



Operations/Resource Impact Analysis

RCRA Subtitle C

What Resources Do EPA and States Require to
Implement the Regulations Promulgated under
Authority of Subtitle C of the Resource
Conservation and Recovery Act of 1976?

Notice

The attached document was prepared with contractor assistance under the guidance of EPA. It is printed here largely as received from the contractor; the Agency has not yet completed reviewing it.

The reader should be aware that this analysis projects the resource impacts on the Agency and States to conduct a full regulatory program. The general status regulations which will be incumbent upon treatment, storage, and disposal facilities have not been promulgated. (These are scheduled for late 1980.) As a result, this analysis was based on projections as to the type and level of activities which will be required. Upon promulgation of the general status regulations, the Agency will again review this study to determine the impact of any changes.

RCRA SUBTITLE C
OPERATIONS/RESOURCE IMPACT ANALYSIS

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Implement the Regulations Promulgated under
Authority of Subtitle C of the Resource
Conservation and Recovery Act of 1976?

Program Analysis Division
Office of Resources Management
Office of Planning and Management
U.S. Environmental Protection Agency

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PREFACE

The U.S. Environmental Protection Agency is issuing regulations under Subtitle C of the Resource Conservation and Recovery Act (RCRA). These regulations establish a comprehensive system for the environmentally safe management of hazardous waste, including its transportation, treatment, storage, and disposal. The regulations will be promulgated by the end of April 1980, and become effective six months after promulgation.

Usually, the lead office writing a regulation prepares a complete decision package for the Administrator. The decision package must meet the requirements of Executive Order 12044 and contain an analysis of alternatives, supporting documents quantifying the anticipated effects of the regulation, a preamble, and the regulation itself. However, because of the complexity of the Subtitle C regulations and the limited time available before the promulgation deadline, the Office of Planning and Management (OPM) offered to help the Offices of Solid Waste and Enforcement develop several portions of the decision package. This document, the Operations/Resource Impact Analysis (ORIA), is one product of OPM's assistance. The ORIA is a part of the Administrator's decision package, and a summary of the ORIA will be published in the Federal Register.

The purpose of an ORIA is to define the key activities and associated expenditures necessary to implement a regulation. Included are explicit statements about the roles and relationships of federal and State agencies, schedules for implementation, an estimate of resources required, and the proposed source of these resources. This information helps Agency decision makers evaluate the benefits and costs of alternative strategies and reduces the risk of promulgating a regulation without the resources to implement it. The description of activities and responsibilities will also help federal, State, and local officials and the public understand EPA's hazardous waste management program.

The ORIA was prepared by the Program Analysis Division (PAD), Office of Resources Management, under the direction of George Alapas, Acting Division Director. PAD used information on program activities and resource requirements provided by the Offices of Solid Waste and Enforcement. The ten regional offices and several headquarters offices reviewed earlier drafts (February and March 1980) and made many helpful suggestions. This edition (April 1980) is basically identical to the March document. The few changes are primarily editorial in nature.

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EXECUTIVE SUMMARY

PURPOSE

The purpose of this operations/resource impact analysis is to define the key activities and associated expenditures necessary to implement the regulations promulgated under authority of Subtitle C of the Resource Conservation and Recovery Act.

The document contains explicit statements about the roles and relationships of federal and State agencies, schedules for implementation, and estimates of required resources. By combining the entire Subtitle C hazardous waste program under a single long-range strategy, we hope to facilitate a better understanding of roles and responsibilities among organization units, to eliminate duplicative effort, and to provide Agency decision makers with an integrated solution to the problems of hazardous waste management.

CONCLUSIONS

States Will Provide Most of the Resources

According to the assumptions and analysis in this document, from FY 1980 to 1985 the States and EPA regions will invest a total of 17,505 workyears to implement RCRA. Of this total, the States will invest 15,272 workyears, or 87 percent, and the regions will invest 2,232 workyears, or 13 percent.

