, records management, and contracts management. Savings in the areas of property and supply management, in-house computer processing, in-house printing and copying, telecommunications, and space management are enabling the Regions to improve the quality and cost-effectiveness of their administrative services.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$261,500 results from the following actions:

-Restructuring. (-\$769,800) The Congressionally approved restructuring transferred resources from Administrative management into the Regional Support Costs

in the Regional Offices. The Administrative Management program element consisted of the salaries and expenses associated with providing Regional administrative services.

-Congressional Action. (+\$111,800) EPA's application of Congressional action to this activity resulted in the following changes:

(+\$115,000) This increase includes +\$115,000 of the \$10.5 million Salaries and Expenses add-on which supports the 480 additional permanent full-time work-years provided to the Agency.

(-\$3,200) A general reduction of \$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$396,500) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$396,500 to the Salaries and Expenses appropriation.

1982 Accomplishments

The Agency obligated \$5,904,900 from Salaries and Expenses to support this program. This program provided a wide range of administrative services to support all Regional programs, which included: acquisition and management of equipment, supplies, and services; management of Regional ADP resources; and provision of library systems and services. As part of our commitment to provide the highest possible level of administrative services, we maintained administrative information systems and minicomputer operations to ensure effective ADP operational support for Regional programs, provided administrative direction for support activities and services, maintained Regional library operations, and managed word processing equipment and systems acquisition. We also coordinated Regional records management, directed contracting and purchasing activities, ensured safety and security in the Regions, and managed property and supplies.



Support Costs

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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SUPPORT COSTS

Support Costs

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	
(DOLLARS IN THOUSANDS)						
PROGRAM						

Nationwide Support Services						
Salaries & Expenses	\$40,125.3	\$46,406.0	\$47,004.0	\$48,219.0	\$1,215.0	
Operations, Research & Facilities	\$4.4					
TOTAL	\$40,129.7	\$46,406.0	\$47,004.0	\$48,219.0	\$1,215.0	
Headquarters Support Services						
Salaries & Expenses	\$22,585.1	\$27,024.6	\$25,726.2	\$26,349.2	\$623.0	
TOTAL	\$22,585.1	\$27,024.6	\$25,726.2	\$26,349.2	\$623.0	
Regional Support Services						
Salaries & Expenses	\$13,333.3	\$13,350.4	\$14,282.8	\$12,430.4	-\$1,852.4	
TOTAL	\$13,333.3	\$13,350.4	\$14,282.8	\$12,430.4	-\$1,852.4	
Automated Data Processing Support Costs						
Salaries & Expenses	\$18,286.0	\$17,362.2	\$17,194.7	\$14,864.0	-\$2,330.7	
TOTAL	\$18,286.0	\$17,362.2	\$17,194.7	\$14,864.0	-\$2,330.7	
Professional Training						
Salaries & Expenses	\$230.7	\$502.3	\$497.4	\$507.6	\$10.2	
TOTAL	\$230.7	\$502.3	\$497.4	\$507.6	\$10.2	
Lab Support - Research & Development						
Salaries & Expenses	\$4,192.1	\$4,710.4	\$4,664.9	\$4,710.4	\$45.5	
TOTAL	\$4,192.1	\$4,710.4	\$4,664.9	\$4,710.4	\$45.5	
Lab Support - Air, Noise & Radiation						
Salaries & Expenses	\$1,371.2	\$2,178.5	\$2,157.4	\$2,178.5	\$21.1	
TOTAL	\$1,371.2	\$2,178.5	\$2,157.4	\$2,178.5	\$21.1	
Lab Support - Pesticides & Toxic Substances						
Salaries & Expenses	\$132.9	\$151.4	\$149.9	\$151.4	\$1.5	
TOTAL	\$132.9	\$151.4	\$149.9	\$151.4	\$1.5	
TOTAL:						
Salaries & Expenses	\$100,256.6	\$111,685.8	\$111,677.3	\$109,410.5	-\$2,266.8	
Operations, Research & Facilities	\$4.4					
Support Costs	TOTAL	\$100,261.0	\$111,685.8	\$111,677.3	\$109,410.5	-\$2,266.8

MANAGEMENT AND SUPPORT

Support Costs

Budget Request

The Agency requests a total of \$109,410.5 in the Salaries and Expenses Appropriation for support services in 1984, a decrease of \$2,266,800 from 1983. The decrease in requested funds is possible because rising rent, telephone, and utility costs are more than offset by reduced space needs and savings resulting from our cost containment initiatives in the areas of mail, telecommunications, and ADP support.

Program Description

The Agency Support Service component provides funds for general support to all Agency programs except Superfund. Programs under support services are:

Nationwide Support Services -- Agencywide costs for the following support functions: facilities rental and associated costs; payments to the U.S. Postal Service; Federal Telecommunications Service (FTS); security investigations; reimbursements to the Federal Employees Compensation Fund; payments to the Public Health Service for personnel administration services for commissioned officers assigned to EPA; and, contracts for EPA's occupational health and safety program.

Headquarters Support Services -- This program funds local office, building, and information management service costs for Headquarters and the field offices at Research Triangle Park, North Carolina (RTP) and Cincinnati, Ohio.

Regional Support Services -- This component funds local office, building, information management service costs, and minicomputer operations. Also included are local telephone service, security service, rental and purchase of common equipment, office and laboratory supplies, and printing and copying for the Regional offices.

Automated Data Processing Support Costs -- This program funds timesharing and related data processing services provided to all Agency programs through contracts with commercial suppliers and in-house computer facilities.

Professional Training -- This component provides funds for Agencywide training programs including executive and supervisory training and development programs mandated by the Office of Personnel Management, the Civil Service Reform Act, or by specific EPA needs.

Lab Support - Research and Development -- This provides resources for the basic facilities and operations and maintenance costs required to operate ORD's seven remote laboratories (those located outside Cincinnati, Ohio and Research Triangle Park, North Carolina). Those costs are not covered by the Headquarter's support account which funds similar items in Headquarters, Cincinnati and Research Triangle Park.

Lab Support - Air, Noise and Radiation -- This provides funds for basic facilities and maintenance costs to support the Motor Vehicle Emissions Laboratory, the Eastern Environmental Radiation Facility, and the Las Vegas facility.

Lab Support - Pesticides and Toxic Substances -- This provides basic facilities and operations and maintenance costs for the laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi.

NATIONWIDE SUPPORT SERVICES

1984 Program Request

The Agency requests a total of \$48,219,000 from Salaries and Expenses, an increase of \$1,215,000 over 1983. The resources in this area fund major Agencywide support requirements--facilities, lease costs, and long distance (FTS) expenses constitute the major portion of this element. The request is only a fractional increase over 1983, as anticipated rate increases are largely offset by savings from cost containment efforts in the areas of space, mail, and telecommunications. For example, we are able to request reduced long distance (FTS) costs because GSA is projecting a substantial decrease in the Agency's 1984 FTS bill as a result of our efforts to reduce unnecessary use of the telephones by tracking and reporting all long distance calls made from individual phones. This information became available through the use of user accountability equipment installed at key EPA locations.

1983 Program

In 1983, the Agency is allocating \$47,004,000 from Salaries and Expenses for Nationwide Support Services. This reflects significant rate increases in Nationwide Support costs, as well as changed assumptions regarding the release of Agency space. With regard to the latter, we will be unable to release space as rapidly as originally planned because the Agency's on-board personnel level is higher than anticipated. These increases will more than offset the savings from our cost reduction efforts.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$598,000 results from the following actions:

-Congressional Action. (-\$450,300) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$1,048,300) The Congressionally approved reprogramming moved resources from Headquarters Support into Nationwide Support. Additional funds were necessary for Nationwide Support to cover increased estimates on rent costs because of revised Agency workforce levels. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$40,129,700 for this program, of which \$40,125,300 was for Salaries and Expenses and \$4,400 was for the Operations, Research, and Facilities appropriation. This provided Agencywide support services including: space rental (which includes utility costs at most locations), postage, FTS, security investigations, and other necessary support for the Agency's workforce. In 1982 we converted all Washington and RTP telephones to the 382 exchange, thus allowing all long distance calls, including those made on the Federal Telecommunications System, to be tracked to the telephones from which the call was made. Also, we installed mail accountability equipment at several EPA locations to better monitor and control Agency postage costs.

HEADQUARTERS SUPPORT SERVICES

1984 Program Request

The Agency requests a total of \$26,349,200 from Salaries and Expenses, an increase of \$623,000 from 1983. The resources in this component fund the following services at Headquarters, RTP, and Cincinnati:

- Office and Building Services. This includes costs for building maintenance, telephone equipment and local services, utilities, office supplies, mail operations, employee health units, audiovisual services and supplies, printing services and supplies, security services, and the rental, purchase, and maintenance of equipment.
- ADP Technical Support. These funds provide the central ADP staff with contractor support for national systems development, maintenance and operation, and other technical services required to support and control the Agency's ADP activities.
- Library Services. This funds library contract operations and provides for the purchase of books and periodicals, literature searches, and information retrieval.

The request maintains the same level of services provided in 1983 at basically the same costs, (despite inflation) due to savings accruing from the continuation of cost reduction programs instituted in 1982 and 1983. These include efforts to control both the costs of providing services and the demand for such services.

1983 Program

In 1983, the Agency is allocating \$25,726,200 from Salaries and Expenses to Headquarters Support costs. This provides funding adequate to continue basic office, building, and information management services, and to support new initiatives to enhance Headquarters security and improve the condition of the Waterside Mall facility. Although we will continue and expand our cost reduction efforts, their net effect on the 1983 budget is hard to predict because of the volatile nature of this account. For example, higher than anticipated workforce levels in 1983 will increase our headquarters support needs substantially, for instance, in the areas of telephones and printing.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$1,298,400 results from the following actions:

-Congressional Action. (-\$250,100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (-\$1,048,300) The Congressionally approved reprogramming moved resources from Headquarters Support into Nationwide Support. Additional funds were necessary for Nationwide Support to cover increased estimates on rent costs because of Agency workforce levels. The Congressionally approved reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

In 1982, the Agency obligated \$22,585,100 from Salaries and Expenses, which provided the support services described above to all program operations at EPA headquarters, RTP, and Cincinnati. We implemented the following cost cutting measures in 1982: (1) instituted user accountability and control systems for local telephone service and mail operations; (2) consolidated publication distribution operations in Cincinnati; (3) reduced overtime utilities; (4) tightened management of printing, copying, audiovisual, and security services; (5) improved facilities and property management; and, (6) established uniform accounting systems for all support locations.

REGIONAL SUPPORT SERVICES

1984 Program Request

The Agency requests \$12,430,400 from Salaries and Expenses, a decrease of \$1,852,400 from 1983. This decrease reflects savings in Regional telecommunications costs resulting from expansion of Headquarters cost containment initiatives, the general reduction in the Regional workforce, and the shift of Regional focus to the Superfund program. Some of these savings will be used for an expanded investment in Regional ADP resources to improve the Regions' information management capabilities in two areas, minicomputer operations and financial management systems and subsystems.

The requested resources will provide basic support services to the ten Regional offices including: utilities, telephone equipment and local services, office and laboratory facility and equipment maintenance, office supplies, printing and copying, minicomputer and word processing operations, health units, ADP contract support, and library operations and supplies.

1983 Program

In 1983, the Agency is allocating \$14,282,800 from Salaries and Expenses to Regional support, an increase of \$949,500. This increase is needed to fully fund cost increases in utilities and other Regional support services. Based upon methods for ensuring greater consistency and accountability across all Regions, this level of funding will adequately provide basic services including: utilities, telephone equipment and local service, office and laboratory facility and equipment maintenance, office supplies, printing, duplicating, minicomputer and word processor operations, health units, ADP contract support, and library services.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$932,400 results from the following actions:

-Restructuring. (+\$769,800) The Congressionally approved restructuring transferred resources from Administrative Management into the Regional Support Costs program element to fund the non-personnel costs associated with providing services in the Regional Offices. The Administrative Management program element consisted of the salaries and expenses associated with providing regional administrative services.

-Congressional Action. (-\$139,400) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

-Reprogrammings. (+\$302,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations. These changes resulted in a net increase of +\$302,000 to the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$13,333,300 to provide basic support services to the ten Regional offices. We conducted a review of these costs across all ten Regions to identify inconsistencies in categories of costs charged to this account and recommended methods for ensuring greater consistency and accountability.

AUTOMATED DATA PROCESSING SUPPORT COSTS

1984 Program Request

The Agency requests \$14,864,000 from Salaries and Expenses, a decrease of \$2,330,700 from 1983, to support the operations of the Agency's National Computer Center at Research Triangle Park, North Carolina (RTP). This request reflects our

assessment of the program offices' computer timeshare service needs for 1984 and anticipates lower demand for ADP services throughout the Agency. Funds in this request support hardware and software equipment rental and maintenance requirements and the contractor effort necessary to operate a computer center. This activity is vital to the operation and maintenance of the Agency's information data systems (including national environmental data bases, and Agencywide management and administrative systems) and thus, are inextricably tied to the attainment of the Agency's environmental goals.

1983 Program

The Agency is allocating \$17,194,700 from Salaries and Expenses to provide ADP timesharing services to all Agency programs exclusive of the Superfund program. In 1983 we are implementing the improved timeshare tracking and reporting practices developed in 1982, thus allowing Agency timeshare users to better plan for and manage their automated data processing activities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$167,500 results from the following action:

-Congressional Action. (-\$167,500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

The Agency obligated \$18,286,000 from Salaries and Expenses to provide ADP services to all Agency programs exclusive of Superfund. In 1982, we developed better methods for recording, tracking, and reporting timeshare use. We developed improved reporting formats to provide Agency managers with the information necessary to support their program planning and budgeting. In order to assure equitable timeshare charges which accurately distribute the costs of the service, we developed improved workload forecasting techniques.

PROFESSIONAL TRAINING

1984 Program Request

For 1984, the Agency requests \$507,600 from Salaries and Expenses, an increase of \$10,200 over 1983. The request maintains current professional training efforts for EPA employees. This includes training mandated by the Office of Personnel Management and statutory obligations, as well as needs identified by the Agency's employee training strategy. We expect that, as a result of EPA's newly developed training strategy, every dollar expended for training will benefit the Agency directly and that the indirect pay-back to the Agency will more than equal the costs of the training. This funding is vital to a successful Agency human resource management program, which is designed to provide senior Agency officials with tools adequate to effectively manage and utilize the EPA workforce.

1983 Program

In 1983, the Agency is allocating from Salaries and Expenses \$497,400 for professional training activities. This increase results from the inauguration, this year, of several new training programs: comprehensive supervisory management training, Senior Executive Service Candidate Program training, and Senior Executive Service incumbent development training. These training and development programs are mandated by the Civil Service Reform Act and the Office of Personnel Management.

In 1983 we will also develop an Agencywide policy and strategy for employee training. The strategy is designed to ensure that EPA has the requisite skills within its workforce to manage its statutorily mandated missions. The strategy also requires that all training benefit the Agency directly and that managers compare the costs of employee training to the pay-back to the Agency for that training.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$4,900 results from the following action:

-Congressional Action. (-\$4,900) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982 the Agency obligated \$230,700 from Salaries and Expenses to provide professional training courses for EPA employees. This included: Office of Personnel Management mandated supervisory training, executive development training, secretarial/clerical training, and technical training.

LAB SUPPORT - RESEARCH AND DEVELOPMENT

1984 Program Request

The Agency requests a total of \$4,710,400 for Salaries and Expenses in this program. This represents an increase of \$45,500 from 1983 and results from the increase in utility and other costs derived from operating ORD's system of remote laboratories. These funds will provide for essential facility and maintenance costs required to operate ORD's seven remote laboratories, (Robert S. Kerr Environmental Research Laboratory, Ada; Environmental Research Laboratory, Athens; Environmental Research Laboratory, Corvallis; Environmental Research Laboratory, Duluth; Environmental Research Laboratory, Narragansett; Environmental Research Laboratory, Gulf Breeze; and Environmental Monitoring Systems Laboratory, Las Vegas). These laboratories do not receive funding from the Headquarter's support account. Services funded include, but are not limited to, facility janitorial and guard services, utilities and transportation costs which are essential to the operation of these remote laboratories.

1983 Program

In 1983, the Agency is allocating a total of \$4,664,900 for Salaries and Expenses in this program. The services provided by this program are ongoing in nature. These funds provide for the operation and maintenance of ORD's remote laboratories.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$45,500 results from the following action:

-Congressional Action. (-\$45,500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated a total of \$4,192,100 for Salaries and Expenses in this program. This provided funding for operating and maintaining ORD's seven remote laboratories.

LAB SUPPORT - AIR, NOISE AND RADIATION

1984 Program Request

The Agency requests a total of \$2,178,500 for this program, all of which is for Salaries and Expenses. This represents an increase of \$21,100 from 1983 for increased contractual services costs. This program supports the Motor Vehicle Emissions Laboratory (MVEL) in Ann Arbor, Michigan; the Eastern Environmental

Radiation Facility (EERF) in Montgomery, Alabama; and the Las Vegas radiation laboratory in Nevada. These funds provide for the facilities basic operations and maintenance costs necessary to support these laboratories. Support provided consists of security, janitorial and maintenance services, utilities, GSA vehicles, supplies and materials, and communications.

1983 Program

In 1983, the Agency is allocating \$2,157,400 for this program, all of which is for Salaries and Expenses. The 1983 program is providing for these three laboratories the same types of activities described for 1984, as these services -- basic laboratory operations, maintenance, and supplies -- are required on a continuing basis.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$21,100 results from the following action:

-Congressional Action. (-\$21,100) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

In 1982, the Agency obligated \$1,371,200 for this program, all of which was for Salaries and Expenses. In support of the MVEL, the EERF, and the Las Vegas Facility, these funds provided the basic facilities and operations and maintenance costs necessary to operate these laboratories.

LAB SUPPORT - PESTICIDES AND TOXIC SUBSTANCES

1984 Program Request

In 1984 the Agency requests \$151,400 under the Salaries and Expenses Appropriation, an increase of \$1,500 to cover rising support costs. These funds will be used for basic facilities and operations and maintenance costs for the laboratories in Beltsville, Maryland and Bay St. Louis, Mississippi. These costs include utilities, security, communications warehousing, custodial services and building maintenance.

1983 Program

In 1983 the Agency is allocating \$149,900 for Salaries and Expenses. The 1983 program supports the same type of activities as in 1984.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$1,500 results from the following action:

-Congressional Action. (-\$1,500) A general reduction of -\$1,350,000 was made to Management and Support activities and was applied proportionately to all offices in that media in the Salaries and Expenses appropriation.

1982 Accomplishments

The Agency obligated \$132,900 from Salaries and Expenses for continuing requirements for general support and maintenance.



Buildings and Facilities

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BUILDINGS AND FACILITIES

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
APPROPRIATION					

Buildings and Facilities	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0
TOTAL, Buildings and Facilities	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0
OUTLAYS	\$3,325.0	\$3,559.0	\$2,825.0	\$4,689.0	+\$1,864.0
AUTHORIZATION LEVELS	By virtue of Appropriation Act.				

BUILDINGS AND FACILITIES

OVERVIEW AND STRATEGY

The Buildings and Facilities appropriation funds the design, construction, repair, and improvement of buildings occupied by EPA, whether Federally owned or leased.

For the last year and a half, the Office of Administration, in conjunction with Regional and program representatives, has been investigating the costs and benefits of changing the current structure of our various laboratory and other field operation networks. For this analysis, we have limited spending for Buildings and Facilities projects in those facilities that may be affected, unless the projects were essential to safeguard the health and safety of EPA personnel. Recommendations resulting from our analysis are currently in the final stages of Agencywide review. We anticipate tailoring the use of unobligated funds to those facilities covered by the recommendations.

BUILDINGS AND FACILITIES

Repairs & Improvements

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Repairs & Improvements					
Buildings and	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0
Facilities					
TOTAL	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0
TOTAL:					
Buildings and	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0
Facilities					
Repairs & Improvements TOTAL	\$3,384.7	\$3,000.0	\$3,000.0	\$2,600.0	-\$400.0

BUILDINGS AND FACILITIES

Budget Request

The Agency requests \$2,600,000 for 1984 in the Buildings and Facilities Appropriation, a decrease of \$400,000 from 1983. We intend to focus the available Buildings and Facilities resources to those facilities and types of projects covered in the results of the Agency study.

Program Description

This appropriation funds the design and construction of new EPA facilities, as well as necessary repairs and improvements to buildings already occupied by EPA, whether Federally owned or leased. The program contains the following two program elements.

New Facilities -- This includes engineering and design services and construction costs of new, Federally owned facilities to be occupied by EPA, or the expansion of existing Federally owned, EPA occupied facilities.

Repairs and Improvements -- This covers major repairs and capital improvements to any buildings or facilities occupied by EPA. Most of the projects relate to the correction of health and safety deficiencies, the prevention of serious deterioration, or pollution control.

NEW FACILITIES

1984 Request

We are not requesting any funds for New Facilities in 1984.

1983 Program

No funds are allocated for New Facilities in 1983.

1983 Explanation of Changes from Budget Estimate

There were no funds obligated for this activity in 1982.

REPAIRS AND IMPROVEMENTS

1984 Request

The Agency requests \$2,600,000 for this program, a decrease of \$400,000. The requested funds will address the most pressing health and safety projects at EPA laboratories and other facilities, and for maintenance and repairs required to prevent the deterioration of EPA occupied facilities. This critical program is directed toward providing a safe and healthful working environment for EPA employees; ensuring that all EPA facilities meet pollution abatement standards; providing facilities maintenance that is essential to conduct program operations, prevent deterioration of EPA facilities, and provide preventative maintenance; improving capabilities at both research, program-oriented, and Regional laboratories; and addressing Agency requirements for toxic and hazardous material handling facilities. Again in 1984, in conformance with the Appropriation Committees' concerns, this request contains funding for all repairs and improvement projects over \$20,000. The Salaries and Expenses (S&E) appropriation contains funds for projects under \$20,000.

1983 Program

The Agency is allocating \$3,000,000 in 1983 for engineering, design, and construction related to health and safety, preventive maintenance, and emergency repairs at selected EPA facilities. We will continue the fumehood certification program, as well as reinstitute the preventive maintenance program deferred in 1982. With resolution of the long-term facilities strategy plan, we expect to begin funding those priority projects in conformance with the plan. In line with reforms introduced in 1981 and 1982, this budget earmarks funds for emergency repairs and engineering services essential to the timely and effective obligation of buildings and facilities funds. Also included is funding for space planning, reconfigurations, and alterations associated with space reductions begun in 1982. This program, in conformance with the Appropriation Committees' concerns, contains funding for all buildings and improvements projects greater than \$20,000. The Salaries and Expenses appropriation contains funds for repairs and improvement projects under \$20,000.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

The Agency obligated a total of \$3,384,700 to correct essential health and safety deficiencies and install pollution control devices in EPA laboratories in 1982. This included projects to: upgrade fumehoods and ventilation, install sewage disposal systems, provide safe storage for hazardous and toxic materials, modify emergency exits, correct faulty electrical systems, and modify or replace fire detection systems. We continued the fumehood certification program begun in 1981.

We deferred other essential maintenance and program expansion projects originally planned for 1982 pending the correction of health, safety, and pollution control deficiencies and the completion of the long-term facilities strategy plan.

Construction Grants

ENVIRONMENTAL PROTECTION AGENCY

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CONSTRUCTION GRANTS

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 vs 1983

	(DOLLARS IN THOUSANDS)				
Appropriation	\$2,400,000.0	\$2,400,000.0	\$2,430,000.0	\$2,400,000.0	-30,000.0
Obligations*	\$2,116,802.7	\$2,400,000.0	\$3,300,000.0	\$2,700,000.0	-\$600,000.0
Appropriation	(2,116,802.7)	(2,400,000.0)	(3,300,000.0)	(2,700,000.0)	(-600,000.0)
Contract Authority	(...)	(...)	(...)	(...)	(...)
Outlays	\$3,756,152.1	\$3,350,000.0	\$3,100,000.0	\$2,800,000.0	-\$300,000.0
Appropriation	(3,136,819.9)	(2,950,000.0)	(3,100,000.0)	(2,800,000.0)	(-300,000.0)
Contract Authority	(619,332.2)	(400,000.0)	(...)	(...)	(...)
Liquidation of					
Contract Authority	\$1,000,000.0	...	...	...	...
Authorization Levels	\$2,400,000.0	\$2,600,000.0	\$2,600,000.0	\$2,600,000.0	...

* Net obligations in 1982 are \$682 million less, and \$300 million less in 1983 and 1984.

CONSTRUCTION GRANTS

OVERVIEW AND STRATEGY

The long range goal of the Construction Grants program is to reduce the discharge of municipal wastewater pollutants in order to improve water quality and protect public health. To meet this goal, the program provides grants to municipal and intermunicipal agencies to assist in financing the construction of cost-effective and environmentally sound municipal wastewater treatment facilities to comply with requirements of the Clean Water Act. In addition, the program provides funds to assist States in carrying out their responsibilities in managing the Construction Grants and water quality management planning programs.

From 1973 through 1982, Congress authorized approximately \$44 billion and appropriated approximately \$38 billion. Approximately \$34 billion has been obligated and \$25 billion outlayed under P.L. 92-500. In spite of these large investments in the program, the 1980 Needs Survey identified needs of \$120 billion for sewage treatment that would be eligible for Federal funding under then-current legislation. The Administration proposed several reforms in the program; they were enacted by the Congress and signed by the President on December 29, 1981. The 1981 amendments to the Clean Water Act provide for more cost-effective targeting of the construction grants program. They reduce long-term expenditures for capital investments, thereby relieving the burden on the Federal government for financing projects that improve the environment marginally or not at all, and emphasize water quality based funding decisions.

EPA has simplified program regulations to eliminate all requirements not directly called for in the legislation. These modifications will provide the States maximum flexibility in determining the best way to implement their construction grants programs. The regulatory reforms have been accompanied by issuance of appropriate discretionary guidance documents. EPA has also made major efforts to complete and close out projects more quickly and to ensure that completed plants meet permit requirements.

To meet the long range goals of the program, EPA has identified the following major objectives: 1) to direct funds to projects with the greatest potential for improving water quality; 2) to ensure that communities have the financial capability to construct, operate, and maintain proposed treatment works that can become self-sustaining; 3) to prevent waste, fraud, and mismanagement and ensure program integrity; 4) to eliminate remaining backlogs and prevent their recurrence; 5) to implement results-oriented program management approaches in States and EPA; 6) to continue to fully delegate project management responsibilities to States; and 7) to continue to streamline program management requirements. The requested \$2,400,000,000 will allow States and municipalities to continue funding needed projects while maintaining program stability and integrity.

CONSTRUCTION GRANTS

Budget Request

An appropriation of \$2,400,000,000 is requested for 1984 for the municipal construction grants program established under Title II of the Clean Water Act (CWA), as amended by the 1981 Clean Water Act Amendments. This represents a decrease of \$30,000,000 from 1983. Obligations (net) for 1984 are expected to total \$2,400,000,000, a decrease of \$600,000,000 from 1983. This decrease is attributable to a reduction in carryover funds.

Program Description

This program provides grants to municipal and intermunicipal agencies to assist in financing the construction of cost-effective and environmentally sound municipal wastewater treatment facilities; to assist delegated States in carrying out their responsibilities to manage the Construction Grants program; and to assist States in carrying out water quality planning programs. The program also provides special funding to address marine combined sewer overflow problems. Resources associated with the management of these funds are described in the Municipal Source Control subactivity and the Water Quality State Programs Management subactivity.

From its annual construction grants allotment, a State may reserve up to four percent of its authorization or \$400,000, whichever is greater, to manage its delegated activities, and must reserve up to one percent of its allotment or \$100,000, whichever is greater, for water quality management planning. The Act also requires that each State set aside between four and seven and one-half percent of its allotment to provide incentives to communities to use innovative and alternative technologies in constructing their wastewater treatment facilities and that States having substantial rural populations set aside four percent of their funds for alternative projects in small communities. All grants for assisting in the development and construction of wastewater treatment facilities are to be awarded on the basis of a State's priority system, which is designed to ensure that funds are awarded to projects with the greatest potential for improving water quality. Through the end of FY 1982, approximately \$34 billion had been obligated under this program, with approximately \$4.1 billion still unobligated.

Before the 1981 Amendments, projects were done in three stages with separate grants awarded to a community for the planning (Step 1), design (Step 2), and construction (Step 3) phases of each project. In order to make the process more efficient, the 1981 Amendments eliminated the three-step procedure and provided for allowances for the planning and design costs. Provision is also made for advances to enable small communities, otherwise unable to finance such activities, to plan and design projects. Other provisions designed to make the program more efficient and cost-effective include eliminating funding to construct excess reserve capacity, limiting project eligibilities beginning in 1985, expanding the secondary treatment definition, and extending for one year the period for coastal cities to seek secondary treatment waivers under Section 301(h).

The 1981 Amendments also emphasized increased non-Federal responsibility for financing, constructing, and operating cost-effective treatment works that meet their permit requirements. The local funding share will increase from 25% to 45% for awards made beginning in FY 1985. Grantees must now demonstrate prior to award that the most economical and cost-effective alternative has been selected, including construction, operation, maintenance, and replacement costs. Value engineering review is mandatory for projects above \$10 million. Additionally, engineering firms will be expected to oversee a project's first year of operation to help ensure that it meets design and permit specifications.

The goal of the State management assistance grant program under Section 205(g) is to encourage States to assume responsibility for management of construction grants and other priority programs with emphasis on early achievement of full delegation of the program. The timing and extent of delegation and financial support to each State depends on the State's ability to operate a construction grants program that meets statutory requirements and EPA policy. A grant is provided to a State when it is able to exercise effective management for a substantial portion of the program.

EPA is working with all States to ensure the maximum delegation possible. A total of 49 States (including Puerto Rico) are expected to have signed delegation agreements by the end of 1984, with 36 of the States fully delegated by that time. EPA will continue to exercise project management responsibilities in remaining nondelegated and partially delegated States and Territories. EPA will also continue to maintain Federal responsibilities for ensuring effective, orderly use of construction grant funds; implement results-oriented program management; ensure program accountability in meeting statutory goals; work with States in meeting program priorities, providing information transfer and guidance as necessary; and work with the U.S. Army Corps of Engineers as it fulfills its program management, State training, and State management assistance role.

The goal of the water quality planning grant program under Section 205(j) is to support State, regional, and local planning activities, including determining the nature and extent of water quality problems; identifying priority water bodies; identifying cost-effective, acceptable means to meet and maintain water quality standards, including point-nonpoint source control tradeoffs; and identifying municipal treatment construction needs. States are required to consult with local, regional, and interstate agencies in developing work plans for using these funds.

In accordance with Congressional directives, the Administrator is reviewing all proposed advanced treatment projects where the incremental costs of the advanced component is greater than \$3,000,000. The review of these projects is performed by EPA staff in Headquarters; the Regional offices are responsible for review of similar projects with an incremental cost of less than \$3,000,000. This review ensures that such funding is strictly limited to those situations where the higher level of treatment would result in significant water quality and public health improvements.

1984 Program Request

In 1984, EPA proposes a construction grants appropriation of \$2,400,000,000, a decrease of \$30,000,000 from 1983. This funding level will provide for 597 grant awards and \$2,400,000,000 in net obligations. The Agency estimates that outlays will total approximately \$2,800,000,000. A total of 1,200 projects are expected to complete construction. This appropriation will allow for new obligational authority of \$90,797,000 for Section 205(g) delegation management and \$24,407,792 for water quality planning under Section 205(j).

By the end of 1984, EPA expects that the construction grants program will have achieved essentially full delegation. No additional States are expected to accept initial delegation in 1984, although 36 States will assume full delegation, an increase of 6 from 1983. The remaining States are expected to continue at approximately the same levels of delegation for the near future. In 1984 States will provide 2,140 workyears or 68% of the total program management staffing, EPA 18%, and the Corps of Engineers the remaining 14%.

EPA will continue its role as overall program manager by working with States in targeting funds toward priority water quality needs; assuring that proposed plants are within each community's financial capabilities and have the capability for becoming self-sustaining; completing and closing out projects as quickly as possible; ensuring effective facilities construction, including improved first year operations; preventing waste, fraud, or abuse and taking necessary corrective action; ensuring that grants obligations and outlays projections are viable; and managing effectively shared EPA, State, and Corps of Engineers responsibilities.

EPA anticipates that States will obligate \$24,400,000 under Section 205(j) in support of water quality management priorities identified in 1982 and 1983. States will review and revise water quality standards; update State Continuing Planning Processes; ensure consistency between water quality management plans and permit and construction grants decisions; and develop needed source and nonpoint source control programs.

1983 Program

With a 1983 construction grants appropriation of \$2,430,000,000, a total of 771 Step 3 and 2+3 grants totaling \$3,000,000,000 will be awarded in 1983. A total of 1,136 projects are expected to complete construction. These funds will also support construction grants management activities under Section 205(g) in 49 delegated States with estimated obligations of \$107,103,000; water quality management planning activities in the States with estimated obligations of \$45,200,000 under Section 205(j) and funding of Marine Combined Sewer Overflow projects.

EPA expects three additional States will accept initial delegation in 1983. Of the 49 jurisdictions with delegation agreements, 30 States are expected to assume full delegation, an increase of 9 over 1982. With the exception of statutory responsibilities for project management, EPA will exercise the role of overall program manager in these States.

The Agency will work with States to define annual national program priorities and objectives, monitor delegated State programs, and provide needed management assistance. The Federal program will emphasize results-oriented oversight of a limited number of high priority program activities where there are direct financial, water quality, or public health concerns. EPA will ensure that funded projects meet identified water quality and public health needs; projects are technologically appropriate and within the financial capability of the communities served; appropriate Advanced Treatment funding decisions are made; projects are completed and closed out as quickly as possible; waste, fraud, and mismanagement in the program are prevented; obligation and outlay projections are viable; and that States continue to implement delegated roles.

The \$45,200,000 to be obligated in 1983 under Section 205(j) includes \$22,200,000 available from 1982. Funding priorities will include reviewing and revising water quality standards for use attainability, updating water quality management planning processes and plans, and conducting wasteload allocations on priority waterbodies for determining treatment needs.

1982 Accomplishments

In 1982, construction grants awards totaled 586, including 26 Step 1, 36 Step 2, and 524 Step 2+3 and Step 3 awards. This funding resulted in 8,346 active projects by the end of the year. In 1982, Federal outlays totaled \$3,756,152,000 and obligations totaled \$2,116,800,000.

During 1982, one additional State signed a Section 205(g) agreement. Of the 46 jurisdictions with delegation agreements, 21 are considered to be fully delegated including assistance provided by the Corps of Engineers. Delegated States obligated \$50,131,000 in 1982 to support construction grants and other program needs. States provided 1,901 workyears, or 59% of the total program. No states obligated Section 205(j) because of the timing of the appropriation. \$22,200,000 of 1982 funds were reserved for 1983 use.

Superfund

ENVIRONMENTAL PROTECTION AGENCY

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SUPERFUND

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
APPROPRIATION					

Hazardous Substance Response Trust Fund	\$180,743.6	\$230,000.0	\$210,000.0	\$310,000.0	100,000.0
TOTAL, Superfund	\$180,743.6	\$230,000.0	\$210,000.0	\$310,000.0	100,000.0
PERMANENT WORKYEARS	465.6	516.4	623.8	619.3	-4.5
TOTAL WORKYEARS	527.7	592.2	699.6	707.1	7.5
OUTLAYS	\$79,576.0	\$188,000.0	\$177,000.0	\$269,000.0	+\$92,000.0
AUTHORIZATION LEVELS	By virtue of Appropriation Act, as authorized by Public Law 96-510.				

SUPERFUND

OVERVIEW AND STRATEGY

In 1984, the major emphasis of the Superfund program will continue to be on the field implementation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. This law establishes a broad based and integrated program, involving both Federal and State governments, to address the environmental problems posed by uncontrolled hazardous waste sites and spills of hazardous materials. The costs of implementing CERCLA is funded by the Hazardous Substance Response Trust Fund. This Fund is financed by a combination of excise taxes levied on oil and chemical manufacturers and revenues from the General Fund. The authority to collect taxes expires on or before September 30, 1985.

The primary goal of the Environmental Protection Agency's Superfund program is to effectively respond to the release or threatened release of hazardous substances, pollutants, or contaminants that may present an imminent or substantial endangerment to public health, welfare, or the environment. The two basic types of responses that can be taken are removal and remedial actions. Removal actions are generally short-term responses taken to abate an immediate threat posed by the uncontrolled release of hazardous substances at both sites and spills into the air, land, and water media. Remedial actions involve longer term and more complex solutions at hazardous waste sites.

While the Agency has the primary responsibility for implementing the program, CERCLA provides a clear mandate for the Agency to work closely with a variety of other Federal agencies and the States in order to carry out the Act. The National Contingency Plan provides the basic framework for implementing the program in a timely and effective fashion. The Agency undertakes five major activities in implementing the Superfund program: Hazardous Substance Response, Enforcement, Research and Development, Management and Support, and Interagency Support. The effective integration of these activities will involve close cooperation among various Agency offices, the States and other Federal agencies with specific program responsibilities.

Hazardous Substance Response

In 1984, Hazardous Substance Response activities financed by the Hazardous Substance Response Trust Fund will be focused on the containment of the most serious hazardous waste emergencies and the continuation and initiation of remedial actions at uncontrolled sites posing the greatest threat to public health and the environment. In 1984, the Agency will continue its systematic evaluation of all known uncontrolled waste sites to determine which pose a significant threat to public health, welfare, or the environment. As required by CERCLA, the National Priority List has been prepared to provide a basis for determining priorities for response and enforcement efforts. In order to make the best use of available resources, before any Federally sponsored remedial action is initiated, a concerted effort will be made to have responsible parties assume the cost of response. When this fails, the Agency will proceed to characterize the problem, identify and analyze feasible solutions, and then design and implement the selected alternative. By the end of 1984, the Agency expects to have initiated planning efforts at approximately 130-140 sites and begun the design or implementation of solutions at approximately 75 sites.

In 1984, the Agency will continue to work closely with the States in selecting and implementing solutions at hazardous waste sites. States will be encouraged to accept management of all response actions when capable. For those sites where the States do not accept the lead for management of the response, the Agency will contract for the necessary expertise to conduct the assessment of and selection of alternatives and the Army Corps of Engineers will manage design and construction contracts to implement the solution.

The Agency will continue to ensure an effective emergency response program for any major hazardous substance spills and for emergency releases at hazardous waste sites. Approximately 4,000 hazardous material spills and site emergencies occur each year. The Federal government will need, as in the past, to respond directly at only a small number of these incidents. Maintenance of a Federal capability to respond directly to certain incidents is absolutely crucial for those situations when the party responsible is either unknown or incapable of properly handling the response and the State and local governments are unable to provide adequate response. The Agency will work closely with the U.S. Coast Guard and other members of the National and Regional Response Team, as well as the States, to provide timely and effective response in those situations where it is truly necessary.

Enforcement

The Hazardous Substance Response Trust Fund is insufficient to support clean-up of all problem sites and spills. The Agency's enforcement program will emphasize securing privately-financed response actions through negotiated settlement or administrative and legal action and will initiate cost recovery whenever possible. These efforts will expand the program's ability to address uncontrolled waste sites.

The Agency's enforcement efforts will focus on the development of legally and technically sound cases. Those responsible for uncontrolled sites or spills will be given an early opportunity to reach a settlement and voluntarily assume the cost of responding. However, the Agency will continue to initiate administrative and legal actions against those parties who fail to negotiate in good faith. In addition, in those cases where a Fund-financed response action is undertaken, the Agency will seek to recover the cost of responding. If appropriate, the Agency may seek to impose the treble damage provisions of CERCLA.

Research and Development

The Superfund Research and Development program supports the Agency, States, and industry in resolving those technical problems which inhibit the effective implementation of removal and remedial actions. The Office of Research and Development support for Agency Superfund activities focuses on adopting existing technologies and scientific information for application to uncontrolled hazardous waste site situations. For instance, current technologies used in the construction industry, wastewater treatment, and spill cleanup, may be applicable to uncontrolled waste sites. However, before these technologies can be applied, they must first be tested, their cost-effectiveness determined, and limitations understood. In addition, field response personnel must be in a position to identify rapidly and measure accurately the hazardous waste with which they are confronted and determine quickly the risk involved to the surrounding population and ecosystem.

Superfund activities of the Office of Research and Development are systematically designed to provide the following in support of the Agency's program(s): methods for sampling and analyzing hazardous materials needed for quality assurance protocols; techniques for field response personnel to use in evaluating potential ecological effects of hazardous materials releases from waste sites; characterization of hazardous materials through the use of remote monitoring techniques; evaluation of the hazard potential of substances released from uncontrolled sites; and engineering and other technical guidance to Federal, State and local officials for immediate response to uncontrolled site cleanup operations.

Management and Support

Management and Support activities for the Superfund program provide the full array of financial, administrative, and support services in an integrated and efficient manner. The five major activities conducted to supply basic Agency management and support are provision of administrative services, financial management, policy and resource management, and the services of the Offices of the Inspector General and General Counsel.

Administrative services include personnel management, contracts management, data systems management, and occupational health and safety. Also included are funds necessary for facility rental, Federal Telecommunications Service, utilities, local telephone costs, and other support costs.

Financial management activities include the maintenance of systems, procedures, and records that accurately reflect the financial condition of the Fund, and provide full accounting of all receipts and disbursements and site specific accounting to document cost recovery.

Policy and resource management activities support program implementation through: statistical, technical, economic, and financial analyses of regulations, guidelines, policies, and program activities; the development and implementation of management tracking and accountability systems; and, budget preparation, control, execution, and evaluation.

The Agency's Office of Inspector General is responsible for determining whether or not the Fund is being properly administered; preparing interim and final Reports to the Congress; and conducting, supervising, and coordinating pre-award, interim, and final audits of Superfund contracts and interagency agreements.

The Agency's Office of General Counsel supports the Superfund program by providing advice and consultation on financial and administrative matters such as eligible uses of the Fund and legal support for the development and defense of regulations. The General Counsel also provides advice to Superfund managers and States on Cooperative Agreements with State agencies to manage removal or remedial work, and for defensive litigation arising out of Agency Superfund decisions.

Interagency Support

In addition to requiring integration of the efforts of the various Agency offices with program responsibilities, the Superfund program requires close cooperation among various Federal agencies. Executive Order 12316, signed by the President in August 1981, requires that the Agency assume responsibility for the management of the program. In addition, several other agencies including the Departments of Justice, Health and Human Services, Transportation, Commerce, and Interior, as well as, the Federal Emergency Management Agency were assigned responsibilities under CERCLA and the Executive Order. To ensure a coordinated Federal program, the Agency will emphasize the development of an integrated approach in undertaking site response actions. Activities at specific sites undertaken by other Federal agencies will be triggered at the request of the lead Agency's on-scene personnel and will be funded through reimbursable agreements. On-going activities of other Federal agencies are determined jointly under the interagency budget process established in the Executive Order and are funded through transfer allocation accounts. The dual system ensures that agencies have sufficient funds to conduct on-going activities while providing the lead Agency the ability to manage and coordinate Federal actions at specific sites.

SUPERFUND

<u>Program Activities</u>	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimated 1984</u>	<u>Increase + Decrease - 1983 vs 1984</u>
Hazardous Substance Spills and Sites - Immediate Removal Actions	50	50	50	50	0
Hazardous Substance Sites - Planned Removal Actions	1	30	15	10	- 5
<u>Remedial Actions</u>					
Preliminary Assessments	1,500	2,000	4,000	4,000	0
Inspections	1,300	500	2,000	2,000	0
Investigations	400	100	200	200	0
Remedial Investigation/ Feasibility Studies	31	56	40	55	+ 15
Initial Remedial Measures*	12	-	15	20	+ 5
Designs	8	20	24	40	+ 16
Remedial Actions	14	11	11	22	+ 11
<u>Enforcement Activities</u>					
Technical Support for On-going Docket/Filed Cases	42	-	25	40	+ 15
Settlements	20		36	50	+ 14
Enforcement of Administrative Orders	-	-	17	32	+ 15
CERCLA §106 Imminent Hazard Civil Litigation Case Support	9	-	7	10	+ 3
CERCLA §107 Cost Recovery Civil Litigation Case Support	18	-	14	24	+ 10
State Support Activities	17	-	30	30	0

*Initial remedial measures involve limited actions, if necessary, such as drum excavation required to continue work on remedial investigation/feasibility study or design.

Research and Development

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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SUPERFUND

Hazardous Substances

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Scientific Assessment Hazardous Substance Response Trust Fund	\$459.9	\$614.2	\$614.2	\$794.0	\$179.8
TOTAL	\$459.9	\$614.2	\$614.2	\$794.0	\$179.8
Monitoring Systems & Quality Assurance Hazardous Substance Response Trust Fund	\$2,785.9	\$1,989.9	\$1,989.9	\$2,905.9	\$916.0
TOTAL	\$2,785.9	\$1,989.9	\$1,989.9	\$2,905.9	\$916.0
Environmental Engineering & Technology Hazardous Substance Response Trust Fund	\$9,809.5	\$3,499.4	\$3,499.4	\$2,221.3	-\$1,278.1
TOTAL	\$9,809.5	\$3,499.4	\$3,499.4	\$2,221.3	-\$1,278.1
Environmental Processes & Effects Hazardous Substance Response Trust Fund	\$757.9	\$232.5	\$232.5	\$459.5	\$227.0
TOTAL	\$757.9	\$232.5	\$232.5	\$459.5	\$227.0
TOTAL: Hazardous Substance Response Trust Fund	\$13,813.2	\$6,336.0	\$6,336.0	\$6,380.7	\$44.7
Hazardous Substances TOTAL	\$13,813.2	\$6,336.0	\$6,336.0	\$6,380.7	\$44.7
PERMANENT WORKYEARS					

Scientific Assessment	3.8	2.5	2.5	2.5	
Monitoring Systems & Quality Assurance	8.6	8.4	8.4	8.4	
Environmental Engineering & Technology	11.8	11.5	11.5	11.5	
Environmental Processes & Effects	1.9	2.1	2.1	2.1	
TOTAL PERMANENT WORKYEARS	26.1	24.5	24.5	24.5	

SUPERFUND

Hazardous Substances.....	SF-8

ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
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(DOLLARS IN THOUSANDS)

TOTAL WORKYEARS

Scientific Assessment	3.8	2.5	2.5	2.5
Monitoring Systems & Quality Assurance	8.6	8.4	8.4	8.4
Environmental Engineering & Technology	11.8	11.5	11.5	11.5
Environmental Processes & Effects	1.9	2.1	2.1	2.1
TOTAL WORKYEARS	26.1	24.5	24.5	24.5

SUPERFUND

Hazardous Substances

<u>Major Outputs/Milestones</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Provide Techniques and Procedures for Site and Situation Assessment			
- Develop methods for assessing health effects and exposure to complex wastes. (Scientific Assessment)	9/82	9/83	9/84
- Prepare risk assessments for use in remedial and enforcement actions. (Scientific Assessment)	Ongoing	Ongoing	Ongoing
- Guidelines for sampling and emergency response. (Monitoring)	9/82	9/83	9/84
- Laboratory on-site evaluations and aerial photo studies. (Monitoring)	Ongoing	Ongoing	Ongoing
- Provide Superfund field procedure documents to aid response teams in assessing and cleaning up uncontrolled sites. (Env. Processes)	9/83	9/83	9/84
Evaluate Technologies to Manage Uncontrolled Waste Sites			
- Mobile incinerator construction, testing and demonstration. (Env. Eng.)	6/83	9/84	9/84
- Handbooks for decontamination procedures, cover design and installation, slurry trench design and installation. (Env. Eng.)	1/84	9/84	9/84
- Handbooks for fixation/solidification of wastes, design and performance of liner materials and evaluation of organic chemicals on cutoff wall performance. (Env. Eng.)	12/83	8/85	8/85
Provide Information for Personnel Health and Safety Equipment and Procedures			
- Develop interim and final diver safety protocol. (Env. Eng.)	8/84		
Support Reportable Quantities Regulatory Efforts			
- Monitoring guidelines. (Monitoring)		9/83	9/84
- Develop criteria "reportable quantities" (RQs) and for chemicals listed in CERCLA, Sections 101(14) and 102. (Scientific Assessment)	9/82	9/83	9/84

SUPERFUND

Hazardous Substances

Budget Request

The Agency requests a total of \$6,380,700 and 24.5 permanent workyears for 1984, an increase of \$44,700. Within this level, there is a decrease in environmental engineering and technology and increases in the other program elements which comprise this sub-activity.

Program Description

Unsound hazardous waste management practices in the United States have resulted in large numbers of uncontrolled sites, many now abandoned, that are causing contamination of the environment.

The support afforded by the Office of Research and Development (ORD) is almost entirely a technical support function through which ORD uses completed research or developments from other programs such as Hazardous Waste, Hazardous Spills and Drinking Water to provide the support necessary for program implementation. Carefully tailored guidance documents, operations manuals, assessment techniques, evaluation of control technologies and general technical assistance are provided to meet the requirements of EPA program and regional offices, States and local authorities. Specific program objectives established as the basis for ORD support activities are:

Objective 1. Provide Techniques and Procedures for Site and Situation Assessment. Activities under this objective provide the necessary techniques and procedures to allow On-Scene Coordinators (OSC) to quickly and effectively assess the degree of hazard posed at specific uncontrolled hazardous waste sites. An extensive quality assurance program for the National Contracts Program is also included.

Objective 2. Evaluate Technologies to Manage Uncontrolled Waste Sites. Activities under this objective evaluate and assess technologies, techniques and construction materials which may be applicable to controlling hazardous waste incidents in a cost-effective manner.

Objective 3. Provide Procedures for Assuring Effective Post-Closure of Uncontrolled Sites. These activities provide the means to accurately monitor and ensure adequate control during the post-closure phase of site cleanup.

Objective 4. Provide Information on Personnel Health and Safety Equipment and Procedures. These activities evaluate and assess the technical areas necessary to ensure personnel health and safety during removal and cleanup operations, including the evaluation and assessment of: communications equipment and procedures, protective clothing and breathing apparatus, personal monitoring for exposure, safety procedures for extended site operations, and decontamination procedures of personnel and equipment exposed to hazardous materials.

Objective 5. Support Reportable Quantities Regulatory Efforts. These activities support Superfund regulatory efforts by ranking and assigning reportable quantities to chemicals based upon a number of scientific and technical factors, including chronic mammalian toxicity or potential carcinogenicity.

Objective 6. Provide Technical Support to Enforcement, Program and Regional Offices. These activities provide verification of remedial action design and implementation, review and evaluation of all QA/QC plans, review of new data submitted by liable parties, and provide expert witnesses when required for litigation procedures.

SCIENTIFIC ASSESSMENT

1984 Program Request

The Agency requests a total of \$794,000 and 2.5 permanent workyears for this program, all of which is for the Hazardous Substance Response Trust Fund appropriation. This represents an increase of \$179,800 in total funding and no change in workyears, reflecting the Agency's increased need for emergency response and enforcement support.

Provide Techniques and Procedures for Site and Situation Assessment. Rapid response health assessments will be provided to On-Scene-Coordinators (OSCs) for use in deciding appropriate response to emergency situations. These assessments are chemical-specific but when summed over the chemicals involved will allow OSCs at a spill or uncontrolled site to determine potential hazards and the need for more detailed assessments. Also, methods for preparing detailed assessments of human health effects and exposure to complex hazardous wastes are being refined. Additional factors will be considered in formulating more comprehensive versions of methods developed in 1983.

Provide Procedures for Ensuring Effective Post-Closure of Uncontrolled Sites. Site-specific and chemical-specific detailed risk assessments will be prepared to verify the long-term adequacy of Agency sponsored remedial, enforcement and voluntary compliance actions. Since residual levels of hazardous substances may remain in the environment after remedial responses, protocols are also being developed to estimate aggregate acceptability indices from exposure to these levels. This effort will help address the issue of "how clean is clean" from a human health standpoint.

Support Reportable Quantities Regulatory Efforts. Chemical-specific criteria were developed in 1982 and 1983 to determine minimum "reportable quantities" (RQs) for each chemical listed or specified under CERCLA, Sections 101(14) and 102 based upon their inherent health hazard. Approximately 50 to 70 reportable quantity determinations required under Section 102 will still remain to be completed in 1984 (all of those under Section 101 will be completed earlier). Resources also will be required to respond to public comments during rulemaking for all of the chemicals in both sections.

1983 Program

In 1983, the Agency is allocating a total of \$614,200 and 2.5 permanent workyears for this program, all of which is funded under the Hazardous Substance Response Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. Toxicity data are being compiled and summarized for 100 additional chemicals in order to respond rapidly to requests from OSCs at emergency sites. First generation methods for evaluating human health hazards resulting from multiple media exposure to chemical mixtures are being completed and compiled in the form of a technical support document.

Provide Procedures for Ensuring Effective Post-Closure of Uncontrolled Sites. Chemical-specific and site-specific hazard/risk assessments are being provided to identify potential acute and chronic human health hazards arising from multi-media exposures to complex mixtures and single chemicals found in past remedial situations. These assessments vary in depth of coverage, ranging from brief hazard summary statements to full peer reviewed risk assessments for use in litigation or negotiation.

Support Reportable Quantities Regulatory Efforts. Chemical-specific criteria for determining reportable quantities are being finalized and applied to approximately 75 chemicals among those designated under CERCLA Section 101(14).

1983 Explanation of Changes From Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$459,900 for this program, all of which was under the Hazardous Substance Response Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. Toxicity data were compiled and summarized for 60 chemicals, and 20 rapid response health assessments were provided upon request from regional and program staff. Methods for determining human health effects from multiple media exposure and single chemicals were completed and summarized in the form of a draft report now under review.

Provide Procedures for Ensuring Effective Post-Closure of Uncontrolled Sites. A total of six detailed human health risk assessments were completed in 1982 as part of this program.

Support Reportable Quantities Regulatory Efforts. Preliminary criteria for determining reportable quantities were developed and applied to approximately 75 chemicals listed in CERCLA, Section 101(14).

MONITORING SYSTEMS AND QUALITY ASSURANCE

1984 Program Request

The Agency requests a total of \$2,905,900 and 8.4 permanent workyears for this program, all of which is for the Hazardous Substance Response Trust Fund appropriation. This reflects an increase of \$916,000, resulting in a strengthening of efforts to provide an effective quality assurance program in support of the National Contracts Laboratory Program. The increase also reflects the anticipated growth of sample analyses from waste sites and an increase in the number of settlement agreements from enforcement actions.

Provide Techniques and Procedures for Site and Situation Assessment. It is anticipated that some 12-15 contractors will be involved in the National Contracts Laboratory Program in 1984. On-site laboratory evaluations, blind sample analyses, quarterly reviews and a 10 percent data audit will be provided in order to establish data of known quality throughout the site analysis program. The site analysis and prioritization program will use historical and new aerial photography to provide more than 500 site studies. A second edition of the "Compendium of Sampling Methods" will be published to provide the latest methods to States and industry.

Support Reportable Quantities Regulatory Efforts. The Reportable Quantities Regulations under provision of Superfund Sections 101(14) and 102 will be updated and strengthened by adding monitoring methods for new chemicals.

Provide Technical Support to Enforcement, Program and Regional Offices. Enforcement cases will be provided with increased monitoring expertise for case preparation. Quality assurance and quality control efforts to ensure that clean-up by industry is consistent with agreements will receive direct ORD support. Support will be available to program offices and Regions in the form of geophysical monitoring to ensure that removal and remedial actions have been successful in abating pollution. A referee laboratory to analyze split samples from field monitoring and provide quick turn around analyses of complex samples will be provided to the Regions along with special studies in air, water, soils and biota monitoring.

1983 Program

In 1983, the Agency is allocating a total of \$1,989,900 and 8.4 permanent workyears to this program, all of which is under the Hazardous Substance Response Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. A more encompassing and effective quality assurance program for the National Contracts Laboratory Program is being implemented in order to obtain data of known quality. The first edition of a "Compendium of Sampling Methods" and "Guidelines On Response to Emergencies" is being completed. Historical and new aerial photography is being used to characterize site conditions.

Support Reportable Quantities Regulatory Efforts. A compendium of available monitoring methods for ambient and emergency monitoring of reportable quantities is being provided to support Superfund Sections 101(14) and 102.

Provide Technical Support to Enforcement, Program and Regional Offices. A contractor-operated laboratory is providing referee analysis capabilities, sample analysis for enforcement and analysis of complex samples for the Regions. Quality assurance oversight of enforcement settlement agreements is being initiated. Field testing of equipment for volatile organic air problems and water, soils and biota monitoring is being supplied to Agency and operational State programs. Enforcement support for case preparation is using state-of-the-art equipment and the scientific expertise of the Office of Research and Development.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$2,785,900 for this program, all of which was under the Hazardous Substance Response Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. The first phase of a quality assurance program for the National Contracts Laboratory Program and mandatory quality assurance program was implemented. Evaluation and standardization of sampling and analysis methods, and the development of a personal exposure monitor were completed. An extensive program to characterize 100 sites with aerial photography was accomplished.

Provide Technical Support to Enforcement, Program and Regional Offices. Support in the form of special studies on air, surface and ground water and oversight of a contractor-operated laboratory for the analysis of complex field samples were provided.

ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

1984 Program Request

The Agency requests a total of \$2,221,300 and 11.5 permanent workyears for this program, all of which is for the Hazardous Substance Response Trust Fund appropriation. This decrease of \$1,278,100 reflects the near completion of major engineering studies associated with the development of manuals required to support initial Superfund implementation efforts.

Evaluate Technologies to Manage Uncontrolled Waste Sites. Response technology to support emergency action at hazardous materials spills and newly discovered releases of hazardous materials from uncontrolled waste sites will be evaluated. Efforts will address response equipment and technology by demonstrating prototypical equipment such as mobile incineration systems and mobile soil washing systems for cost-effective multi-media removal actions at uncontrolled sites. Manuals of practice for handling damaged and leaking drums at waste sites will be made available. A scientifically defensible technology base (including guidelines) will be prepared to provide response personnel direction on the use of dispersants and/or coagulants introduced into the environment to mitigate the effects of hazardous releases.

Remedial technology activities will address the engineering and technology needs of the program office and Regions relative to cleaning up problems at abandoned waste sites. Assessing the cost-effectiveness of technologies applied and validation of technology effectiveness will be an integral part of this effort. A handbook on remedial technology will be prepared, based on a survey and assessment of current technology and field assessments of remedial actions at uncontrolled hazardous waste sites begun in 1982. It will include design data, and cost and effectiveness information to assist in selecting remedial action alternatives. Predictive capabilities characterizing reactivity of construction materials and hazardous wastes will be provided. Models to predict the effectiveness of remedial action will also be provided.

Provide Information on Personnel Health and Safety Equipment and Procedures. Based on our experience at hazardous waste sites, there is a need to evaluate specialized equipment and establish current state-of-the-art procedures to ensure personnel safety during reconnaissance and cleanup, especially decontamination of equipment and personnel. Outputs in this area will include manuals establishing personnel safety protocols and the evaluation of equipment and techniques specific to the needs of response personnel.

Provide Technical Support to Enforcement, Program and Regional Offices. In order to provide timely technical and scientific information and analysis in support of hazardous waste site litigation and corrective actions, short-term, quick turn-around technical advice and consultation will be provided to regional programs and to the Office of Waste Program Enforcement.

1983 Program

In 1983, the Agency is allocating a total of \$3,499,400 and 11.5 permanent workyears for this program, all of which is under the Hazardous Substance Response Trust Fund appropriation.

Evaluate Technologies to Manage Uncontrolled Waste Sites. Major activities include evaluation of prototypical equipment for cost-effective multi-media removal actions at spills and defective uncontrolled hazardous waste sites; production of manuals addressing on-site assessment of the extent of contamination, containment and confinement techniques for removal actions; and manuals addressing separation, concentration of released hazardous chemicals, and ultimate disposal of collected and concentrated cleanup residuals. A survey and assessment of current technology applicable to remedial actions at uncontrolled hazardous waste sites is also being prepared.

Remedial action design sites analyses are being conducted and reports on pilot test facilities to predict the effectiveness of remedial action schemes are being prepared. Under this effort reports will be initiated on the prediction of reactivity of construction materials with hazardous wastes. Technical resource documents describing best engineering judgement practices for user communities in controlling pollutant release from uncontrolled waste sites are being prepared.

Provide Information on Personnel Health and Safety Equipment and Procedures. This program is providing manuals on the testing of specialized safety equipment and procedures for ensuring personnel safety during site reconnaissance and cleanup including decontamination of equipment and personnel. Emphasis is on evaluating equipment and techniques specific to the needs of response personnel, including people engaged in sampling and site investigation.

Provide Technical Support to Enforcement, Program and Regional Offices. The program is providing quick turn-around, short-term technical support to OERR and regional offices in reviewing response plans for uncontrolled hazardous waste sites, enforcement cases, and control technology. Support is being provided by in-house ORD technical experts and through ORD contractors. Response field assistance is continuing, including on-site consultation, supervision of cleanup operations involving ORD equipment, and analytical support using mobile and central laboratories.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$9,809,500 for this program, all of which was under the Hazardous Substance Response Trust Fund appropriation.

Evaluate Technologies to Manage Uncontrolled Waste Sites. Since the Office of Research and Development's activities in support of CERCLA began in 1981, only those outputs with a short period of performance were completed in 1982. Major accomplishments resulted in improved engineering technology to correct environmentally unsound hazardous waste sites. Construction of a mobile incinerator designed for field use in destroying hazardous organic substances collected from cleanup operations was completed. In order to systematically evaluate and demonstrate the equipment, test and trial burns were begun and will be completed in early 1983. A technical gap was filled by providing technology (ultrasonic reflectometer) to locate insoluble hazardous wastes (sinkers) at the bottom of waterbodies. A computerized data base providing a centralized information bank of past hazardous substances incident response experiences has been developed. Information from regional offices, States, and localities are being added to the system to increase its comprehensiveness.

A number of tasks initiated in both 1982 and prior years produced reports, e.g., "Handbook - Remedial Action at Waste Disposal Sites," "Costs of Remedial Response Actions at Uncontrolled Hazardous Waste Sites," and "In-Situ Stabilization Case Study." Other activities included completion of a study on in-situ destruction of PCB's in contaminated soils. Several technical handbooks were initiated, addressing such subjects as slurry trench design, plume control, and cover design.

Provide Information on Personnel Health and Safety Equipment and Procedures. Activities supporting this objective were not initiated until the end of 1982 and as a result, there were no products produced during that year.

Provide Technical Support to Enforcement, Program and Regional Offices. Several direct technical support activities were completed for both the Office of Emergency Response and the Regions. These included a report entitled "Cost-effective Analysis of the Remedial Action Options for the LiPari Hazardous Waste Site in New Jersey," and a feasibility study on the treatment of LiPari leachates by a public wastewater treatment plant. These activities were in addition to the primary function of support for enforcement activities.

ENVIRONMENTAL PROCESSES AND EFFECTS

1984 Program Request

The Agency requests a total of \$459,500 and 2.1 permanent workyears for this program, all of which is for the Hazardous Substance Response Trust Fund appropriation. This reflects an increase of \$227,000 which supports the need to apply increased resources toward establishing guidelines and criteria on which to make decisions regarding the necessary extent and duration of emergency and remedial response actions.

Provide Techniques and Procedures for Site and Situation Assessment. To support on-scene coordinators (OSCs) of emergency and remedial response activities, a handbook will be prepared which assists OSCs in determining whether the extent and duration of a removal or remedial activity is commensurate with the degree of risk posed by an uncontrolled site from an ecological and toxicological perspective. Models developed or selected for use in 1983 to predict the behavior of contaminants in ground and surface water will be evaluated.

Provide Technical Support to Enforcement, Program and Regional Offices. Technical support will continue to be provided to enforcement, program and regional offices on an "as requested" basis. In addition to predictive models and manuals, field and enforcement personnel have a continuing need for technical support on a short term basis to address site-specific problems.

1983 Accomplishments

In 1983, the Agency is allocating a total of \$232,500 and 2.1 permanent work-years to this program, all of which is under the Hazardous Substance Response Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. The program continues to focus on preparation and validation of user oriented materials to aid regional and State response team personnel. A set of manuals are being completed which assist OSCs in identifying ecological, biological, geohydrological and economic factors germane to responding to releases of hazardous materials. Models to predict the behavior of contaminants in ground and surface water are being developed and selected for use. These will assist response team personnel in assessing the risks posed at uncontrolled hazardous waste sites.

Provide Technical Support to Enforcement, Program and Regional Offices. The program provides field and enforcement personnel with technical expertise in response to site or situation-specific needs and requests. Products include consultations, supervision, testimony and analytic support.

1983 Explanation of Change from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982 the Agency obligated a total of \$757,900 and 1.9 permanent workyears for this program, all of which was under the Hazardous Substance Trust Fund appropriation.

Provide Techniques and Procedures for Site and Situation Assessment. Drafts of user manuals were prepared for the land and ground water media and were distributed for peer review to response team personnel. Efforts continued to develop a user manual for surface water assessments.

Provide Technical Support to Enforcement, Program and Regional Offices. The program provided field and enforcement personnel with technical expertise in response to site or situation-specific needs and requests. Products included consultations, supervision, testimony and analytic support.



Enforcement

ENVIRONMENTAL PROTECTION AGENCY

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SUPERFUND

Hazardous Substance Response - Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983	
----- (DOLLARS IN THOUSANDS) -----						
PROGRAM -----						
Technical Support - Office of Legal & Enforcement Counsel Hazardous Substance Response Trust Fund	\$1,564.9	\$2,346.2	\$2,346.2	\$964.5	-\$1,381.7	
TOTAL	\$1,564.9	\$2,346.2	\$2,346.2	\$964.5	-\$1,381.7	
Hazardous Substance Technical Enforcement Hazardous Substance Response Trust Fund	\$6,581.7	\$9,219.7	\$8,745.6	\$17,512.8	\$8,767.2	
TOTAL	\$6,581.7	\$9,219.7	\$8,745.6	\$17,512.8	\$8,767.2	
Hazardous Substance Legal Enforcement Hazardous Substance Response Trust Fund	\$263.0	\$3,762.6	\$3,534.4	\$3,628.7	\$94.3	
TOTAL	\$263.0	\$3,762.6	\$3,534.4	\$3,628.7	\$94.3	
TOTAL: Hazardous Substance Response Trust Fund	\$8,409.6	\$15,328.5	\$14,626.2	\$22,106.0	\$7,479.8	
Hazardous Substance Response - Enforcement	TOTAL	\$8,409.6	\$15,328.5	\$14,626.2	\$22,106.0	\$7,479.8
PERMANENT WORKYEARS -----						
Technical Support - Office of Legal & Enforcement Counsel	19.7	15.0	15.0	12.0	-3.0	
Hazardous Substance Technical Enforcement	121.2	84.9	117.9	120.6	2.7	
Hazardous Substance Legal Enforcement	4.1	66.0	79.4	73.9	-5.5	
TOTAL PERMANENT WORKYEARS	145.0	165.9	212.3	206.5	-5.8	
TOTAL WORKYEARS -----						
Technical Support - Office of Legal & Enforcement Counsel	20.8	19.0	19.0	14.0	-5.0	

SUPERFUND

Hazardous Substance Response - Enforcement

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

	(DOLLARS IN THOUSANDS)				
Hazardous Substance Technical Enforcement	137.8	99.3	132.3	140.0	7.7
Hazardous Substance Legal Enforcement	5.1	71.9	85.3	82.5	-2.8
TOTAL WORKYEARS	163.7	190.2	236.6	236.5	-.1

SUPERFUND

Hazardous Substance Response-Enforcement

Budget Request

The Agency requests a total of \$22,106,000 and 206.5 permanent workyears for 1984 from the Hazardous Substance Response Trust Fund appropriation for technical, administrative and legal enforcement activities. This represents an increase of \$7,479,800 and a decrease of 5.8 permanent workyears from 1983. The increase in dollars reflects greater reliance on contract resources to intensify efforts to secure privately-financed actions in response to releases of hazardous substances. In addition, contract funds will also support an increased level of cost recovery actions thereby conserving the Trust Fund for use at future sites and spills. The decrease in permanent workyears reflects the decreased need for legal policy development in 1984.

Program Description

Hazardous substance response enforcement consists of the administrative and legal enforcement actions authorized under CERCLA. In the event a release or threat of a release presents an imminent or substantial endangerment to public health, welfare, or the environment, the Agency may order responsible parties to take abatement action by issuing a CERCLA §106 Administrative Order. Noncompliance with such orders can result in the Agency assessing fines and/or treble damage penalties against the party. Civil judicial actions also may be initiated to compel response action. CERCLA §107 authorizes the Agency to recover the cost of Federally-financed response actions from responsible parties by documenting the release or threat of release, linking responsible parties to the site or spill, and indicating that the Federal response was not inconsistent with the National Contingency Plan. Criminal actions may be initiated for failure to notify authorities of releases as required under CERCLA §103.

Combined legal and technical documentation will support identification of parties responsible for uncontrolled waste sites and spills, negotiations for privately-financed response when possible, development and execution of CERCLA §106 Administrative Orders, initiation of cost recovery actions, and the development of civil and criminal referrals for abatement and cost recovery actions to the Department of Justice when warranted. The Agency will also provide technical and legal enforcement support for the management of on-going imminent hazard and cost recovery cases filed by the Department of Justice on behalf of the Agency. The technical and legal enforcement functions of this program are performed under separate program elements consistent with the Agency's reorganization of enforcement activities.

Technical Support - Office of Legal and Enforcement Counsel -- This program element comprises the Superfund portion of the activities of the National Enforcement Investigations Center (NEIC) in Denver, Colorado which is within the Office of Legal and Enforcement Counsel (OLEC). The NEIC provides technical support to various aspects of the Superfund enforcement program, with emphasis on specialized technical case support for high hazard and high priority enforcement cases as well as national expertise and specialized services not normally available at Headquarters or in the Regions. The NEIC focus is on provision of specialized investigatory assistance; technical support for case development for recovery of funds expended for remedial and removal actions; evaluating technical evidence related to litigation efforts; case preparation investigations; high hazard sample

analysis associated with the development of priority enforcement cases; specialized technical support in negotiating priority settlements; provisions of expert technical witnesses in support of litigation; and specialized assistance to State enforcement activities. The NEIC is primarily concerned with the provision of specialized technical support to the Agency's civil and criminal litigation activities.

Hazardous Substance Technical Enforcement -- This program covers the technical enforcement component of the Superfund program and is responsible for initiation of administrative enforcement actions. Through a nationally managed program, the Agency will provide support of efforts to secure responsible party response actions at uncontrolled sites and spills. This will include seeking response actions through negotiations and voluntary settlements with responsible parties, maintaining an aggressive Administrative Order process, and developing high quality, legally defensible technical evidence for civil litigation. A major program emphasis will be on the recovery of Superfund costs, wherever possible, for removal and remedial actions through the issuance of demand letters to responsible parties, negotiation for payment by these parties, and technical support of litigation. Technical support of criminal enforcement actions will be provided as well as support of State lead enforcement efforts at uncontrolled hazardous waste sites.

Hazardous Substance Legal Enforcement -- This program provides the legal staff for enforcement efforts under the Superfund program. A major emphasis under this program is the development of the legal documentation necessary to reach agreement for privately-financed response action at hazardous waste sites and spills. In cooperation with technical enforcement staff, this program will provide legal support for the issuance of demand letters, Administrative Orders and will participate with the Department of Justice in negotiations of consent decrees and the conduct of civil and criminal litigation. In addition, EPA legal staff will work with the Department of Justice to support cost recovery actions when a Superfund-financed response has been taken. Finally, this program will ensure that a nationally consistent enforcement approach is taken under Superfund.

TECHNICAL SUPPORT - OFFICE OF LEGAL AND ENFORCEMENT COUNSEL

1984 Program Request

The Agency requests a total of \$964,500 and 12.0 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation. This represents a decrease of \$1,381,700 and 3.0 permanent workyears from 1983. The decrease reflects a refocusing of the National Enforcement Investigation Center's (NEIC) efforts to the technical support of certain civil and criminal litigation. Less emphasis will be placed on nonlitigation related activities such as the development of investigative and analytical protocols and routine compliance inspections.

In 1984, this program will provide specialized technical support to nationally managed cases that require unusually complex or difficult technical capabilities. This program will supplement Regional staff in those cases that are technically difficult, and will fully support precedent-setting criminal cases. Responsibilities will include providing technical consultation and assistance in case preparation activities including high hazard laboratory procedures; field investigations in support of case development efforts for certain categories of cases; laboratory analysis; evidence evaluation; report preparation; technical testimony; and, negotiation of technical aspects of key consent decrees. Specialized technical assistance will be provided to State and Regional case development efforts in preparation and analysis of high hazard samples. Contract funds will provide for a continuation of the evidence audit function.

1983 Program

In 1983, the Agency is allocating a total of \$2,346,200 and 15.0 permanent workyears to this program from the Hazardous Substance Response Trust Fund appropriation. Specialized technical capabilities will be made available to Regional enforcement programs and State agencies for site entry procedures, sampling of highly hazardous drums and tanks, preparation and analysis of high hazard samples, and a wide range of specialized analytical procedures, quality control, and evidence security procedures. The Agency will assist the Federal Bureau of Investigation (FBI) and Regional investigative staffs in criminal investigations of hazardous waste disposal practices by training FBI personnel in EPA technical evidence gathering procedures. An evidence audit control process will be continued in 1983. This will ensure that proper chain-of-custody procedures are followed to support the field investigation team contract.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,564,900 for this program from the Hazardous Substance Response Trust Fund appropriation. This program provided technical consultation and assistance in litigation preparation by performing laboratory analyses, data evaluation, technical testimony, and negotiation of technical aspects of consent decrees. It also developed high hazard laboratory procedures, investigative protocols, and provided technical support in the review of Agency regulations.

HAZARDOUS SUBSTANCE TECHNICAL ENFORCEMENT

1984 Program Request

The Agency requests a total of \$17,512,800 and 120.6 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. This reflects an increase of \$8,767,200 and 2.7 permanent workyears to expand efforts to secure privately-financed response action at National Priority List sites and to initiate cost recovery in all cases where there is a financially viable party and it is cost-effective.

Efforts to secure response action at National Priority List sites will be provided through a nationally managed program coordinating legal and technical activities and assuring consistency with Agency policy. The Agency will continue to identify, notify, and negotiate with responsible parties in an attempt to secure voluntary, privately-financed response action at uncontrolled hazardous waste sites. The Agency anticipates reaching settlements with responsible parties at 50 sites. The Agency will issue CERCLA §106 Administrative Orders, monitor compliance with orders, and provide technical support for any litigation necessary to enforce them. High quality, legally defensible technical evidence will be provided to support the development of ten new civil cases to compel private party response and to support an estimated 40 on-going civil actions already filed by the Department of Justice on behalf of the Agency.

In order to conserve Trust Fund resources for use at abandoned sites, efforts to recover Trust Fund costs for removal and remedial actions will increase in 1984. Through issuance of demand letters, negotiations, and, if necessary, technical support for civil litigation authorized under CERCLA §107, the Agency will seek recovery of Trust Fund costs from financially viable responsible parties. The Agency expects to refer 24 cost recovery actions to the Department of Justice.

These efforts will be supported by contract resources to meet the stringent technical requirements essential for negotiations, administrative enforcement, and litigation including evidence audit activities. Specifically, these resources will be used to search for responsible parties and determine their financial viability; to develop proposed plans for response actions or review defendants' plans; to conduct analysis of potential populations at risk; to conduct evidence audits; and, to secure expert witness support for litigation and negotiations. Effective management of these resources will require close coordination with response personnel and legal enforcement staff to avoid duplication of efforts undertaken in planning possible Federal response and to provide the broadest possible basis of technical information to support enforcement actions.

Technical support for criminal enforcement actions will be provided as well as support of 30 State actions at uncontrolled waste sites.

1983 Program

In 1983, the Agency is allocating a total of \$8,745,600 and 117.9 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. These resources support the effort necessary to begin enforcement at sites on the expanded National Priority List and to initiate cost recovery where Federal funds have been expended.

The Agency will develop technical enforcement policies and manage a nationally consistent program to secure privately-financed response actions at National Priority List sites. The Agency will identify responsible parties at sites on the priority list, will initiate appropriate administrative actions, and support legal actions. The Agency anticipates reaching settlements at 36 sites. The Agency will issue CERCLA §106 Administrative Orders to abate imminent hazards, monitor compliance with such orders, and provide technical support for any litigation that may be necessary to enforce them. The Agency will provide high quality, legally defensible technical enforcement support for 25 on-going cases, the development of seven new civil actions, and four criminal enforcement actions.

The Agency will initiate cost recovery actions against financially viable responsible parties at sites where Federally-financed removal actions have been undertaken. Demand letters will be issued to responsible parties and negotiations will be conducted to recover costs. Technical support for the development of 14 cost recovery referrals to the Department of Justice will be provided.

The Agency will support 30 State lead enforcement actions at uncontrolled sites.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$474,100 results from the following action:

-Reprogrammings. (-\$474,100) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, the Agency obligated \$6,581,700 from the Hazardous Substance Response Trust Fund appropriation for this program. This level represented the combined technical and legal enforcement resources in Headquarters and the Regions.

This program supported the national management of actions initiated at sites on the Interim Priority List and other sites where CERCLA funds were expended. Resources were used to identify, notify, and negotiate with responsible parties for site response actions. Technical support was provided to the Department of Justice for the on-going docket of 42 filed imminent hazard cases and for the development of nine new civil referrals. The Agency negotiated settlements worth an estimated \$29.3 million in privately-financed response activities at 20 sites. In addition, the program received \$2.3 million in cost recoveries and voluntary contributions for Federal response actions. The Agency initiated its Administrative Order program and provided technical support for the development of 18 cost recovery actions referred to the Department of Justice. State lead enforcement actions were supported by technical expertise provided by the Agency.

HAZARDOUS SUBSTANCE LEGAL ENFORCEMENT

1984 Program Request

The Agency requests a total of \$3,628,700 and 73.9 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. This represents an increase of \$94,300 and a decrease of 5.5 permanent workyears from 1983. This decrease in permanent workyears reflects the completion of initial development of Agency legal enforcement policies in 1983.

In 1984, this program will emphasize those enforcement actions necessary to obtain privately-financed response actions and to recover Federal costs related to removal and remedial actions. Appropriate legal approaches will be selected and undertaken against those identified parties that do not properly undertake removal or remedial actions at hazardous sites and who fail to reach a negotiated settlement.

Actions will include the issuance of Administrative Orders and initiation of civil and/or criminal litigation. Actions will be initiated to recover Federal expenses related to Federally-financed response activities.

The Agency will ensure that a consistent and fair legal approach is followed through the implementation of its enforcement policies. These policies will be used to guide the conduct of enforcement actions. Specifically, the Agency will ensure consistency in negotiated settlements and in decisions related to the initiation and conduct of civil actions.

The Agency will provide support to the Department of Justice for 40 on-going civil actions; will prepare ten new civil cases to compel private party response; will refer 24 cost recovery cases; and, will refer four criminal cases to the Department of Justice. Legal support and documentation will be provided in the development and execution of negotiated settlements, Administrative Orders, and enforcement of Administrative Orders and consent decrees as required.

1983 Program

In 1983, the Agency is allocating \$3,534,400 and 79.4 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation. Agency efforts will focus on providing the necessary legal support in negotiations with responsible parties for privately-financed response actions.

The Agency will provide support to the Department of Justice for 25 on-going civil actions and will prepare seven new civil cases to compel private party response, refer 14 cost recovery cases, and will refer four criminal cases to the Department of Justice. Legal support and documentation will be provided in the development and execution of negotiated settlements, Administrative Orders, and enforcement of Administrative Orders and consent decrees as required.

In addition, in 1983 the Agency will complete initial development of enforcement policies to ensure a fair and consistent approach in pursuing enforcement actions, including developing with the NEIC guidelines for judicially admissible evidence and documentation required to establish the liability of responsible parties.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$228,200 results from the following action:

-Reprogrammings. (-\$228,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, the Agency obligated a total of \$263,000 from the Hazardous Substance Response Trust Fund appropriation. Due to the enforcement reorganization in mid-1982, this amount represents only a portion of the costs of legal support activities. Legal support including the development and initiation of civil and criminal cases for the Superfund program were also funded under the Hazardous Substance Technical Enforcement program element. The Agency obligated a total of \$6,844,700 for the activities carried out under these two program elements in 1982.



Management and Support

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SUPERFUND

Management and Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Hazardous Substance Financial Management - Headquarters					
Hazardous Substance Response Trust Fund	\$208.9	\$778.9	\$778.9	\$564.9	-\$214.0
TOTAL	\$208.9	\$778.9	\$778.9	\$564.9	-\$214.0
Hazardous Substance Financial Management - Regions					
Hazardous Substance Response Trust Fund	\$89.2	\$283.8	\$236.9	\$364.4	\$127.5
TOTAL	\$89.2	\$283.8	\$236.9	\$364.4	\$127.5
Hazardous Substance Administrative Management - Headquarters					
Hazardous Substance Response Trust Fund	\$1,419.3	\$3,028.0	\$3,164.0	\$2,636.3	-\$527.7
TOTAL	\$1,419.3	\$3,028.0	\$3,164.0	\$2,636.3	-\$527.7
Hazardous Substance Administrative Management - Regions					
Hazardous Substance Response Trust Fund	\$360.6	\$271.1	\$385.4	\$401.0	\$15.6
TOTAL	\$360.6	\$271.1	\$385.4	\$401.0	\$15.6
Hazardous Substance Occupational Health and Safety - Headquarters					
Hazardous Substance Response Trust Fund	\$482.4	\$665.0			
TOTAL	\$482.4	\$665.0			
Hazardous Substance Support Services - Headquarters					
Hazardous Substance Response Trust Fund	\$3,101.3	\$3,097.3	\$3,626.3	\$4,601.8	\$975.5
TOTAL	\$3,101.3	\$3,097.3	\$3,626.3	\$4,601.8	\$975.5
Hazardous Substance Support Services - Regions					
Hazardous Substance Response Trust Fund	\$352.3	\$964.6	\$1,283.4	\$1,371.3	\$87.9
TOTAL	\$352.3	\$964.6	\$1,283.4	\$1,371.3	\$87.9

SUPERFUND

Management and Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
Hazardous Substance Laboratories & Facilities					
Hazardous Substance Response Trust Fund	\$136.2				
TOTAL	\$136.2				
Hazardous Substance Computer Services					
Hazardous Substance Response Trust Fund	\$255.4	\$1,435.0	\$1,535.0	\$1,480.0	-\$55.0
TOTAL	\$255.4	\$1,435.0	\$1,535.0	\$1,480.0	-\$55.0
Hazardous Substance Legal Services - Headquarters					
Hazardous Substance Response Trust Fund	\$69.8	\$280.3	\$280.3	\$243.5	-\$36.8
TOTAL	\$69.8	\$280.3	\$280.3	\$243.5	-\$36.8
Hazardous Substance Legal Services - Regions					
Hazardous Substance Response Trust Fund	\$139.1	\$236.0	\$202.8	\$397.1	\$194.3
TOTAL	\$139.1	\$236.0	\$202.8	\$397.1	\$194.3
Hazardous Substance Inspector General					
Hazardous Substance Response Trust Fund	\$1,671.4	\$2,813.9	\$2,813.9	\$2,570.2	-\$243.7
TOTAL	\$1,671.4	\$2,813.9	\$2,813.9	\$2,570.2	-\$243.7
Hazardous Substance Natural Resource Claims					
Hazardous Substance Response Trust Fund		\$40.0	\$40.0		-\$40.0
TOTAL		\$40.0	\$40.0		-\$40.0
Hazardous Substance - Office of Policy and Resource Management					
Hazardous Substance Response Trust Fund	\$1,225.3	\$1,432.1	\$1,432.1	\$1,224.0	-\$208.1
TOTAL	\$1,225.3	\$1,432.1	\$1,432.1	\$1,224.0	-\$208.1
TOTAL:					
Hazardous Substance Response Trust Fund	\$9,511.2	\$15,326.0	\$15,779.0	\$15,854.5	\$75.5
Management and Support TOTAL	\$9,511.2	\$15,326.0	\$15,779.0	\$15,854.5	\$75.5

SUPERFUND

Management and Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS) -----					
PERMANENT WORKYEARS					

Hazardous Substance Financial Management - Headquarters	3.4	5.0	5.0	4.4	-.6
Hazardous Substance Financial Management - Regions	4.0	6.0	9.2	9.2	
Hazardous Substance Administrative Management - Headquarters	18.4	22.0	24.1	25.3	1.2
Hazardous Substance Administrative Management - Regions	5.8	10.0	10.0	10.0	
Hazardous Substance Occupational Health and Safety - Headquarters	2.0	2.1			
Hazardous Substance Legal Service - Headquarters	1.5	5.8	5.8	5.0	-.8
Hazardous Substance Legal Services - Regions	.8	1.0	10.0	10.0	
Hazardous Substance Inspector General	17.5	22.0	22.0	19.8	-2.2
Hazardous Substance Natural Resource Claims		1.0	1.0		-1.0
Hazardous Substance - Office of Policy and Resource Management	2.9	7.0	7.0	7.0	
TOTAL PERMANENT WORKYEARS	56.3	81.9	94.1	90.7	-3.4
TOTAL WORKYEARS					

Hazardous Substance Financial Management - Headquarters	4.6	5.0	5.0	4.4	-.6
Hazardous Substance Financial Management - Regions	4.0	6.0	10.0	10.0	

SUPERFUND

Management and Support

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
----- (DOLLARS IN THOUSANDS)					
Hazardous Substance Administrative Management - Headquarters	19.3	25.1	28.6	28.7	.1
Hazardous Substance Administrative Management - Regions	5.8	10.0	10.0	10.0	
Hazardous Substance Occupational Health and Safety - Headquarters	3.2	3.5			
Hazardous Substance Legal Service - Headquarters	1.6	6.0	6.0	5.0	-1.0
Hazardous Substance Legal Services - Regions	4.1	5.0	14.0	10.0	-4.0
Hazardous Substance Inspector General	17.5	22.0	22.0	19.8	-2.2
Hazardous Substance Natural Resource Claims		1.0	1.0		-1.0
Hazardous Substance Office of Policy and Resource Management	4.6	7.0	7.0	9.0	2.0
TOTAL WORKYEARS	64.7	90.6	103.6	96.9	-6.7

SUPERFUND

Management and Support

Budget Request

The Agency requests a total of \$15,854,500 and 90.7 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for Management and Support activities in 1984. This represents an increase of \$75,500 and a decrease of 3.4 permanent workyears from 1983.

Program Description

This function provides basic management and support services for the Superfund program, including rent, utilities, financial and administrative management, contracts management, data systems management, occupational health and safety, programmatic and regulatory analysis, and budget formulation and execution. This function also includes resources for the Superfund related activities of the Offices of the General and Regional Counsels and the Office of Inspector General.

Hazardous Substance Financial Management - Headquarters and Regions -- This component contains two program elements which maintain financial records, and track and report on the use of the Hazardous Substance Response Trust Fund.

Hazardous Substance Administrative Management - Headquarters and Regions -- This component also contains two program elements. The resources fund the Superfund administrative services necessary to award and administer contracts, process personnel actions, provide central management and technical support for Superfund information systems, acquire and maintain Superfund office and laboratory services, and provide technical assistance and training for the Superfund program staff to assure the safety of those employees.

Hazardous Substance Occupational Health and Safety - Headquarters -- These resources provide technical assistance and training for the Superfund program staff to assure the safety of those employees exposed to toxic and other hazardous substances. This program element was consolidated with the Hazardous Substance Administrative Management - Headquarters program element in 1983.

Hazardous Substance Support Services - Headquarters and Regions -- The two program elements in this component cover the costs of space, utilities, printing, equipment, and other nonpersonnel support needs incurred by the Superfund program staff.

Hazardous Substance Laboratories and Facilities -- This program element provides funds for construction and modification of laboratories to ensure the safe handling of toxic and other hazardous substances.

Hazardous Substance Computer Services -- This program element funds the data processing (timesharing) costs of operating and maintaining all Superfund information systems.

Hazardous Substance Legal Services - Headquarters and Regions -- These program elements fund the activities of the Office of the General Counsel (OGC) and the Offices of the Regional Counsels under Superfund. These activities include statutory interpretations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and the issuance of opinions and advice regarding the use of the Hazardous Substance Response Trust Fund and other financial, administrative, or legal issues. In addition, OGC acts as the Agency's chief

counsel in defending regulatory and other Agency decisions regarding the implementation of CERCLA and supports the enforcement litigation program. The Offices of the Regional Counsels advise and assist the Regions and States in interpreting the Act and represent Regions in defensive litigation activities.

Hazardous Substance Inspector General -- This program element funds the Congressionally required annual audit of the Trust Fund, as well as pre-award, interim, and final audits of contracts awarded under the Superfund program, and audits of Cooperative Agreements with the States.

Hazardous Substance Natural Resource Claims -- This program element provides funds for the Board of Arbitrators which will settle disputes regarding payment of claims for natural resource damages.

Hazardous Substance - Office of Policy and Resource Management -- This program provides resources for budget development and fund oversight, policy analysis, management assessments and evaluations, under the Superfund program.

HAZARDOUS SUBSTANCE FINANCIAL MANAGEMENT - HEADQUARTERS

1984 Program Request

The Agency requests \$564,900 and 4.4 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation, a decrease of \$214,000 and .6 permanent workyears. This reflects the completion in 1983 of the development of standardized systems and procedures. These resources fully service the Headquarters components of the Superfund program with the complete array of financial management activities. This includes basic accounting and payroll support, processing all financial actions and vouchers, access to the Financial Management System, cash management controls, and site specific accounting to support cost recoveries.

1983 Program

In 1983, the Agency is allocating \$778,900 and 5.0 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation. These resources adequately fund all necessary day to day financial activities, overall guidance and coordination for the Regional finance operations associated with the Superfund activities, and the completion of development of standardized systems and procedures.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated \$208,900 to provide sound fiscal controls, and assure the financial integrity of the Superfund program.

HAZARDOUS SUBSTANCE FINANCIAL MANAGEMENT - REGIONS

1984 Program Request

The Agency requests \$364,400 from the Hazardous Substance Response Trust Fund appropriation and 9.2 permanent workyears for this program, an increase of \$127,500. This dollar increase will enable the Agency to continue to meet the increasing demands for sound financial management and fund control in the Superfund program as the level of field activity increases. The activities in this will parallel those described for the Agency's Regional Financial Management program in the

Management and Support media. However, financial management for the Superfund program is distinguished by the unique nature of the program -- site and spill response actions, financial recovery actions, and requirements for financial information on specific sites and for Superfund as a distinct appropriation. These resources will support transactions processing (travel, payroll, vouchers); general ledger activities; imprest fund services; financial reporting; and answers to Superfund program office inquiries and on-scene coordinator problems. This request enables the Regional finance offices to keep pace with Superfund field activities, and the financial transactions supporting those activities.

1983 Program

The Agency is allocating \$236,900 and 9.2 permanent workyears to this program from the Hazardous Substance Response Trust Fund appropriation in order to support expanded Superfund field activity and meet the increasing demands for sound financial management and fund control in the Superfund program. Among the responsibilities of the Regional finance offices are: providing timely and accurate financial reports; maintaining internal controls to ensure the fiscal integrity of the Fund; billing and collecting monies due the Fund for Federal response recovery actions; coordinating financial data from other Federal agencies; and, providing accurate and auditable document support for all Superfund financial transactions.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$46,900 results from the following action:

-Reprogrammings. (-\$46,900) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

The Agency obligated \$89,200 from the Hazardous Substance Response Trust Fund appropriation for this program. The Regional finance offices provided financial reports; implemented and maintained internal contracts to ensure the fiscal integrity of the Fund; collected State cost share; coordinated financial data from other Federal agencies and other financial activities.

HAZARDOUS SUBSTANCE ADMINISTRATIVE MANAGEMENT - HEADQUARTERS

1984 Program Request

The Agency requests \$2,636,300 and 25.3 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation, a decrease of \$527,700 and an increase of 1.2 permanent workyears. This decrease reflects the completion of health and safety standards in 1983.

The request provides centralized administrative services in the contracts, grants, information management, health and safety, and personnel areas. In the contracts area, we will award and administer new contracts and purchase orders, as necessary, and manage the large mission contracts awarded in 1982 and 1983. This entails contract monitoring, task order issuance, and subcontract approval. The Grants Administration Division will award and administer the Superfund Cooperative Agreements. The Superfund Information Systems staff will continue to manage the development of the Superfund systems with particular emphasis on integrating the new systems with existing Agency systems and data bases. The Occupational Health and Safety Staff will develop and certify training courses, work with the National Institute of Occupational Safety and Health Administration and the U.S. Coast Guard on interagency safety task forces, and develop specialized medical monitoring programs. The Headquarters Superfund personnel team will provide staffing and classification activities to service Superfund personnel.

1983 Program

The Agency is allocating \$3,164,000 and 24.1 permanent workyears for this program from the Hazardous Substance Response Trust Fund appropriation to provide centralized administrative and management services. In 1983, we are maintaining and refining the administrative services initiated in 1982. We are devoting significant resources to manage the contracts awarded in 1982, including two major mission contracts, and to award new 1983 contracts. We are implementing and refining health and safety standards and procedures. We also are continuing to support the Superfund program in the areas of information and personnel management.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$136,000 results from the following actions:

-Restructuring. (+\$665,000) The Congressionally approved restructuring consolidated all Superfund Administrative Management responsibilities into one program element. Therefore, Occupational Health and Safety resources were transferred into the Hazardous Substance Administrative Management program element.

-Reprogrammings. (-\$529,000) The Congressionally approved change reprogrammed funds from the Superfund Management account to the Superfund Support account. Additional funds provided support for Superfund workyears and the portion of Agencywide updated and revised support costs which were associated with the Superfund program. The reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

The Agency obligated \$1,419,300 for this program from the Hazardous Substance Response Trust Fund appropriation. With these resources, we awarded and administered large mission contracts required to carry out response and remedial activities; provided central technical support for developing, operating, and maintaining all Superfund information systems; maintained and supported the personnel requirements of the program staff; and, supported the program in such areas as telecommunications, printing, space management, and office services.

HAZARDOUS SUBSTANCE ADMINISTRATIVE MANAGEMENT - REGIONS

1984 Program Request

The Agency requests \$401,000 and 10.0 permanent workyears, an increase of \$15,600 from 1983 from the Hazardous Substance Response Trust Fund appropriation, to maintain the current administrative management services of the Regional activities of the Superfund program. In addition to providing traditional administrative services, these resources will enable the Regions to coordinate the efforts of Regional Superfund program offices and the Headquarters' Procurement and Contracts Management Division by providing overall management of Superfund Regional procurement activities, and interpreting and disseminating information reporting requirements among various Regional offices and other Federal and State agencies.

1983 Program

The Agency is allocating \$385,400 from the Hazardous Substance Response Trust Fund appropriation and 10.0 permanent workyears to this program. These funds will expand and continue administrative and management services necessary to support the Regional Superfund program. In order to meet growing program demands, the Agency is increasing its efforts in the areas of contracting and purchasing, information management, and occupational health and safety.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$114,300 results from the following action:

-Reprogrammings. (+\$114,300) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

The Agency obligated \$360,600 from the Hazardous Substance Response Trust Fund appropriation for this program. These funds provided administrative support services which enabled the Regional Superfund programs to operate in an effective and efficient manner. The activities in the Superfund Regional Administrative Management program paralleled those described in the Agency's Regional Administrative Management program in the Management and Support media, but supported the Superfund program directly. Activities and services included contracting and purchasing assistance, employee health and safety, information management, property and supply management, space management, and mail services.

HAZARDOUS SUBSTANCE OCCUPATIONAL HEALTH AND SAFETY - HEADQUARTERS

1984 Program Request

In 1984, the Agency is requesting resources for the Occupational Health and Safety program in the Hazardous Substance Administrative Management - Headquarters program element.

1983 Program

For 1983, the Agency is allocating resources for these activities in the Hazardous Substance Administrative Management - Headquarters program element to reflect the program element restructuring approved by Congress.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$665,000 results from the following action:

-Restructuring. (-\$665,000) The Congressionally approved restructuring consolidated all Superfund Administrative Management responsibilities into one program element. Therefore, Occupational Health and Safety resources were transferred into the Hazardous Substance Administrative Management program element.

1982 Accomplishments

In 1982, the Agency obligated \$482,400 from the Hazardous Substance Response Trust Fund appropriation to address health and safety concerns under this program. Activities in this area included the continued development of procedures and guidelines designed to protect the safety of EPA field and laboratory employees and to monitor the training and certification of these employees. In addition, a technical support and evaluation team was established to conduct on-site safety inspections, evaluate the adequacy of safety programs and to support EPA agreements with the National Institute of Occupational Safety and Health and the Occupational Safety and Health Administration.

HAZARDOUS SUBSTANCE SUPPORT SERVICES - HEADQUARTERS

1984 Program Request

For 1984, the Agency requests \$4,601,800 from the Hazardous Substance Response Trust Fund appropriation to cover certain Agencywide and Headquarters nonpersonnel support costs allocable to the Superfund program. This is an increase of

\$975,500 which reflects both increasing costs in the support areas and an increase in the portion of the Agency's support costs that are allocable to Superfund. For the most part, Agencywide support costs are allocated to Superfund based on the ratio of Superfund workyears to total Agency workyears. As this ratio changes, so does the share of the total support costs that are allocable to the appropriation.

This program element provides resources for Superfund's share of the Agency's rent, telephone, postage, utilities, other building and office services, and health and safety training. A full description of the costs in these categories is contained in the Nationwide and Headquarters Support Services program elements in the Management and Support media.

1983 Program

The Agency is allocating \$3,626,300 from the Hazardous Substance Response Trust Fund appropriation in 1983 for Superfund support costs. The increase over 1982 reflects expanded Superfund activity and an increase in the portion of total support costs that are allocable to the Superfund Appropriation.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$529,000 results from the following action:

-Reprogrammings. (+\$529,000) The Congressionally approved change reprogrammed funds from the Superfund Administrative Management account to the Superfund Support account. Additional funds provided support for Superfund workyears and the portion of Agencywide updated and revised support costs which were associated with the Superfund program. The reprogramming above was included in a letter to Congress on November 17, 1982.

1982 Accomplishments

In 1982, the Agency obligated \$3,101,300 for the Superfund program portion of the Agency's space rental, communications, utilities, and other offices and building services costs.

HAZARDOUS SUBSTANCE SUPPORT SERVICES - REGIONS

1984 Program Request

The Agency requests \$1,371,300 from the Hazardous Substance Response Trust Fund appropriation to provide Regional Superfund nonpersonnel support costs such as utilities, local telephone service, printing and copying, minicomputer operations, equipment maintenance, etc. This is an increase of \$87,900, reflecting an increased share of the total Regional support costs that are allocable to Superfund. As with Headquarters Superfund Support, the amount requested in this program element is the Superfund program's share of the total Regional support costs, determined primarily on the basis of the ratio of Regional Superfund workyears to total Regional workyears. A full description of the functions funded from this program element is contained in the Regional Support Services program element in the Management and Support media.

1983 Program

The Agency is allocating \$1,283,400 from the Hazardous Substance Response Trust Fund appropriation to fund the Regional support costs associated with the Superfund program. The increase from 1982 reflects expanded Regional activity in the program and an increase in the portion of total Regional support costs that are allocable to Superfund.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$318,800 results from the following action:

-Reprogrammings. (+\$318,800) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, the Agency obligated \$352,300 for Regional support costs associated with Superfund, for Regional rent; communications and other nonpersonnel support costs associated with Superfund in the Regions.

HAZARDOUS SUBSTANCE LABORATORIES AND FACILITIES

1984 Request

No funds are requested for Superfund related facilities projects in 1984.

1983 Program

No funds are allocated for Superfund facilities projects in 1983.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

The Agency obligated \$136,200 from the Hazardous Substance Response Trust Fund appropriation to modify EPA facilities for the benefit of the Superfund program during 1982.

HAZARDOUS SUBSTANCE COMPUTER SERVICES

1984 Program Request

The Agency requests \$1,480,000 from the Hazardous Substance Response Trust Fund appropriation to provide timeshare services to the Superfund program through our National Computer Center at Research Triangle Park. The decrease of \$55,000 from 1983 reflects a slight reduction in the need to continue systems development and testing at an accelerated pace. These resources purchase ADP timeshare for the Superfund program. Based on spending patterns and program plans, these resources will adequately cover the timeshare needs of existing Superfund management information systems and support the integration of Superfund information systems with other related Agency systems and data bases.

1983 Program

The Agency is allocating \$1,535,000 from the Hazardous Substance Response Trust Fund appropriation to this program to fund the direct timeshare charges attributable to Superfund systems, including a portion of the Agencywide computer facility management contracts, rental of hardware and software, and maintenance and operational costs.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$100,000 results from the following action:

-Reprogrammings. (+\$100,000) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

The Agency obligated \$255,400 from the Hazardous Substance Response Trust Fund appropriation to provide timeshare services to the Superfund program.

HAZARDOUS SUBSTANCE LEGAL SERVICES - HEADQUARTERS

1984 Program Request

In 1984, the Agency requests \$243,500 and 5.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. This is a reduction of less than one permanent workyear and \$36,800 which reflects an anticipated decline in the need for defensive case support. The 1984 Headquarters program will provide continued support to the Superfund program through advice and assistance to Agency Superfund managers. This includes consultation on financial and administrative matters; legal support for the development and defense of regulations and disbursement decisions; legal guidance on statutory interpretation and development of response priorities; and, coordination with and support to the enforcement litigation program.

1983 Program

In 1983, the Agency is allocating a total of \$280,300 and 5.8 permanent workyears from the Hazardous Substance Response Trust Fund appropriation to this program. The 1983 Headquarters program will provide advice and consultation on financial and administrative matters, such as eligible uses of the Fund and other Agency appropriations, staffing, and budget activities; legal guidance in program matters such as interpretation of the statute and the National Contingency Plan; and, coordination with and support of the enforcement litigation program.

1983 Explanation of Changes from Budget Estimate

There are no changes to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$69,800 from the Hazardous Substance Response Trust Fund appropriation to this program. The Headquarters program provided legal guidance in program matters such as statutory interpretation and development of response priorities.

HAZARDOUS SUBSTANCE LEGAL SERVICES - REGIONS

1984 Program Request

In 1984, the Agency requests \$397,100 and 10.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. This is an increase of \$194,300 to support anticipated Regional participation in defensive litigation. The Regional program will continue to provide legal assistance by reviewing EPA Cooperative Agreements with States for legal sufficiency; advising States in assuring appropriate legal authorities to qualify for participation in Fund-financed actions; responding to challenges to enforcement activities; determining eligible uses of the Fund; advising on Federal procurement; and, treatment of confidential information.

1983 Program

In 1983, the Agency is allocating a total of \$202,800 and 10.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation to this program. The Regional program includes such activities as: reviewing EPA Cooperative Agreements with States for legal sufficiency; assisting State agencies in assuring legal authorities to qualify for participation in Fund-financed actions; and, responding to challenges to enforcement activities.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$33,200 results from the following action:

-Reprogrammings. (-\$33,200) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, the Agency obligated \$139,100 from the Hazardous Substance Response Trust Fund appropriation to this program. In 1982, the Regional Counsels assisted the States on legal matters concerning Fund-financed removal and remedial actions. This involves advising State agencies on the legal requirements under CERCLA and assisting in drafting, negotiating and documenting the terms of EPA Cooperative Agreements with States. They also advised on legal problems associated with EPA removal and remedial activities.

HAZARDOUS SUBSTANCE INSPECTOR GENERAL

1984 Program Request

The Agency requests a total of \$2,570,200 and 19.8 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program in 1984, a decrease of \$243,700 and 2.2 permanent workyears from 1983. The decrease reflects the decreased number of management evaluations which will be conducted in 1984.

The Office of the Inspector General will perform selected audits of the Trust Fund to ensure the integrity of, and to safeguard the assets, of the Fund. Extramural audits of contracts will ensure costs claimed are reasonable, allowable, and allocable to the project. Extramural audits will also include interim audits of the costs claimed by Hazardous Site Remedial Response Activity contractors and verification of State credit period costs. The Office of the Inspector General will continue to audit State matching share costs under planned removal actions and remedial actions.

1983 Program

The Agency is allocating a total of \$2,813,900 and 22.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation to this office in 1983. Extramural contract resources are being used for audit services provided by other Federal agencies and Certified Public Accountant firms. The Office of the Inspector General will audit Trust Fund activities which occurred in 1982 and issue the required report to Congress by March 31, 1983. Extramural audits will ensure costs claimed under contracts are reasonable, allowable, and allocable to the sponsored project and that internal controls are adequate to safeguard Federal assets. The Office of the Inspector General expects to perform an increased number of audits to verify State credit period costs in 1983, as well as audits of State matching share costs. Full scope audits are planned for remedial action activities where the Agency has taken the managerial responsibility for response action. Such audits would include both financial and management reviews of the Hazardous Site Remedial Response Activity contractors and subcontractors.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,671,400 from the Hazardous Substance Response Trust Fund appropriation for this program, of which \$500,000 was obligated to cover audit services performed by other Federal agencies and \$524,600 for audit services conducted by independent public accounting firms. The Office of the Inspector General performed and submitted to Congress the interim report on the Trust Fund on March 31, 1982. Pre-award audits of contractor proposals were performed to evaluate pricing and cost data, the contractors' financial capabilities, and the contractors' accounting, procurement, and property system to assure that costs claimed would be properly accounted for and Federal assets properly safeguarded. The audit efforts with respect to remedial actions were concentrated in two areas: (1) verification of State credit period costs; and (2) pre-award audits of contractors who competed for the \$92 million Hazardous Site Remedial Response Activities contracts.

HAZARDOUS SUBSTANCE NATURAL RESOURCE CLAIMS

1984 Program Request

No resources are requested from the Hazardous Substance Response Trust Fund appropriation for this activity in 1984. This represents a decrease of \$40,000 and 1.0 permanent workyear from 1983. The Agency anticipates only a small number of claims in 1984. If necessary, funds will be reprogrammed into this program element.

1983 Program

The Agency is allocating \$40,000 and 1.0 permanent workyear from the Hazardous Substance Response Trust Fund appropriation to this program in 1983. These resources enable EPA to support a Board of Arbitrators under the provisions of §112(a) of CERCLA. The Board is authorized to make final determinations of disputed claims for natural damages.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

No funds were obligated for this activity in 1982.

HAZARDOUS SUBSTANCE - OFFICE OF POLICY AND RESOURCE MANAGEMENT

1984 Program Request

The Agency requests a total of \$1,224,000 and 7.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation for this program. The decrease of \$208,100 reflects a slight reduction in the requirement for policy and economic analysis as a result of the program's continued move into implementation activities. The Office of the Comptroller will coordinate and prepare the OMB and Congressional budget submission, respond to Congressional inquiries, and provide fund oversight activities including on-going resource reviews which will be especially critical in 1984 when program expenditures and activities will increase. The Offices of Policy Analysis, Standards and Regulations, and Management Systems and Evaluation will provide policy development and review activities, review guidance for implementing regulations and conduct program evaluations of the Superfund program.

1983 Program

In 1983, the Agency is allocating a total of \$1,432,100 and 7.0 permanent workyears from the Hazardous Substance Response Trust Fund appropriation to this program. These resources will be used to fund the following activities: the Office of the Comptroller coordinates and prepares OMB and Congressional budget submissions, and also identifies and analyzes major resource issues to support resource management decision making; the Office of Policy Analysis prepares and analyzes policy and program implementation issues; the Office of Standards and Regulations provides statistical and technical support of the regulatory development process; and the Office of Management Systems and Evaluation provides the program with responsive, efficient and effective management systems and accurate assessment of program activities and accomplishments.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, the Agency obligated a total of \$1,225,300 from the Hazardous Substance Response Trust Fund appropriation for this program. In 1982, the Office of the Comptroller prepared the 1983 Hazardous Substance Response Trust Fund Congressional Budget submission and the 1984 budget submission to the Office of Management and Budget; provided allowances and other budget control mechanisms for 1982 funds; reviewed and analyzed 1983 operating plans; and, conducted resource analyses on critical issues pertaining to resource utilization of Superfund monies. These included: analysis and recommendations on improving obligation patterns and work-year charging; efficient utilization of resources designated for equipment and Research and Development products; and, developing fund balance projections. The Office of Policy Analysis supported the revisions of the National Contingency Plan; assisted in developing implementation guidance and other regulatory actions; and analyzed numerous major policy and program implementation issues. The Office of Management Systems and Evaluation completed the development and implementation of a comprehensive tracking and accountability system for program and enforcement activities. The Office of Standards and Regulations provided management control of the regulatory process; technical support for regulatory actions; and served as liaison with the Office of Management and Budget on regulatory activities. The resources in the Hazardous Substance Planning and Evaluation program element have been consolidated with this program element.

Hardous Substance Response Actions

ENVIRONMENTAL PROTECTION AGENCY

1984 Budget Estimate

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SUPERFUND

Hazardous Substance Response - EPA

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					

PROGRAM

Hazardous Spill & Site Response					
Hazardous Substance Response Trust Fund	\$149,009.6	\$184,729.9	\$150,271.2	\$256,345.7	\$106,074.5
TOTAL	\$149,009.6	\$184,729.9	\$150,271.2	\$256,345.7	\$106,074.5

Assessing & Replacing Natural Resources					
Hazardous Substance Response Trust Fund		\$1,007.8	\$1,007.8	\$1,009.7	\$1.9
TOTAL		\$1,007.8	\$1,007.8	\$1,009.7	\$1.9

TOTAL:					
Hazardous Substance Response Trust Fund	\$149,009.6	\$185,737.7	\$151,279.0	\$257,355.4	\$106,076.4

Hazardous Substance Response - EPA	TOTAL	\$149,009.6	\$185,737.7	\$151,279.0	\$257,355.4	\$106,076.4
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PERMANENT WORKYEARS

Hazardous Spill & Site Response	238.2	243.1	291.9	296.6	4.7
Assessing & Replacing Natural Resources		1.0	1.0	1.0	
TOTAL PERMANENT WORKYEARS	238.2	244.1	292.9	297.6	4.7

TOTAL WORKYEARS

Hazardous Spill & Site Response	273.2	285.9	333.9	348.2	14.3
Assessing & Replacing Natural Resources		1.0	1.0	1.0	
TOTAL WORKYEARS	273.2	286.9	334.9	349.2	14.3

SUPERFUND

Hazardous Substance Response-Environmental Protection Agency

Budget Request

The Agency requests a total of \$257,355,400 and 297.6 permanent workyears for 1984 from the Hazardous Substance Response Trust Fund appropriation, an increase of \$106,076,400 and 4.7 permanent workyears over 1983. The increase in dollars reflects an increased level of field implementation, particularly in the resource intensive design and implementation areas. This is in contrast to earlier years in which initial emphasis of the program was on developing basic policies and guidance for program implementation and performing the necessary preliminary site planning work.

Program Description

This program is responsible for protecting public health and the environment from the dangers associated with releases of hazardous substances into the environment. The activities include responding to spills and emergency releases of hazardous substances, conducting remedial work at abandoned and uncontrolled hazardous waste sites, and assessing and replacing natural resources damaged by hazardous substances. The authority to carry out these activities is provided by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

Hazardous Spill and Site Response -- The Agency coordinates an emergency response program to deal with the most serious hazardous substance spills and site emergencies where the responsible party or State and local governments are unable to respond adequately. The Agency is also conducting a comprehensive program to evaluate all known hazardous waste sites, to establish priorities for remedial response, and to undertake the appropriate remedy at as many sites as possible. The Headquarters portion of the program establishes the policy framework, coordinates the setting of priorities, administers the response resources, and provides implementation guidance. The Regions have the lead responsibility for conducting all the preliminary field work to identify the problems and to manage the response work supported by the Trust Fund at spills and sites.

Assessing and Replacing Natural Resources -- CERCLA authorizes payments for costs associated with Federal or State efforts to restore, rehabilitate, replace, or acquire the equivalent of natural resources damaged as a result of hazardous substance releases. The Agency, in conjunction with other Federal agencies, will determine if significant or irreplaceable damage to natural resources has resulted from a release of hazardous substances, determine the economic impact of any such damage, evaluate alternatives for restoring or replacing these damaged natural resources, and finance the costs of restoration or rehabilitation.

HAZARDOUS SPILL AND SITE RESPONSE

1984 Program Request

The Agency requests a total of \$256,345,700 and 296.6 permanent workyears from the Hazardous Substance Response Trust Fund appropriation to conduct removal and remedial response action in 1984. This is an increase of \$106,074,500 or 71% and 4.7 permanent workyears from 1983. The increase reflects the continued momentum of the program in initiating planning work at additional sites on the Priority List and proceeding with the more expensive implementation work at sites where planning is completed.

Removal: The Agency expects to receive and screen 5,000 hazardous substances release notifications in 1984 to determine what, if any, response is required. In the majority of cases, the responsible party or the local or State government will take the lead in addressing the problem. In 1984, the Agency will monitor responsible party and State responses to hazardous substances releases at 300 incidents, a reduction of 25% from 1983. This decrease is the result of the increased experience States will have gained in managing response actions and the Agency's efforts to have States assume a greater responsibility for managing and monitoring removal actions. The Agency intends to enter into Cooperative Agreements and provide appropriate funding to those States who are willing and able to assume responsibility for responding to major releases of hazardous substances.

In situations where more than one State is involved or where there is an unusually complex problem, the Federal government will coordinate and fund the response. In order to meet this need, the Federal government will continue to maintain a core emergency response capability in 1984, including an Environmental Response Team, comprised of Agency employees with special engineering and scientific expertise. The need for Federally managed emergency actions is expected to remain constant through 1984. The Agency will undertake 50 emergency removal actions at sites and spills.

In addition to responding to emergencies, planned removals will be taken where an immediate response is not critical, but some early response is necessary to protect public health or the environment. The Agency will undertake ten planned removal actions in 1984. While this is a reduction of five actions from 1983, the number of serious problem sites identified in 1984 is expected to decline reducing the number of sites requiring planned removal.

Remedial: The Agency's major emphasis in 1984 will be on substantially increasing its investment in remedial activities at sites. By the end of 1984, the Agency will have finished the screening and assessing of all reported uncontrolled hazardous waste sites. This effort is necessary to confirm that the sites on the priority list are the most serious. In 1984, the more expensive implementation efforts will begin at sites begun in 1982 and 1983 and where the planning and design work is completed and the Agency will continue to initiate remedial investigations at new sites. It is expected that the Agency will begin planning work at 55 new sites an increase of 37% over the number of sites initiated in 1983.

The funds provided as a result of the statute were never intended to be sufficient to completely address all of the known problem sites. Therefore, it is essential that a substantial investment be made in planning response actions, ensuring that solutions are both technically sound and cost-effective.

This requires that detailed studies be undertaken to characterize the problem, collect and analyze the data necessary to determine the potential range of solutions, and to evaluate and select the most effective course of action. A large scale sample collection, analysis, and evaluation program will support field activities involving over 14,000 samples in 1984. Once this step is completed, the final remedial solution is selected, the detailed engineering design for the proposed action is developed and the actual implementation of the solution is carried out by either the States or contractors under the direction of the Army Corps of Engineers.

In addition to implementing and managing the technical aspects of remedial actions, the Agency must negotiate the required Cooperative Agreements, coordinate with the local jurisdictions and the States, and involve the affected communities. These efforts are necessary to meet the requirements of CERCLA and the National Contingency Plan and to ensure that the actions taken at sites are clearly understood and generally acceptable to the affected communities.

In 1984, the Agency's continuing priority will be to begin design and implementation work at those sites where work is ready to proceed. The Agency expects to be able to initiate designs at 40 sites and implement remedial actions at 22 sites during 1984, approximately double the number of starts in 1983. The Agency will also initiate the necessary remedial investigations and feasibility studies at 55 additional sites during 1984. The design and implementation of solutions at these sites will be undertaken by the States/or Army Corps of Engineers once these studies are completed. This will bring the total number of sites where planning for remedial work has been initiated to approximately 130-140 serious sites by the end of 1984.

Finally, at some sites, work on the remedial investigation or engineering design cannot commence or continue until an initial remedial measure is conducted. This is a limited action, such as drum excavation, which must be taken to enable the planning work to continue. The Agency projects that it will be necessary to conduct 20 initial remedial measures in 1984.

State Participation: In 1984, the Agency will be making a concerted effort to get as many States as possible to participate in on-going response actions. The Agency expects that States will enter into Cooperative Agreements for approximately \$95 million for site response actions. This is an increase of \$47 million or 98% over 1983. In 1982, the Agency successfully worked with States and 60% of the remedial response dollars were obligated through Cooperative Agreements at State managed actions. Efforts will continue in 1984 to encourage States to assume greater responsibility for development and operation of their own response programs. This will include providing advice and guidance on organizing response capability, reviewing and suggesting improvement in technical resources and staff, developing removal and remedial manuals and instructions, identifying technical and health and safety training needs, and assisting in determining possible financial mechanisms States can adopt to support their current and future activities.

Interagency Support: Finally, resources in support of the incident-specific activities of other agencies will be provided through reimbursable agreements. Examples of incidentspecific activities that may be performed by other agencies include studies at priority sites by the Department of Health and Human Services, permanent relocation of individuals at priority sites by the Federal Emergency Management Agency, and the U.S. Coast Guard response to hazardous spill incidents occurring in coastal waters. These actions will be triggered by Agency on-scene personnel. The other agencies will be reimbursed once their specific actions are completed.

1983 Program

In 1983, the Agency is allocating a total of \$150,271,200 and 291.9 workyears from the Hazardous Substance Response Trust Fund appropriation for this program. The Agency's energies will be directed toward carrying out the program's primary mission of effective field response at both spills and uncontrolled or abandoned sites. The National Priority List was proposed in December 1982. The majority of work in 1983 will be geared toward initiating the necessary studies at the worst sites and responding to those emergencies where a Federal response is required.

Removal: The Agency will direct the response at 50 major hazardous substance releases and 15 planned removals and provide on-scene assistance at 400 releases of hazardous substances. In addition, the regulatory and guidance framework will be completed for the removal program including: promulgation of final regulations on CERCLA notification and reportable quantities; issuance of policy on continuous releases; and promulgation of regulations on designations of additional hazardous substances.

Remedial: In 1983, the Agency will focus its remedial efforts on initiating feasibility studies at the most serious sites on the priority list, and begin design and implementation at sites which are ready to proceed. Work will continue to assess the known universe of sites begun in 1982.

Specific site activities will include the performance of 4,000 preliminary assessments of sites and 2,000 site inspections; initiation of remedial investigations and feasibility studies at 40 sites; initiation of engineering designs at 24 sites and remedial actions at 11 sites; and initiation of initial remedial measures at 15 sites.

As in 1984, site specific work undertaken by other agencies in 1983 will be funded under reimbursable agreements when requested by on-scene personnel.

1983 Explanation of Changes from Budget Estimate

The net decrease of -\$34,458,700 results from the following actions:

-Congressional Action. (-\$34,708,000) A Congressionally mandated reprogramming of resources in the Hazardous Substance Response Trust Fund appropriation required a reduction to this program. This reprogramming increased the Department of Health and Human Services for Superfund related activities by +\$4,708,000 to reach the Congressionally mandated level of \$8.0 million; provided \$10 million to support State activities in continuing hazardous waste site surveys under Section 3012 of the RCRA Act; and, reduced the Superfund program by \$20 million.

-Reprogrammings. (+\$249,300) During the development of the operating plan, several reprogrammings were made to this activity which are not reportable under the Congressional reprogramming limitations.

1982 Accomplishments

In 1982, of the monies available from the Hazardous Substance Response Trust Fund appropriation for response actions, including carryover, the Agency obligated a total of \$149,009,600 or 91% of the dollars available for this program element. Operations were directed at formulating the basic operating policies and establishing the implementation mechanisms for the program. By the end of 1982, the Agency had promulgated the National Contingency Plan, developed Interagency Agreements with the Corps of Engineers and other Federal agencies, awarded Cooperative Agreements with 18 States and awarded the major contract support for remedial action. The Agency had designated 160 sites as priority sites and remedial work had been initiated or continued at 59 sites.

Specific accomplishments in 1982 included the processing of over 4,400 notifications of spills of hazardous substances; directing 50 immediate removals at major hazardous incidents and one planned removal where State and local authorities lacked the necessary expertise and the responsible party could not be identified, refused to respond, or was incapable of adequate removal; monitoring 400 removals of hazardous substances carried out by the responsible party or State and local authorities; conducting 1,500 preliminary assessments of sites and performing 1,300 site inspections; and initiating 31 remedial investigations and feasibility studies, eight engineering designs, and 14 remedial actions.

The Agency's efforts in implementing the Superfund program were supported through reimbursable agreements with other Federal agencies. The Department of Justice used Superfund resources to carry out hazardous waste litigation activities. The U.S. Coast Guard used Superfund resources for equipment purchases and personnel

training. The Department of Commerce used Superfund resources for the purchase of equipment that will support natural resource damage assessments. The Department of Health and Human Services used Superfund resources for scientific support to the Regions and States for emergency response guidance and for site-specific studies and assessments. These Agencies also participated in incident-specific activities supporting Agency initiated response actions.

ASSESSING AND REPLACING NATURAL RESOURCES

1984 Program Request

The Agency requests a total of \$1,009,700 and 1.0 permanent workyear from the Hazardous Substance Response Trust Fund appropriation for this program. These resources can support up to two damage assessments and one restoration.

1983 Program

In 1983, the Agency is allocating a total of \$1,007,800 and 1.0 permanent workyear from the Hazardous Substance Response Trust Fund appropriation to this program, an increase of \$1,900. These resources can support up to two damage assessments and one restoration.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, no funds were obligated for this program because no claims were received.

SUPERFUND

Hazardous Substance Response - Interagency

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983

(DOLLARS IN THOUSANDS)					
PROGRAM					

Department of Health & Human Services Hazardous Substance Response Trust Fund		\$3,292.0	\$8,000.0	\$1,905.0	-\$6,095.0
TOTAL		\$3,292.0	\$8,000.0	\$1,905.0	-\$6,095.0
United States Coast Guard Hazardous Substance Response Trust Fund		\$1,514.8	\$1,514.8	\$3,674.4	\$2,159.6
TOTAL		\$1,514.8	\$1,514.8	\$3,674.4	\$2,159.6
Department of Justice Hazardous Substance Response Trust Fund		\$2,100.0	\$2,100.0	\$2,644.0	\$544.0
TOTAL		\$2,100.0	\$2,100.0	\$2,644.0	\$544.0
National Oceanographic & Atmospheric Administration Hazardous Substance Response Trust Fund		\$365.0	\$365.0		-\$365.0
TOTAL		\$365.0	\$365.0		-\$365.0
Department of Interior Hazardous Substance Response Trust Fund				\$80.0	\$80.0
TOTAL				\$80.0	\$80.0
TOTAL: Hazardous Substance Response Trust Fund		\$7,271.8	\$11,979.8	\$8,303.4	-\$3,676.4
Hazardous Substance Response - Interagency	TOTAL	\$7,271.8	\$11,979.8	\$8,303.4	-\$3,676.4

SUPERFUND

Hazardous Substance Response-Interagency

Budget Request

The Agency requests a total of \$8,303,400 for Hazardous Substance Response Interagency activities in 1984, a decrease of \$3,676,400 from 1983. The decrease reflects the availability of previous year funding provided during 1983 to support the completion of onetime guidance-related activities. The requested resources will support the on-going Superfund program activities of the Department of Health and Human Services, the United States Coast Guard, the Department of Justice, the National Oceanographic and Atmospheric Administration, and the Department of Interior.

Program Description

Executive Order 12316, signed by the President in August 1981, requires the Agency to manage an interagency budget process culminating in a consolidated budget request for the entire Superfund program to the Congress. The activities of other Federal agencies are divided into two basic categories. The first category includes those activities which are episodic in nature and taken in direct support of specific site or spill response actions. Funds to support these activities are included in the Hazardous Spill and Site Response program element. The second category of other Federal agency involvement is support for on-going activities which are generally not incident-specific. These activities include developing program policies and guidance, conducting health research and training, and the purchase and maintenance of equipment.

Department of Health and Human Services (HHS) -- Executive Order 12316 gives the Department of Health and Human Services authority to investigate complaints of illness or disease related to exposure to hazardous substances, conduct health studies and surveys, develop appropriate testing for exposed individuals, and develop and maintain information on health effects of toxic substances. EPA is working closely with HHS to develop policies and procedures to ensure a coordinated Federal approach in conducting these activities.

United States Coast Guard (USCG) -- The USCG has the authority to respond to any release or threatened release involving the coastal zone, Great Lakes waters, ports, and harbors. USCG provides training to maintain this response capability, conducts enforcement activities as necessary in their areas of responsibility, and maintains the CERCLA component of the National Response Center.

Department of Justice (DOJ) -- Executive Order 12316 gives the Attorney General responsibility for the conduct and control of all litigation arising under CERCLA. EPA will prepare the required technical and legal documentation and will cooperate with DOJ in the negotiation of consent decrees for privately-financed response actions.

National Oceanographic and Atmospheric Administration (NOAA) -- The National Contingency Plan designates NOAA as Federal Trustee for certain natural resources which may be lost or damaged as a result of hazardous substance discharges. NOAA provides scientific and technical support for responses to spills and hazardous materials in coastal waters.

Department of Interior (DOI) -- The National Contingency Plan designates DOI as Federal Trustee for certain natural resources lost or damaged as a result of hazardous substance discharges. Additionally, DOI has the responsibility to develop damage assessment regulations. Funds to support these activities are included in the Department's budget. DOI provides scientific and technical support in the areas of resource damage assessment through participation on Joint Response Teams.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

1984 Program Request

The Agency requests a total of \$1,905,000 from the Hazardous Substance Response Trust Fund appropriation for HHS's on-going activities during 1984. The decrease of \$6,095,000 reflects the availability of previous year funding provided during 1983 to support the completion of onetime guidance-related and other startup activities. These resources will enable HHS to support the Headquarters and field core staff necessary to provide scientific and technical advice to EPA on-scene coordinators when assessing the public health hazard at priority sites, and to review environmental test results for indications of human health hazard. HHS will also provide on-going health related field guidance and laboratory support at emergency responses.

1983 Program

In 1983, the Agency is allocating a total of \$8,000,000 from the Hazardous Substance Response Trust Fund appropriation for HHS's on-going activities. In addition to these 1983 funds, HHS still has approximately \$4,000,000 in obligational authority remaining and available from its 1982 appropriation. These resources include the amount Congress added for on-going Superfund related activities of the HHS. The Department is collecting the information and developing the procedures necessary to provide continuing health-related support to the Superfund program. Included are development of health-related field guidance in support of Agency emergency response actions, and standard guidelines for the conduct of health and epidemiological studies at priority sites; production of worker health and safety technical guidance and field manuals for individuals involved in response actions; and, toxicological testing of chemicals found at priority sites.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$4,708,000 results from the following action:

-Congressional Action. (+\$4,708,000) A Congressionally mandated reprogramming of resources in the Hazardous Substance Response Trust Fund appropriation required an addition to this program. This reprogramming supports \$8 million for use of the Department of Health and Human Services for on-going Superfund related activities. In addition to these 1983 funds, HHS still has approximately \$4,000,000 in obligational authority remaining and available from its 1982 appropriation. Additionally, Congress mandated \$2,000,000 which may be made available by the Administrator to the Department for performance of specific activities in accordance with Section 111(c)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). These funds would be provided, if necessary, from the Hazardous Substance Response program element.

1982 Accomplishments

In 1982, all funds obligated from the Hazardous Substance Response Trust Fund appropriation by HHS were in the Hazardous Spill and Site Response program element. HHS provided scientific support and emergency response guidance and conducted health assessments at certain sites.

UNITED STATES COAST GUARD (USCG)

1984 Program Request

The Agency requests a total of \$3,674,400 from the Hazardous Substance Response Trust Fund appropriation for on-going activities. The increase of \$2,159,600 will provide contract support for teams to respond to releases which are immediately

dangerous to life and health. The USCG will ensure CERCLA financial responsibility requirements are met; train emergency response personnel using program modules and simulation drills; staff the CERCLA component of the National Response Center; and, maintain records of characteristics for certain chemicals.

1983 Program

In 1983, the Agency is allocating a total of \$1,514,800 from the Hazardous Substance Response Trust Fund appropriation for this program which will be used to purchase safety equipment and to provide response training for USCG personnel and to upgrade capabilities at the National Response Center and field data systems in support of USCG initiated response programs.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, all funds obligated from the Hazardous Substance Response Trust Fund appropriation by USCG were in the Hazardous Spill and Site Response program element. They were utilized for staff support and personnel training.

DEPARTMENT OF JUSTICE (DOJ)

1984 Program Request

The Agency requests a total of \$2,644,000 from the Hazardous Substance Response Trust Fund appropriation. The increase of \$544,000 will support entry of Superfund cases into the DOJ automated litigation system. The Department of Justice will provide legal advice and bring legal action pursuant to the Superfund legislation.

1983 Program

In 1983, the Agency is allocating a total of \$2,100,000 from the Hazardous Substance Response Trust Fund appropriation for this program. The Department of Justice is providing civil and criminal enforcement litigation which includes counseling on and enforcement of Administrative Orders, warrant for entry, institution of suits to compel removal and remedial actions, and to recover response costs incurred by the Fund.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, all funds obligated from the Hazardous Substance Response Trust Fund appropriation by DOJ were in the Hazardous Spill and Site Response program element. They were used for litigation and other enforcement-related activities.

NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

1984 Program Request

In 1984, the resources required from the Hazardous Substance Response Trust Fund appropriation to support NOAA activities will be provided as necessary on a reimbursable basis with the funds contained in the Hazardous Spill and Site Response program element.

1983 Program

In 1983, the Agency is allocating from the Hazardous Substance Response Trust Fund appropriation a total of \$365,000 for this program to provide training for the scientific response team, to purchase and maintain protective equipment for personnel and, to maintain field instrumentation.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, all funds obligated by NOAA were in the Hazardous Spill and Site Response program element. They were used to purchase equipment and to prepare for conducting natural resource damage assessments.

DEPARTMENT OF INTERIOR (DOI)

1984 Program Request

The Agency requests a total of \$80,000 from the Hazardous Substance Response Trust Fund appropriation for this program which will enable DOI to participate on the Regional and Joint Response Team by providing damage assessment expertise.

1983 Program

In 1983, the activities of DOI funded by the Hazardous Substance Response Trust Fund appropriation are under the Hazardous Spill and Site Response program element. In 1983, the DOI is establishing and maintaining a capability to participate on the Regional and Joint Response Team by providing damage assessment expertise.

1983 Explanation of Changes from Budget Estimate

There was no change to this program.

1982 Accomplishments

In 1982, no funds were obligated for this program.

SUPERFUND

Hazardous Waste Site Inventory

	ACTUAL 1982	BUDGET ESTIMATE 1983	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 VS 1983
<hr/>					
(DOLLARS IN THOUSANDS)					
<hr/>					
PROGRAM					
<hr/>					
Hazardous Waste Site Inventory					
Hazardous Substance Response Trust Fund			\$10,000.0		-\$10,000.0
TOTAL			\$10,000.0		-\$10,000.0
TOTAL:					
Hazardous Substance Response Trust Fund			\$10,000.0		-\$10,000.0
Hazardous Waste Site Inventory			\$10,000.0		-\$10,000.0

SUPERFUND

Hazardous Waste Site Inventory

Budget Request

No funds are requested for this activity in 1984.

Program Description

This is a one-year Congressionally mandated program to support State hazardous substances activities under Section 3012 of the Resource Conservation and Recovery Act (RCRA).

Hazardous Waste Site Inventory -- This program provides financial assistance to States for assessment and inspections of hazardous waste sites under Section 3012 of the Resource Conservation and Recovery Act (RCRA). In 1983, the Congress earmarked \$10,000,000 for these purposes.

HAZARDOUS WASTE SITE INVENTORY

1984 Program Request

The Agency requests no funds for this activity in 1984. The work that will be undertaken by the States with the monies provided in 1983 along with the site identification and screening efforts of the Agency will satisfy the need to complete a comprehensive site inventory.

1983 Program

In 1983, the Agency is allocating a total of \$10,000,000 for this program. The Congress earmarked these funds to support State hazardous waste site activities including preliminary assessments, inspections, responsible party searches, inventory completion, and collection of additional information to characterize site problems. A regulation is being promulgated describing the policies and procedures for a State to receive some share of the available resources.

1983 Explanation of Changes from Budget Estimate

The net increase of +\$10,000,000 results from the following action:

-Congressional Action. (+\$10,000,000) The Congress mandated a reprogramming of resources in the Hazardous Substance Response Trust Fund appropriation and directed that \$10 million be provided to support State activities in continuing hazardous waste site surveys under Section 3012 of the RCRA Act. This program element was established to meet this requirement.

1982 Accomplishments

In 1982, no funds were obligated for this program.

Special Analyses

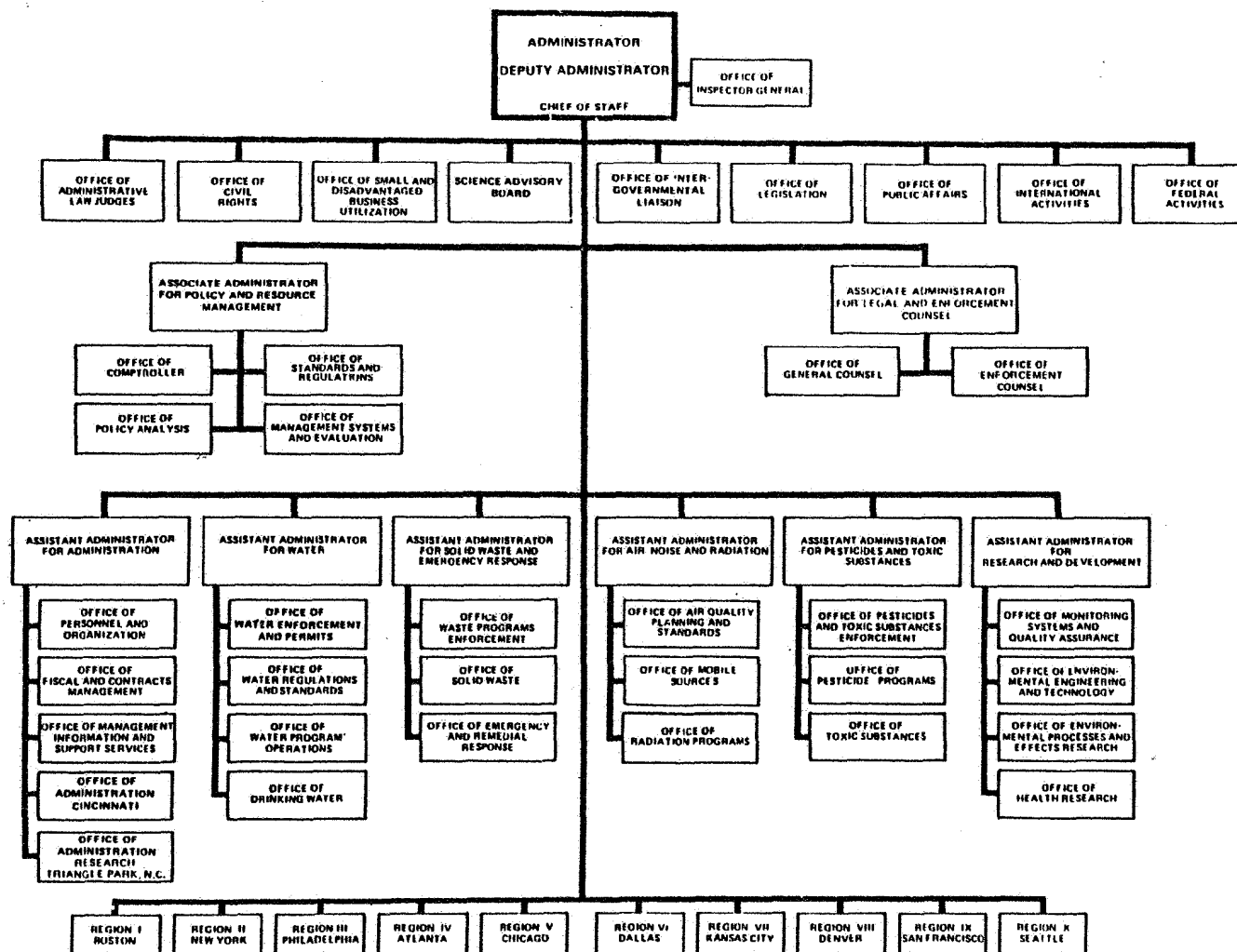
ENVIRONMENTAL PROTECTION AGENCY

SPECIAL ANALYSES

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U.S. ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL PROTECTION AGENCY

REGIONS Locations and States

Region I	<u>Headquarters, Boston, Massachusetts</u> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	Region VI	<u>Headquarters, Dallas, Texas</u> Arkansas, New Mexico, Texas, Oklahoma Louisiana
Region II	<u>Headquarters, New York, New York</u> New Jersey, New York, Puerto Rico Virgin Islands	Region VII	<u>Headquarters, Kansas City, Missouri</u> Iowa, Kansas, Missouri, Nebraska
Region III	<u>Headquarters, Philadelphia, Pennsylvania</u> Delaware, Maryland, Pennsylvania, Virginia, West Virginia, District of Columbia	Region VIII	<u>Headquarters, Denver, Colorado</u> Colorado, Montana, North Dakota South Dakota, Utah, Wyoming
Region IV	<u>Headquarters, Atlanta, Georgia</u> Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	Region IX	<u>Headquarters, San Francisco, California</u> Arizona, California, Hawaii, Nevada, American Samoa, Guam, Trust Territories of Pacific Islands, Northern Mariana Island
Region V	<u>Headquarters, Chicago, Illinois</u> Illinois, Indiana, Michigan, Minnesota Ohio, Wisconsin	Region X	<u>Headquarters, Seattle, Washington</u> Alaska, Idaho, Oregon, Washington

ENVIRONMENTAL PROTECTION AGENCY

Summary of Resources By Appropriation (dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs 1983
<u>Research and Development</u>				
Budget Authority.....	\$154,315.6	\$119,000.0	\$111,669.0	-\$7,331.0
Obligations.....	200,637.9	126,014.0	112,434.0	-13,580.0
Outlays.....	197,339.0	153,709.0	140,764.0	-12,945.0
<u>Abatement, Control and Compliance</u>				
Budget Authority.....	372,969.7	369,075.0	293,933.0	-75,142.0
Obligations.....	393,328.0	375,000.0	294,871.0	-80,129.0
Outlays.....	523,722.0	423,538.0	366,359.0	-57,179.0
<u>Salaries and Expenses</u>				
Budget Authority.....	555,105.7	548,613.2	540,389.0	-8,224.2
Obligations.....	540,773.2	548,613.2	540,389.0	-8,224.2
Outlays.....	520,363.0	518,904.0	518,533.0	-371.0
Permanent Workyears.....	9,112.4	8,442.4	7,996.8	-445.6
Total Workyears.....	10,853.5	10,157.6	9,678.7	-478.9
<u>Buildings and Facilities</u>				
Budget Authority.....	3,621.0	3,000.0	2,600.0	-400.0
Obligations.....	3,384.7	5,033.0	2,965.0	-2,068.0
Outlays.....	3,325.0	2,825.0	4,689.0	+1,864.0
<u>Construction Grants</u>				
Budget Authority.....	2,400,000.0	2,430,000.0	2,400,000.0	-30,000.0
Obligations.....	2,116,802.7	3,000,000.0	2,400,000.0	-600,000.0
Outlays.....	3,756,152.1	3,100,000.0	2,800,000.0	-300,000.0
<u>Scientific Activities Overseas</u>				
Obligations.....	19.3	700.0	950.0	+250.0
Outlays.....	677.0	1,000.0	600.0	-400.0

	<u>Actual</u> <u>1982</u>	<u>Current</u> <u>Estimate</u> <u>1983</u>	<u>Estimate</u> <u>1984</u>	<u>Increase +</u> <u>Decrease -</u> <u>1984 vs 1983</u>
<u>Operations, Research and Facilities</u>				
Obligations.....	814.4	1,432.7	...	-1,432.7
Outlays.....	289.0	1,633.0	1,439.0	-194.0
<u>Revolving Fund</u>				
Obligations.....	750.0	800.0	800.0	...
Outlays.....	21.0	100.0	100.0	...
<u>Enforcement</u>				
Outlays.....	1,598.0	1,002.0	...	-1,002.0
<u>U.S. Regulatory Council</u>				
Outlays.....	245.0	319.0	...	-319.0
<u>Misc. Contributed Funds</u>				
Obligations.....	22.7	30.0	20.0	-10.0
Outlays.....	12.0	20.0	20.0	...
<u>Reimbursements</u>				
Obligations.....	15,480.9	20,000.0	20,000.0	...
Permanent Workyears.....	54.4	58.8	53.0	-5.8
Total Workyears.....	60.5	67.8	62.0	-5.8
<u>Hazardous Substance Response</u>				
<u>Trust Fund</u>				
Budget Authority.....	190,000.0	210,000.0	310,000.0	+100,000.0
Obligations.....	180,743.6	240,476.0	319,870.0	+79,394.0
Outlays.....	79,576.0	177,000.0	269,000.0	+92,000.0
Permanent Workyears.....	465.6	623.8	619.3	-4.5
Total Workyears.....	527.7	699.6	707.1	+7.5

	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs 1983</u>
<u>Payment to Hazardous Substance</u>				
<u>Response Trust Fund</u>				
Budget Authority.....	(26,000.0)	(40,000.0)	(44,000.0)	(+4,000.0)
Obligations.....	(26,000.0)	(40,000.0)	(44,000.0)	(+4,000.0)
Outlays.....	(26,000.0)	(40,000.0)	(44,000.0)	(+4,000.0)
<u>TOTAL ENVIRONMENTAL PROTECTION</u>				
<u>AGENCY</u>				
Budget Authority.....	\$3,676,012.0	\$3,679,688.2	\$3,658,591.0	-\$21,097.2
Obligations.....	3,452,757.4	4,318,098.9	3,692,299.0	-625,799.9
Outlays.....	5,083,319.1	4,380,050.0	4,101,504.0	-278,546.0
Permanent Workyears.....	9,632.4	9,125.0	8,669.1	-455.9
Total Workyears.....	11,441.7	10,925.0	10,447.8	-477.2

ENVIRONMENTAL PROTECTION AGENCY

Summary of Resources By Media (dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs 1983
<u>Air</u>				
Budget Authority.....	\$217,548.5	\$212,245.3	\$190,991.6	-\$21,253.7
Obligations.....	229,703.1	214,902.3	191,337.6	-23,564.7
Outlays.....	245,652.0	195,753.0	199,621.0	+3,868.0
Permanent Workyears.....	1,576.0	1,374.4	1,350.3	-24.1
Total Workyears.....	1,821.8	1,603.2	1,577.1	-26.1
<u>Water Quality</u>				
Budget Authority.....	234,720.4	215,998.9	151,369.3	-64,629.6
Obligations.....	250,946.2	219,138.9	151,818.3	-67,320.6
Outlays.....	314,122.0	255,108.0	205,682.0	-49,426.0
Permanent Workyears.....	2,271.9	1,950.6	1,662.9	-287.7
Total Workyears.....	2,671.1	2,379.3	2,065.5	-313.8
<u>Drinking Water</u>				
Budget Authority.....	82,281.7	77,958.5	66,355.9	-11,602.6
Obligations.....	85,898.7	78,820.5	66,467.9	-12,352.6
Outlays.....	80,715.0	76,760.0	73,568.0	-3,192.0
Permanent Workyears.....	474.3	471.2	465.1	-6.1
Total Workyears.....	566.4	562.4	560.8	-1.6
<u>Hazardous Waste</u>				
Budget Authority.....	106,777.7	116,551.5	110,112.7	-6,438.8
Obligations.....	110,578.4	117,244.5	110,194.7	-7,049.8
Outlays.....	123,514.0	115,722.0	114,192.0	-1,530.0
Permanent Workyears.....	586.1	643.1	625.8	-17.3
Total Workyears.....	737.9	821.9	830.0	+8.1

	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs 1983</u>
Pesticides				
Budget Authority.....	54,083.0	52,928.1	52,742.6	-185.5
Obligations.....	57,813.6	52,978.1	52,750.6	-227.5
Outlays.....	61,435.0	53,074.0	53,430.0	+356.0
Permanent Workyears.....	765.3	662.2	652.7	-9.5
Total Workyears.....	828.3	745.8	736.9	-8.9
Radiation				
Budget Authority.....	10,663.3	10,923.3	10,854.8	-68.5
Obligations.....	12,335.4	11,059.3	10,872.8	-186.5
Outlays.....	12,349.0	12,483.0	11,419.0	-1,064.0
Permanent Workyears.....	150.3	148.1	126.9	-21.2
Total Workyears.....	169.6	172.2	146.4	-25.8
Noise				
Budget Authority.....	1,922.6	...	...	...
Obligations.....	1,621.3	...	...	...
Outlays.....	6,616.0	1,707.0	663.0	-1,044.0
Permanent Workyears.....	21.2	...	...	...
Total Workyears.....	27.4	...	...	...
Interdisciplinary				
Budget Authority.....	18,850.0	23,935.9	41,335.6	+17,399.7
Obligations.....	16,928.9	25,606.9	41,595.6	+15,988.7
Outlays.....	14,425.0	22,979.0	29,098.0	+6,119.0
Permanent Workyears.....	200.2	325.6	353.4	+27.8
Total Workyears.....	243.9	388.8	396.5	+7.7
Toxic Substances				
Budget Authority.....	74,855.8	69,661.8	66,675.7	-2,986.1
Obligations.....	82,712.8	71,451.8	66,891.7	-4,560.1
Outlays.....	82,211.0	79,915.0	71,368.0	-8,547.0
Permanent Workyears.....	634.4	626.7	606.2	-20.5
Total Workyears.....	729.5	706.9	683.2	-23.7

	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs 1983</u>
<u>Energy</u>				
Budget Authority.....	51,650.9	25,000.9	23,530.1	-1,470.8
Obligations.....	65,662.9	26,940.9	23,742.1	-3,198.8
Outlays.....	90,638.0	56,424.0	42,153.0	-14,271.0
Permanent Workyears.....	138.9	36.4	36.8	+.4
Total Workyears.....	196.9	53.5	54.9	+1.4
<u>Management and Support</u>				
Budget Authority.....	229,037.1	231,484.0	232,022.7	+538.7
Obligations.....	221,352.2	232,916.7	232,022.7	+538.7
Outlays.....	211,634.0	228,861.0	225,901.0	-2,960.0
Permanent Workyears.....	2,293.8	2,204.1	2,116.7	-87.4
Total Workyears.....	2,860.7	2,723.6	2,627.4	-96.2
<u>Buildings and Facilities</u>				
Budget Authority.....	3,621.0	3,000.0	2,600.0	-400.0
Obligations.....	3,384.7	5,033.0	2,965.0	-2,068.0
Outlays.....	3,325.0	2,825.0	4,689.0	+1,864.0
<u>Construction Grants</u>				
Budget Authority.....	2,400,000.0	2,430,000.0	2,400,000.0	-30,000.0
Obligations.....	2,116,802.7	3,000,000.0	2,400,000.0	-600,000.0
Outlays.....	3,756,152.1	3,100,000.0	2,800,000.0	-300,000.0
<u>Scientific Activities Overseas</u>				
Obligations.....	19.3	700.0	950.0	+250.0
Outlays.....	677.0	1,000.0	600.0	-400.0
<u>Revolving Fund</u>				
Obligations.....	750.0	800.0	800.0	...
Outlays.....	21.0	100.0	100.0	...
<u>Misc. Contributed Funds</u>				
Obligations.....	22.7	30.0	20.0	-10.0
Outlays.....	12.0	20.0	20.0	...

	Actual 1982	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs 1983
<u>Reimbursements</u>				
Obligations.....	15,480.9	20,000.0	20,000.0	...
Permanent Workyears.....	54.4	58.8	53.0	-5.8
Total Workyears.....	60.5	67.8	62.0	-5.8
<u>U.S. Regulatory Council</u>				
Outlays.....	245.0	319.0	...	-319.0
<u>Hazardous Substance Response</u>				
<u>Trust Fund</u>				
Budget Authority.....	190,000.0	210,000.0	310,000.0	+100,000.0
Obligations.....	180,743.6	240,476.0	319,870.0	+79,394.0
Outlays.....	79,576.0	177,000.0	269,000.0	+92,000.0
Permanent Workyears.....	465.6	623.8	619.3	-4.5
Total Workyears.....	527.7	699.6	707.1	+7.5
<u>Payment to Hazardous Substance</u>				
<u>Response Trust Fund</u>				
Budget Authority.....	(26,600.0)	(40,000.0)	(44,000.0)	(+4,000.0)
Obligations.....	(26,600.0)	(40,000.0)	(44,000.0)	(+4,000.0)
Outlays.....	(26,600.0)	(40,000.0)	(44,000.0)	(+4,000.0)
<u>TOTAL ENVIRONMENTAL PROTECTION</u>				
<u>AGENCY</u>				
Budget Authority.....	\$3,676,012.0	\$3,679,688.2	\$3,658,591.0	-\$21,097.2
Obligations.....	3,452,757.4	4,318,098.9	3,692,299.0	-625,799.9
Outlays.....	5,083,319.1	4,380,050.0	4,101,504.0	-278,546.0
Permanent Workyears.....	9,632.4	9,125.0	8,669.1	-455.9
Total Workyears.....	11,441.7	10,925.0	10,447.8	-477.2

ENVIRONMENTAL PROTECTION AGENCY

1983 Resources
By Media and Appropriation
(dollars in thousands)

	Salaries & Expenses		Abatement, Control & Compliance	Research & Development	Total	
	Permanent Workyears	Amount	Amount	Amount	Permanent Workyears	Amount
Air.....	1,374.4	\$70,480.0	\$107,855.1	\$33,910.2	1,374.4	\$212,245.3
Water Quality.....	1,950.6	95,940.0	108,861.0	11,197.9	1,950.6	215,998.9
Drinking Water.....	471.2	24,796.7	39,303.5	13,858.3	471.2	77,958.5
Hazardous Waste.....	643.1	32,826.3	63,028.0	20,697.2	643.1	116,551.5
Pesticides.....	662.2	28,501.0	22,318.9	2,108.2	662.2	52,928.1
Radiation.....	148.1	8,340.0	2,195.7	387.6	148.1	10,923.3
Interdisciplinary.....	325.6	17,573.5	2,909.8	3,452.6	325.6	23,935.9
Toxic Substances.....	626.7	34,182.0	22,603.0	12,876.8	626.7	69,661.8
Energy.....	36.4	4,489.7	...	20,511.2	36.4	25,000.9
Management and Support.....	2,204.1	231,484.0	...	...	2,204.1	231,484.0
Subtotal.....	8,442.4	\$548,613.2	\$369,075.0	\$119,000.0	8,442.4	\$1,036,688.2
Buildings and Facilities.....	...	...	...	...	...	3,000.0
Reimbursements.....	...	...	...	...	58.8	...
Hazardous Substance Response Trust Fund.....	...	...	...	...	623.8	210,000.0
Payment to the Hazardous Substance Response Trust Fund.....	...	...	...	...	...	(40,000.0)
Subtotal.....	8,442.4	\$548,613.2	\$369,075.0	\$119,000.0	9,125.0	\$1,249,688.2
Construction Grants.....	...	...	...	...	...	2,430,000.0
Total.....	8,442.4	\$548,613.2	\$369,075.0	\$119,000.0	9,125.0	\$3,679,688.2

ENVIRONMENTAL PROTECTION AGENCY

1984 Resources
By Media and Appropriation
(dollars in thousands)

	Salaries & Expenses		Abatement, Control & Compliance	Research & Development	Total	
	Permanent Workyears	Amount	Amount	Amount	Permanent Workyears	Amount
Air.....	1,350.3	\$71,028.1	\$92,815.4	\$27,148.1	1,350.3	\$190,991.6
Water Quality.....	1,662.9	83,728.8	61,324.0	6,316.5	1,662.9	151,369.3
Drinking Water.....	465.1	24,554.5	29,893.4	11,908.0	465.1	66,355.9
Hazardous Waste.....	625.8	35,038.6	58,150.4	16,923.7	625.8	110,112.7
Pesticides.....	652.7	31,435.2	19,634.4	1,673.0	652.7	52,742.6
Radiation.....	126.9	7,742.4	3,095.7	16.7	126.9	10,854.8
Interdisciplinary.....	353.4	18,244.1	7,049.4	16,042.1	353.4	41,335.6
Toxic Substances.....	606.2	32,900.5	21,970.3	11,804.9	606.2	66,675.7
Energy.....	36.8	3,694.1	...	19,836.0	36.8	23,530.1
Management and Support.....	2,116.7	232,022.7	...	...	2,116.7	232,022.7
Subtotal.....	7,996.8	\$540,389.0	\$293,933.0	\$111,699.0	7,996.8	\$945,991.0
Buildings and Facilities.....	...	...	...	...	...	2,600.0
Reimbursements.....	...	...	...	...	53.0	...
Hazardous Substance Response Trust Fund.....	...	...	...	...	619.3	310,000.0
Payment to the Hazardous Substance Response Trust Fund	...	...	...	...	...	(44,000.0)
Subtotal.....	7,996.8	\$540,389.0	\$293,933.0	\$111,669.0	8,669.1	\$1,258,591.0
Construction Grants.....	2,400,000.0
Total.....	7,996.8	\$540,389.0	\$293,933.0	\$111,669.0	8,669.1	\$3,658,591.0

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ENVIRONMENTAL PROTECTION AGENCY

Total Funds Obligated, 1983
(dollars in thousands)

	Budget Authority	Unobligated Balance Brought Forward	Unobligated Balance Carried Forward	Total Obligations
Research and Development	\$119,000.0	+\$13,646.8	-\$6,632.8	\$126,014.0
Air.....	33,910.2	+2,347.4	-813.4	35,444.2
Water Quality.....	11,197.9	+1,389.2	-427.2	12,159.9
Drinking Water.....	13,858.3	+619.7	-139.7	14,338.3
Hazardous Waste.....	20,697.2	+757.0	-200.0	21,254.2
Pesticides.....	2,108.2	+26.1	-12.1	2,122.2
Radiation.....	387.6	+150.6	-73.6	464.6
Interdisciplinary.....	3,452.6	+139.4	-69.4	3,522.6
Toxic Substances.....	12,876.8	+2,050.6	-670.6	14,256.8
Energy.....	20,511.2	+2,971.0	-1,031.0	22,451.2
Management and Support.....	...	+3,195.8	-3,195.8	...
Abatement, Control and Compliance	369,075.0	+12,742.0	-6,817.0	375,000.0
Air.....	107,855.1	+1,667.9	-544.9	108,978.1
Water Quality.....	108,861.0	+3,369.1	-1,191.1	111,039.0
Drinking Water.....	39,303.5	+451.7	-69.7	39,685.5
Hazardous Waste.....	63,028.0	+290.8	-154.8	63,164.0
Pesticides.....	22,318.9	+74.0	-38.0	22,354.9
Radiation.....	2,195.7	+124.6	-65.6	2,254.7
Noise.....	...	+7.9	-7.9	...
Interdisciplinary.....	2,909.8	+2,517.4	-916.4	4,510.8
Toxic Substances.....	22,603.0	+510.1	-100.1	23,013.0
Management and Support.....	...	+3,728.5	-3,728.5	...
Salaries and Expenses	548,613.2	...	...	548,613.2
Air.....	70,480.0	...	...	70,480.0
Water Quality.....	95,940.0	...	...	95,940.0
Drinking Water.....	24,796.7	...	...	24,796.7
Hazardous Waste.....	32,826.3	...	...	32,826.3
Pesticides.....	28,501.0	...	...	28,501.0
Radiation.....	8,340.0	...	...	8,340.0
Noise.....	...	...	...	...
Interdisciplinary.....	17,573.5	...	...	17,573.5
Toxic Substances.....	34,182.0	...	...	34,182.0
Energy.....	4,489.7	...	...	4,489.7
Management and Support.....	231,484.0	...	...	231,484.0

net/gross oblig

net/gross oblig

net oblig

	<u>Budget Authority</u>	<u>Unobligated Balance Brought Forward</u>	<u>Unobligated Balance Carried Forward</u>	<u>Total Obligations</u>
Buildings and Facilities	3,000.0	+2,921.7	-888.7	5,033.0
Scientific Activities Overseas	...	+3,399.9	-2,699.9	700.0
Construction Grants	2,430,000.0	+1,974,259.0	-1,404,259.0	3,000,000.0
Operations, Research and Facilities	...	+1,432.7	...	1,432.7
Hazardous Substance Response Trust Fund	210,000.0	+47,704.0*	-17,228.0	240,476.0
Total.....	\$3,679,688.2	+\$2,056,106.1	-\$1,438,525.4	\$4,297,268.9

net/gross
net/gross
net/gross
net/gross
gross

* This figure includes \$3,358.0 for offsetting collections from non-Federal sources.

ENVIRONMENTAL PROTECTION AGENCY

Total Funds Obligated, 1984
(dollars in thousands)

	Budget Authority	Unobligated Balance Brought Forward	Unobligated Balance Carried Forward	Total Obligations
Research and Development	\$111,669.0	+\$6,632.8	-\$5,867.8	\$112,434.0
Air.....	27,148.1	+813.4	-645.4	27,316.1
Water Quality.....	6,316.5	+427.2	-322.2	6,421.5
Drinking Water.....	11,908.0	+139.7	-87.7	11,960.0
Hazardous Waste.....	16,923.7	+200.0	-140.0	16,983.7
Pesticides.....	1,673.0	+12.1	-10.1	1,675.0
Radiation.....	16.7	+73.6	-65.6	24.7
Interdisciplinary.....	16,042.1	+69.4	-62.4	16,049.1
Toxic Substances.....	11,804.9	+670.6	-519.6	11,955.9
Energy.....	19,836.0	+1,031.0	-819.0	20,048.0
Management and Support.....	...	+3,195.8	-3,195.8	...
Abatement, Control and Compliance	293,933.0	+6,817.0	-5,879.0	294,871.0
Air.....	92,815.4	+544.9	-366.9	92,993.4
Water Quality.....	61,324.0	+1,191.1	-847.1	61,668.0
Drinking Water.....	29,893.4	+69.7	-9.7	29,953.4
Hazardous Waste.....	58,150.4	+154.8	-132.8	58,172.4
Pesticides.....	19,634.4	+38.0	-32.0	19,640.4
Radiation.....	3,095.7	+65.6	-55.6	3,105.7
Noise.....	...	+7.9	-7.9	...
Interdisciplinary.....	7,049.4	+916.4	-663.4	7,302.4
Toxic Substances.....	21,970.3	+100.1	-35.1	22,035.3
Management and Support.....	...	+3,728.5	-3,728.5	...
Salaries and Expenses	540,389.0	...	...	540,389.0
Air.....	71,028.1	...	...	71,028.1
Water Quality.....	83,728.8	...	...	83,728.8
Drinking Water.....	24,554.5	...	...	24,554.5
Hazardous Waste.....	35,038.6	...	...	35,038.6
Pesticides.....	31,435.2	...	...	31,435.2
Radiation.....	7,742.4	...	...	7,742.4
Noise.....	...	...	...	...
Interdisciplinary.....	18,244.1	...	...	18,244.1
Toxic Substances.....	32,900.5	...	...	32,900.5
Energy.....	3,694.1	...	...	3,694.1
Management and Support.....	232,022.7	...	...	232,022.7

	<u>Budget Authority</u>	<u>Unobligated Balance Brought Forward</u>	<u>Unobligated Balance Carried Forward</u>	<u>Total Obligations</u>
Buildings and Facilities	2,600.0	+888.7	-523.7	2,965.0
Scientific Activities Overseas	...	+2,699.9	-1,749.9	950.0
Construction Grants	2,400,000.0	+1,404,259.0	-1,404,259.0	2,400,000.0
Operations, Research and Facilities	...	...	...	...
Hazardous Substance Response Trust Fund	310,000.0	+24,770.0*	-14,900.0	319,870.0
Total.....	\$3,658,591.0	+\$1,446,067.4	-\$1,433,179.4	\$3,671,479.0

* This figure includes \$7,542.0 for offsetting collections from non-Federal sources.

ENVIRONMENTAL PROTECTION AGENCY

Summary Of State Grant Resources
(dollars in thousands)

	ACTUAL 1982	CURRENT ESTIMATE 1983	ESTIMATE 1984	INCREASE + DECREASE - 1984 vs. 1983
AIR				
SECTION 105.....	\$88,145.1	\$84,734.9	\$69,954.7	-\$14,780.2
WATER QUALITY				
SECTION 106.....	51,338.3	54,200.0	24,000.0	-30,200.0
CLEAN LAKES.....	8,992.1	3,000.0	---	-3,000.0
DRINKING WATER				
PUBLIC WATER SYSTEMS				
PROGRAM GRANTS.....	29,456.4	27,450.0	21,204.0	-6,246.0
UNDERGROUND INJECTION				
CONTROL PROGRAM.....	6,379.9	7,074.5	6,094.2	-980.3
SPECIAL STUDIES & DEMOS.....	1,822.5	1,900.0	---	-1,900.0
HAZARDOUS WASTE				
HAZARDOUS WASTE MANAGEMENT....	42,344.8	44,068.0	42,500.0	-1,568.0
PESTICIDES				
PESTICIDES ENF. GRANTS.....	9,087.4	8,702.9	6,918.4	-1,784.5
PESTICIDES CERT. & TRAINING...	2,579.1	2,000.0	2,100.0	+100.0
TOXIC SUBSTANCES				
TOXICS ENF. GRANTS.....	500.0	---	---	---
SUBTOTAL.....	\$240,645.6	\$233,130.3	\$172,771.3	-\$60,359.0
CONSTRUCTION GRANTS.....	2,116,802.7	2,430,000.0	2,400,000.0	-30,000.0
TOTAL.....	\$2,357,448.3	\$2,663,130.3	\$2,572,771.3	-\$90,359.0

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ENVIRONMENTAL PROTECTION AGENCY
History Of State Grant Budget Authority
Part I: 1971-1977
(dollars in thousands)

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
<u>AIR</u>	<u>30,200</u>	<u>42,900</u>	<u>50,000</u>	<u>50,000</u>	<u>55,268</u>	<u>51,518</u>	<u>55,550</u>
Section 105	30,200	42,900	50,000	50,000	55,268	51,518	55,550
Section 175	---	---	---	---	---	---	---
<u>WATER QUALITY</u>	<u>10,000</u>	<u>15,000</u>	<u>70,000</u>	<u>150,000</u>	<u>199,625</u>	<u>112,375</u>	<u>80,000</u>
Section 106	10,000	15,000	20,000	50,000	45,625	44,375	50,000
Section 208	---	---	50,000 1/	100,000 1/	150,000 1/	53,000	15,000
Clean Lakes	---	---	---	---	4,000	15,000	15,000
<u>DRINKING WATER</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>10,000</u>	<u>20,000</u>
Public Water Systems	---	---	---	---	---	7,500	15,000
Underground Injection	---	---	---	---	---	2,500	5,000
Special Studies & Demos	---	---	---	---	---	---	---
<u>HAZARDOUS WASTE</u>	<u>1,629</u>	<u>2,545</u>	<u>3,250</u>	<u>---</u>	<u>---</u>	<u>1,800</u>	<u>2,925</u>
Haz. Waste Management	---	---	---	---	---	---	---
Solid Waste Management	1,629	2,545	3,250	---	---	1,800	2,925
Resource Recovery	---	---	---	---	---	---	---
<u>PESTICIDES</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>1,000</u>
Pesticides Enf. Grant	---	---	---	---	---	---	1,000
Pesticides Cert. & Training	---	---	---	*	*	*	*
<u>TOXIC SUBSTANCES</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
Toxics Enf. Grants	---	---	---	---	---	---	---
 TOTAL	 <u>41,829</u>	 <u>60,445</u>	 <u>123,250</u>	 <u>200,000</u>	 <u>254,893</u>	 <u>175,693</u>	 <u>159,475</u>

1/ CONTRACT AUTHORITY

*Pesticides certification and training data for these years is unavailable.

ENVIRONMENTAL PROTECTION AGENCY
History Of State Grant Budget Authority
Part II: 1978-1984
(dollars in thousands)

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983 CURRENT ESTIMATE</u>	<u>1984 ESTIMATE</u>
<u>AIR</u>	66,135	130,025	82,800	87,673	87,735	84,735	69,955
Section 105	66,135	80,025	82,800	87,673	87,735	84,735	69,955
Section 175	---	50,000	---	---	---	---	---
<u>WATER QUALITY</u>	128,110	108,003	101,230	95,696	60,200	57,200	24,000
Section 106	52,400	52,400	48,730	51,223	51,200	54,200	24,000
Section 208	59,509	41,028	37,500	33,473	---	---	---
Clean Lakes	16,201	14,575	15,000	11,000	9,000	3,000	---
<u>DRINKING WATER</u>	27,110	36,270	34,745	37,598	37,848	36,424	27,298
Public Water Systems	20,500	26,400	29,450	29,450	29,450	27,450	21,204
Underground Injection	6,000	7,600	4,395	6,648	6,575	7,074	6,094
Special Studies & Demos	610	2,270	900	1,500	1,823	1,900	---
<u>HAZARDOUS WASTE</u>	14,304	44,886	38,600	38,570	41,700	44,068	42,500
Haz. Waste Management	---	15,018	18,600	26,487	41,700	44,068	42,500
Solid Waste Management	14,304	15,150	10,000	8,083	---	---	---
Resource Recovery	---	14,718	10,000	4,000	---	---	---
<u>PESTICIDES</u>	7,280	13,052	12,393	10,972	11,202	10,703	9,018
Pesticides Enf. Grant	5,000	9,538	8,750	8,020	8,632	8,703	6,918
Pesticides Cert. & Training	2,280	3,514	3,643	2,952	2,570	2,000	2,100
<u>TOXIC SUBSTANCES</u>	---	---	---	1,000	500	---	---
Toxics Enf. Grants	---	---	---	1,000	500	---	---
<u>TOTAL</u>	<u>242,939</u>	<u>332,236</u>	<u>269,768</u>	<u>271,509</u>	<u>239,185</u>	<u>233,130</u>	<u>172,771</u>

ENVIRONMENTAL PROTECTION AGENCY
Positions By Grade and Average Employment
SALARIES AND EXPENSES

Grades	Actual 1982	Current Estimate 1983	Estimate 1984
Executive Level II.....	1	1	1
Executive Level III.....	1	1	1
Executive Level IV.....	7	7	7
Executive Level V.....	1	1	1
Subtotal.....	10	10	10
ES-6.....	5	5	5
ES-5.....	28	26	25
ES-4.....	94	91	86
ES-3.....	34	33	30
ES-2.....	16	15	14
ES-1.....	23	22	20
Subtotal.....	200	192	180
GS-16.....	9	9	9
GS/GM-15.....	530	482	457
GS/GM-14.....	1,014	974	922
GS/GM-13.....	1,540	1,479	1,399
GS-12.....	1,776	1,706	1,615
GS-11.....	898	862	816
GS-10.....	65	63	59
GS-9.....	534	512	485
GS-8.....	168	161	152
GS-7.....	591	567	537
GS-6.....	439	422	399
GS-5.....	509	489	462
GS-4.....	223	214	202
GS-3.....	47	46	43
GS-2.....		3	3
GS-1.....	...	...	...
Subtotal.....	8,346	7,989	7,560

SA-20

<u>Grades</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Assistant Surgeon General, \$36,072 to \$50,160.....	...	...	...
Director grade, \$26,736 to \$46,188.....	78	71	69
Senior grade, \$21,394 to \$37,680.....	118	108	104
Full grade, \$18,024 to \$31,512.....	42	38	37
Senior assistant grade, \$16,740 to \$27,252...	8	7	7
Assistant grade, \$14,604 to \$20,173.....	...	...	...
Subtotal.....	246	224	217
Positions established by act of November 16, 1977 (42 U.S.C. 201) compensation for which is not to exceed the maximum rate payable for a GS-18.....			
	30	27	26
<u>Ungraded.....</u>	<u>65</u>	<u>59</u>	<u>57</u>
Total permanent positions.....	8,897	8,501	8,050

ENVIRONMENTAL PROTECTION AGENCY

Positions By Grade and Average Employment

HAZARDOUS SUBSTANCES RESPONSE TRUST FUND

<u>Grades</u>	<u>Actual 1982</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>
ES-5.....	1	1	1
ES-4.....	2	2	3
Subtotal.....	3	3	4
GS/GM-15.....	28	35	35
GS/GM-14.....	42	53	52
GS/GM-13.....	90	122	121
GS-12.....	138	188	185
GS-11.....	72	97	96
GS-10.....	...	...	...
GS-9.....	20	28	28
GS-8.....	5	6	6
GS-7.....	16	21	21
GS-6.....	11	15	15
GS-5.....	22	29	29
GS-4.....	8	11	11
GS-3.....	...	...	...
Subtotal.....	452	605	599
Positions established by act of July 1, 1974 (42 U.S.C. 207):			
Director grade, \$27,806 to \$48,035.....	2	3	5
Senior grade, \$22,241 to \$39,193.....	2	3	3
Full grade, \$18,745 to \$32,774.....	3	4	3
Senior assistant grade, \$17,420 to \$28,343...	4	5	4
Subtotal.....	11	15	15
Ungraded.....	1	1	1
Total Permanent positions.....	467	624	619

RESEARCH AND DEVELOPMENT

Classification by Objects
Includes Direct Obligations Only
(dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984
23.2 Communications, utilities, and other rent.....	\$238.0	\$485.0	...
25.0 Other services.....	109,419.6	\$75,342.8	\$69,236.7
26.0 Supplies and materials.....	30.0	60.0	...
41.0 Grants, subsidies, and contributions.....	90,950.3	50,126.2	43,197.3
Total obligations.....	\$200,637.9	\$126,014.0	\$112,434.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
Communications, utilities and other rent.....	\$238.0	...	\$485.0	...	
			+\$485.0		

The increase in the current estimate reflects the revised estimate for the allocations to the Food and Drug Administration (FDA) for the National Center for Toxicological Research (NCTR).

The decrease in the 1984 request reflects the elimination of our allocation to the Food and Drug Administration (FDA) for the National Center for Toxicological Research (NCTR).

-\$485.0

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Other Services.....</u>	\$109,419.6	\$70,867.0	\$75,342.8	\$69,236.7	
The increase in the 1983 current estimate results from the following:			<u>+\$4,475.8</u>		
Congressional add-on to the Great Lakes program.....			(+65.0)		
Congressional add-on for Phosphate Rock Study.....			(+270.0)		
EPA's application of the \$8.5 million Congressional add-on to this appropriation.....			(+3,651.2)		
Change in the rate of obligations for contracts.....			(+489.6)		
The decrease in the 1984 request reflects the following:					<u>-\$6,106.1</u>
A decrease to direct obligations for this object class results from decreases to Water Quality, Pesticides, Radiation and Energy programs and a reduced estimate for carryover into 1984.					(-7,926.1)
A net increase in the allocation account obligations reflect the elimination of allocations to the Food and Drug Administration (FDA) for the National Center for Toxicological Research (NCTR) (-\$2,180.0) and the new allocation for the National Science Foundation for \$4,000.0.					(+1,820.0)
<u>Supplies and Materials.....</u>	\$30.0	...	\$60.0	...	
The increase in the 1983 current estimate reflects a revised estimate for the FDA allocation account for NCTR.			<u>+\$60.0</u>		
The decrease in the 1984 request reflects the elimina- tion of our allocation to FDA for NCTR.					<u>-\$60.0</u>

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
<u>Grants, subsidies, and contributions.....</u>	\$90,950.3	\$59,393.0	\$50,126.2	\$43,197.3	
Changes to this object class include:			<u>-\$9,266.8</u>		
Congressional add-on to the Great Lakes program.....			(+1,435.0)		
EPA's application of the \$8.5 million Congressional					
add-on to this appropriation.....			(+4,875.0)		
Change in the rate of obligations in grants.....			(-15,576.8)		
The decrease in the 1984 request reflects lower					
research grant levels in the Air, Water Quality and					
Hazardous Waste programs.					<u>-\$6,928.9</u>

ABATEMENT, CONTROL AND COMPLIANCE

Classification by Objects
Includes Direct Obligations Only
(dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984
Personnel Services.....	\$145.7	...	...
<u>Other Objects:</u>			
21.0 Travel and transportation of persons.....	\$46.7	...	\$195.0
22.0 Transportation of things.....	1.0	...	...
23.2 Communications, utilities, and other rent.....	.2	...	...
24.0 Printing and reproduction.....	2.5	...	...
25.0 Other services.....	143,416.2	\$135,559.0	120,516.2
26.0 Supplies and materials.....	9.4	...	...
31.0 Equipment.....	21.0	...	...
41.0 Grants, subsidies, and contributions.....	249,683.1	239,441.0	174,159.8
42.0 Insurance claims and indemnities.....	2.2	...	...
Total other objects.....	<u>\$393,182.3</u>	<u>\$375,000.0</u>	<u>\$294,871.0</u>
Total obligations.....	\$393,328.0	\$375,000.0	\$294,871.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
Personnel services.....	\$145.7	...	...	...	...

There is no change in the 1983 estimate and no request for 1984.

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
<u>Travel and transportation of persons.....</u>	\$46.7	...	...	\$195.0	
There is no change in the 1983 estimate.					
The increase in the 1984 request reflects the need for travel in the drinking water program for direct implementation of the Underground Injection Control and Public Water System Supervision programs in States that do not have primacy.					<u>+\$195.0</u>
<u>Transportation of things.....</u>	\$1.0	...	...	...	...
There is no change in the 1983 estimate and no request for 1984.					
<u>Communications, utilities, and other rent.....</u>	\$.2	...	...	...	...
There is no change in the 1983 estimate and no request for 1984.					
<u>Printing and reproduction.....</u>	\$2.5	...	...	...	...
There is no change in the 1983 estimate and no request for 1984.					

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Other services</u>	\$143,416.2	\$132,481.0	\$135,559.0	\$120,516.2	
The increase in the 1983 current estimate results from the following:			+\$3,078.0		
Congressional add-on to Air Grants Programs.....			(+584.0)		
Congressional add-on for Great Lakes Program.....			(+500.0)		
Congressional add-on for Chesapeake Bay Program.....			(+861.5)		
Congressional add-on for Corps of Engineers to purchase additional workyears.....			(+2,800.0)		
Congressional add-on for Academic Training.....			(+340.0)		
Change in the rate of obligations for contracts.....			(-2,007.5)		
The decrease in the 1984 request primarily results from contract costs to Water Quality programs for the Corps of Engineers, Effluent Guidelines and Chesapeake Bay. Other reductions occurred in Hazardous Waste regulations and guidelines and Pesticides Generic Chemical Review.					-\$15,042.8
<u>Supplies and materials</u>	\$9.4	...	...	...	...
There is no change in the 1983 estimate and no request for 1984.					
<u>Equipment</u>	\$21.0	...	...	...	...
There is no change in the 1983 estimate and no request for 1984.					

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
<u>Grants, subsidies, and contributions.....</u>	\$249,683.1	\$187,927.0	\$239,441.0	\$174,159.8	
Changes to this object class include:			<u>+\$51,514.0</u>		
Congressional add-on for grant programs:					
Air.....			(+14,196.2)		
Water Quality.....			(+13,354.4)		
Drinking Water (PWSS).....			(+3,890.0)		
Drinking Water (UIC).....			(+1,534.3)		
Hazardous Waste.....			(+8,931.4)		
Pesticides Enforcement.....			(+1,784.5)		
Clean Lakes.....			(+3,000.0)		
Rural Water Association.....			(+1,900.0)		
Congressional add-on for wastewater treatment operator training.....			(+2,625.2)		
Congressional add-on for Great Lakes program to continue Section 108(a) demonstration grants.....			(+500.0)		
Congressional add-on for Chesapeake Bay Program.....			(+38.5)		
Congressional add-on for Academic Training.....			(+660.0)		
Change in rate of obligations for grants.....			(-900.5)		
The decrease in the 1984 request reflects lower State grants levels.					<u>-\$65,281.2</u>
<u>Insurance claims and indemnities.....</u>	\$2.2	...	...	...	...

There is no change in the 1983 estimate and no request for 1984.

SALARIES AND EXPENSES

Classification by Objects
Includes Direct Obligations Only
(dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984
<u>Personnel Services.....</u>	\$359,094.1	\$345,671.9	\$350,260.9
<u>Other Objects:</u>			
21.0 Travel and transportation of persons.....	\$12,070.8	\$14,276.1	\$14,307.1
22.0 Transportation of things.....	1,453.7	2,021.6	2,110.9
23.1 Standard level user charges.....	21,746.0	20,892.0	27,488.0
23.2 Communications, utilities, and other rent.....	40,054.4	55,715.7	44,967.7
24.0 Printing and reproduction.....	3,946.3	7,041.9	6,366.0
25.0 Other services.....	63,909.3	78,369.9	71,141.6
26.0 Supplies and materials.....	11,601.5	12,802.8	11,914.8
31.0 Equipment.....	25,121.9	11,321.3	11,332.0
32.0 Lands and structures.....	37.3	...	...
41.0 Grants, subsidies, and contributions.....	1,642.0	500.0	500.0
42.0 Insurance claims and indemnities.....	15.9	...	...
Total other objects.....	\$181,679.1	\$202,941.3	\$190,128.1
Total obligations.....	\$540,773.2	\$548,613.2	\$540,389.0

Position Data:

Average salary, GS positions.....	\$30,788	\$32,019	\$32,019
Average grade, GS positions.....	10.85	10.85	10.85

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Personnel services.....</u>	\$359,094.1	\$331,621.1	\$345,671.9	\$350,260.9	
The increase in the 1983 current estimate results from the following:					<u>+\$14,050.8</u>

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
EPA's application of the \$10.5 million Congressional add-on which supports the increase of workyears and the effluent guidelines and radionuclides programs.....			(+10,399.3)		
Congressional add-on for AWT reviews.....			(+350.0)		
Congressional add-on in Great Lakes program for Grosse Ile laboratory.....			(+400.0)		
EPA's employer share of the Medicare tax (1.3%)....			(+2,760.1)		
Adjustment to reflect revised salary estimates.....			(+141.4)		
The increase in the 1984 request reflects primarily the cost of fringe benefits for the Public Health Service Commissioned Corps Officers which were previously funded by the Public Health Service.					<u>+\$4,589.0</u>
<u>Travel and transportation of persons.....</u>	\$12,070.8	\$14,276.1	\$14,276.1	\$14,307.1	
There is no change in the 1983 current estimate.					
The increase in the 1984 request reflects the amount required to cover increased costs already realized with increases to commercial air fares.					<u>+\$31.0</u>
<u>Transportation of things.....</u>	\$1,453.7	\$1,884.7	\$2,021.6	\$2,110.9	
Changes to this object class include:			<u>+\$136.9</u>		
EPA's application of Congressional reduction to management and support offices.....			(-.1)		
Congressional add-on in Great Lakes program for Grosse Ile laboratory.....			(+6.0)		
Adjustments to cost estimates using 1982 actual costs as a base.....			(+131.0)		
The increase in the 1984 request again reflects estimates based on 1982 actual costs and expected increases for the shipping of materials.					<u>+\$89.3</u>

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
Standard level user charges.....	\$21,746.0	\$25,428.0	\$20,892.0	\$27,488.0	
The decrease in the 1983 current estimate reflects the reduction in rent needs caused by Congressional direction to GSA to charge SLUC for 1983 at 1982 rates.			-\$4,536.0		
The increase in the 1984 estimate reflects the increase in SLUC rates from 1982 to 1984, partially offset by decreased space needs.					+\$6,596.0
Communications, utilities, and other rent.....	\$40,054.4	\$44,508.6	\$55,715.7	\$44,967.7	
Changes to this object class include:			+\$11,207.1		
EPA's application of the \$10.5 million Congressional add-on to fund the effluent guidelines program.....			(+50.7)		
EPA's application of Congressional reduction to management and support offices.....			(-650.3)		
Congressional add-on in Great Lakes program for Grosse Ile laboratory.....			(+100.0)		
Increase in 1983 estimate reflects the transfer of ADP Support Cost funds from Other Services to this object class for operational support for the National Computer Center (NCC).....			(+4,981.1)		
Increase to Nationwide and Headquarters Support Costs reflects adjustment in rental costs for equipment and telephones, and the continually rising costs of utilities.....			(+6,725.6)		
The decrease in the 1984 request reflects a \$2.0 million reduction for operational support for the National Computer Center (NCC) and the remaining reduction realized through cost savings in rental costs for equipment and telephones in Nationwide, Headquarters and Regional Support.					-\$10,748.0

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Printing and reproduction.....</u>	\$3,946.3	\$7,872.1	\$7,041.9	\$6,366.0	
The decrease in the 1983 current estimate results from the following:			<u>-\$830.2</u>		
EPA's application of the \$10.5 million Congressional add-on to fund the effluent guidelines program.....			(+50.0)		
EPA's application of Congressional reduction to management and support offices.....			(-90.6)		
Reduction reflects adjustments to 1983 estimate based on 1982 actual costs for printing and reproduction..			(-789.6)		
The decrease in the 1984 request primarily reflects reductions in printing needs in Air, Water Quality and Toxic Substances.					<u>-\$675.9</u>
<u>Other services.....</u>	\$63,989.3	\$87,130.3	\$78,369.9	\$71,141.6	
The decrease in the 1983 current estimate results from results from the following:			<u>-\$8,760.4</u>		
EPA's application of Congressional reduction to management and support offices.....			(-474.3)		
Congressional add-on to Great Lakes program for Grosse Ile laboratory.....			(+404.0)		
Reduction in 1983 estimate reflect the transfer of ADP Support Cost funds from this object class to communi- cations, utilities, and other rent and equipment for operational support for the National Computer Center (NCC).....			(-6,232.9)		
Reduction reflects adjustments to the 1983 estimate based on 1982 actual costs for administrative and maintenance service contracts.....			(-2,457.2)		
The decrease in the 1984 requests reflects a major reduction in Air, Water Quality, Energy, Management and Support, and Toxic Substances programs with small reductions in Drinking Water and Hazardous Waste.					<u>-\$7,228.3</u>

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Supplies and materials</u>	\$11,601.5	\$13,139.6	\$12,802.8	\$11,914.8	
Changes to this object class include:			-\$336.8		
EPA's application of Congressional reduction to management and support offices.....			(-62.4)		
Congressional add-on to Great Lakes program for Grosse Ile laboratory.....			(+40.0)		
Reduction reflects an adjustment based on 1982 actual costs for supplies.....			(-314.4)		
The decrease in the 1984 request primarily reflects a reduction to the Research and Development Water Quality and Hazardous Waste program needs, and smaller reductions to Toxic Substances and Energy program needs.					-\$888.0
<u>Equipment</u>	\$25,121.9	\$10,839.7	\$11,321.3	\$11,332.0	
Changes to this object class include:			+\$481.6		
EPA's application of Congressional reduction to management and support offices.....			(-72.4)		
Congressional add-on to Great Lakes program for Grosse Ile laboratory.....			(+50.0)		
Increase reflects transfer of ADP Support Cost funds from Other Services to this object class for operational support for the National Computer Center (NCC).....			(+1,251.8)		
Reduction reflect adjustments to estimate based on lower projected needs for equipment.....			(-747.8)		
The small increase in the 1984 request reflects additional equipment needs in this object class in 1984..					+\$10.7

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
<u>Lands and structures.....</u>	\$37.3	...	...	...	...

There is no change in the 1983 estimate
and no request for 1984.

<u>Grants, subsidies, and contributions.....</u>	\$1,642.0	\$4.0	\$500.0	\$500.0	...
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The increase in the 1983 estimate primarily
reflects an increase in grants for construction
grant audits in the Office of Inspector General.

+\$496.0

There is no change in the estimate for 1984.

BUILDINGS AND FACILITIES

Classification by Objects
Includes Direct Obligations Only
(dollars in thousands)

	Actual 1982	Current Estimate 1983	Estimate 1984
21.0 Travel and transportation of persons.....	\$15.7	\$40.0	\$40.0
25.0 Other services.....	3,239.5	4,802.0	2,812.0
31.0 Equipment.....	3.6	5.0	3.0
32.0 Lands and structures.....	125.9	186.0	110.0
Total Obligations.....	\$3,384.7	\$5,033.0	\$2,965.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
Travel and transportation of persons.....	\$15.7	\$40.0	\$40.0	\$40.0	...

There is no change in the 1983 current estimate and 1984 estimate.

Other services.....	\$3,239.5	\$864.0	\$4,802.0	\$2,812.0	
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The increase in the 1983 current estimate reflects a revised carryover estimate based on completion of a laboratory facilities study in 1983 and transfer of funds into this object class from lands and structures.

+\$3,938.0

The decrease in the 1984 estimate reflects lower facility needs in 1984.

-\$1,990.0

Equipment.....

The increase in the 1983 current estimate reflects a revised estimate for equipment needs.

The decrease in the 1984 estimate reflects a reduced need for equipment in 1984.

Lands and structures.....

The decrease in the 1983 current estimate reflects a revised carryover estimate based on completion of a laboratory facilities study in 1983 and a transfer of funds from this object class into other services.

The decrease in the 1984 estimate reflects lower facility needs in 1984.

<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
\$3.6	...	\$5.0	\$3.0	
		<u>+\$5.0</u>		
				<u>-\$2.0</u>
\$125.9	\$2,960.0	\$186.0	\$110.0	
		<u>-\$2,774.0</u>		
				<u>-\$76.0</u>

SCIENTIFIC ACTIVITIES OVERSEAS

Classification by Objects
Includes Direct Obligations Only
(in thousands of dollars)

	Actual 1982	Current Estimate 1983	Estimate 1984
21.0 Travel and transportation of persons.....	\$19.3	\$20.0	\$35.0
25.0 Other services.....	...	680.0	915.0
Total Obligations.....	\$19.3	\$700.0	\$950.0

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	Actual 1982	Budget Estimate 1983	Current Estimate 1983	Estimate 1984	Increase + Decrease - 1984 vs. 1983
<u>Travel and transportation of persons.....</u>	\$19.3	\$20.0	\$20.0	\$35.0	
There is no change in the 1983 current estimate.					
The increase is the 1984 request reflects additional activities expected in 1984.					<u>+\$15.0</u>
<u>Other services.....</u>	...	\$680.0	\$680.0	\$915.0	
There is no change in the 1983 current estimate.					
The increase in the 1984 request reflects additional activities expected in 1984.					<u>+\$235.0</u>

HAZARDOUS SUBSTANCE RESPONSE TRUST FUND

Classification by Objects
Includes Direct Obligations Only
(in thousands of dollars)

	Actual 1982	Estimate 1983	Current Estimate 1984
Personnel Services.....	\$17,851.9	\$31,479.0	\$35,039.2
<u>Other Objects:</u>			
21.0 Travel and transportation of persons.....	\$1,472.5	\$2,722.3	\$2,786.0
22.0 Transportation of things.....	48.6	182.1	220.8
23.1 Standard level user chargers.....	1,195.0	1,427.0	1,992.0
23.2 Communications, utilities, and other rent.....	1,632.7	3,671.0	2,953.0
24.0 Printing and reproduction.....	126.0	288.0	286.0
25.0 Other services.....	120,757.7	139,845.6	172,914.0
26.0 Supplies and materials.....	800.1	1,057.0	1,115.0
31.0 Equipment.....	1,958.5	6,769.0	2,122.0
41.0 Grants, subsidies, and contributions.....	34,900.6	53,035.0	100,442.0
Total other objects.....	\$162,891.7	\$208,997.0	\$284,830.8
Total obligations.....	\$180,743.6	\$240,476.0	\$319,870.0
<u>Position Data:</u>			
Average salary, GS positions.....	\$30,900	\$32,136	\$32,136
Average grade, GS positions.....	11.38	11.38	11.38

EXPLANATION OF INCREASES AND DECREASES TO OBJECT CLASSIFICATIONS

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
<u>Personnel services.....</u>	\$17,851.9	\$26,962.5	\$31,479.0	\$35,039.2	
The increase in the 1983 current estimate results from the following:			<u>+\$4,516.5</u>		
EPA's employer share of the Medicare tax (1.3%).....			(+216.5)		
Primarily an increase to cover the additional workyears added to the Superfund program.....			(+4,300.0)		
The increase in the 1984 request primarily reflects a slower rate of obligation of the allocation account to the Health and Human Services in the Interagency Support program.					<u>+\$3,560.2</u>
<u>Travel and transportation of persons.....</u>	\$1,472.5	\$2,722.3	\$2,722.3	\$2,786.0	
There is no change in the 1983 current estimate.					
The increase in the 1984 request reflects the amount required to cover increased costs already realized with increases to commercial air fares.					<u>+\$63.7</u>
<u>Transportation of things.....</u>	\$48.6	\$262.3	\$182.1	\$220.8	
The decrease in the 1983 current estimate results from an adjustment to cost estimates using 1982 actual costs as a base.			<u>-\$80.2</u>		
The increase in the 1984 request reflects an increased need for the shipping of materials.					<u>+\$38.7</u>
<u>Standard level user changes.....</u>	\$1,195.0	\$1,453.0	\$1,427.0	\$1,992.0	
The decrease in the 1983 current estimate reflects the reduction in rent needs caused by the Congressional direction to GSA to charge SLUC for 1983 at 1982 rates, partially offset by an increase in the portion of total SLUC costs allocable to Superfund.			<u>-\$26.0</u>		

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
The increase in the 1984 request results from increased SLUC rates in 1984 and an increase in the portion of total SLUC costs allocable to Superfund.					<u>+\$565.0</u>
<u>Communications, utilities, and other rent.....</u>	\$1,632.7	\$2,200.9	\$3,671.0	\$2,953.0	
The increase in the 1983 current estimate reflects the revised estimate of this object class due to the additional workyears and the rising costs of utilities.			<u>+\$1,470.1</u>		
The decrease in the 1984 request reflects a lower need for these costs in 1984.					<u>-\$718.0</u>
<u>Printing and reproduction.....</u>	\$126.0	\$522.8	\$288.0	\$286.0	
The decrease in the 1983 current estimate reflects adjustments based on 1982 actual costs from printing.			<u>-\$234.8</u>		
The decrease in the 1984 request reflects lower printing and reproduction needs in 1984.					<u>-\$2.0</u>
<u>Other services.....</u>	\$120,757.7	\$158,866.0	\$139,845.6	\$172,914.0	
The decrease in the 1983 current estimate results in the following:			<u>-\$19,020.4</u>		
Congressional action reduced Superfund by \$20 million, but stipulated that an additional \$4.7 million be set aside for Department of Health and Human Services and \$10.0 million reprogrammed to support State site surveys under RCRA Section 3012.....					(-30,000.0)
Increase for adjusted carryover estimates.....					(+10,979.6)

	<u>Actual 1982</u>	<u>Budget Estimate 1983</u>	<u>Current Estimate 1983</u>	<u>Estimate 1984</u>	<u>Increase + Decrease - 1984 vs. 1983</u>
The increase in the 1984 request reflects a higher level of site response action planned and the contract funds to support such actions.					<u>+\$33,068.4</u>
<u>Supplies and materials.....</u>	\$800.1	\$949.5	\$1,057.0	\$1,115.0	
The increase in the 1983 current estimate reflects adjustments to cost estimates for supplies based on 1982 actual experience.			<u>+\$107.5</u>		
The increase in the 1984 request reflects an increased supply and material needs for the various allocation accounts.					<u>+\$58.0</u>
<u>Equipment.....</u>	\$1,958.5	\$2,304.9	\$6,769.0	\$2,122.0	
The increase in the 1983 current estimate reflects the increased need for laboratory equipment in this object class.			<u>+\$4,464.1</u>		
The decrease in the 1984 request reflects lower equipment needs for 1984.					<u>-\$4,647.0</u>
<u>Grants, subsidies, and contributions.....</u>	\$34,900.6	\$33,755.8	\$53,035.0	\$100,442.0	
The increase in the 1983 current estimate results in the following:			<u>+\$19,279.2</u>		
Congressional action directed that EPA fund \$10 million to support State site surveys under RCRA Section 3012.....			(+10,000.0)		
Increase for adjusted carryover estimates.....			(+9,279.2)		
The increase in the 1984 request reflects a higher level of site response action planned and the grant funds to support such actions.					<u>+\$47,407.0</u>