By fiscal year, the resources required by States and EPA regions are as follows. They are expressed in workyears, the equivalent of one person working full-time for one year.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
States	741.7	1316	2560.8	3748	3453	3453	15272.5
EPA	<u>110.9</u>	<u>527.7</u>	<u>540.5</u>	<u>539.7</u>	<u>256.8</u>	<u>256.8</u>	<u>2232.4</u>
Total Workyears	852.6	1843.7	3101.3	4287.7	3709.8	3709.8	17504.9

Processing Permits Requires
the Most Resources

The hazardous waste program involves four major activities:

- o administering the program
- o operating a manifest system to track wastes from generation to disposal
- o processing permits for hazardous waste facilities
- o assuring compliance with laws and regulations.

Processing permits will require a total of 9,881 workyears through FY 1985, about 56 percent of the total required. By fiscal year, the resources required for the four major activities are as follows:

<u>ACTIVITY</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Adminis- tration	548.6	771.4	745.7	1010.6	572	572	4220.3
Manifest	10	177	177	225	191.5	191.5	972
Permitting	-	558.6	1818.3	2560.8	2471.6	2471.6	9880.9
Compliance	<u>294</u>	<u>336.7</u>	<u>360.3</u>	<u>491.3</u>	<u>474.7</u>	<u>474.7</u>	<u>2431.7</u>
Total Workyears	852.6	1843.7	3101.3	4287.7	3709.8	3709.8	17504.9

Only a Small Proportion of
EPA's Investment Is for
Direct Implementation

EPA's involvement with the states will differ for the three specific programs--manifest, permits, and compliance. For each State, the EPA regions will invest some time in helping the States establish their programs. In some States, those that may not receive authorization (either because they do not have the resources to carry out the program themselves or because they do not yet have sufficient legislation or regulations), EPA itself must implement the program. For States which have authorization, EPA will oversee the State effort.

The regions will make a large investment in helping States establish their programs from FY 1980 to 1983; after that, almost

all the investment will be for oversight of authorized programs. By fiscal year, the resources required are as in the next tabulation.

<u>EPA</u> <u>ACTIVITY</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Administra- tion	30	50	50	50	50	50	280
Assistance	70.9	256.4	163.4	162.6	19	19	691.3
Implementa- tion	-	126.1	202	202	49.7	49.7	629.5
Oversight	<u>10</u>	<u>95.2</u>	<u>125.1</u>	<u>125.1</u>	<u>138.1</u>	<u>138.1</u>	<u>631.6</u>
Total Workyears	110.9	527.7	540.5	539.7	256.8	256.8	2232.4

EPA Will Have Sufficient
Resources Available

The regions will need more resources from FY 1981 to 1983 than after, because by 1983 EPA expects that all the States will be implementing the program. The EPA hazardous waste program received a large increase in the FY 1981 President's Budget. If the FY 1981 budget level is maintained at least through 1983, and if our authorization assumptions are correct, the regions will have sufficient resources to carry out their responsibilities. The table below displays the resources required according to EPA's decision unit budget structure.

<u>DECISION</u> <u>UNITS</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>Total</u>
Manage- ment (D210)	89.7	269.0	316.1	316.5	133.7	1258.7
Enforce- ment (D305)	21.2	79.0	103.2	102.6	62.1	430.2
Permits (D310)	<u>-</u>	<u>179.7</u>	<u>121.2</u>	<u>120.6</u>	<u>61.0</u>	<u>543.5</u>
Total Workyears	110.9	527.7	540.5	539.7	4057.8	2232.4

The States May Require
Additional Grant Support

To carry out their responsibilities under Subtitle C, the States will have to expand greatly the size of their hazardous waste programs. Program expansion might require a corresponding increase in State hazardous waste management grants.

The next table presents the relative magnitude of those grants in millions using an assumption of 10 percent inflation.

	<u>FY80</u>	<u>FY81</u>	<u>FY82*</u>	<u>FY83*</u>	<u>FY84*</u>	<u>FY85*</u>	<u>Total*</u>
EPA Grants (10% infla- tion)	\$18.5	30.0	57.5	92.3	93.7	103.0	\$395.0
State Match	-	-	19.2	30.7	31.2	34.4	\$115.5
State Workyears	741.7	1316	2560.8	3748	3453	3453	15272.5

*Grant amounts shown are based on our projections. EPA does not yet have hazardous waste grant authority or appropriations for FY 1982 or beyond.

For fiscal years 1982 and beyond, the federal share of hazardous waste program development and implementation will be 75 percent.

Individuals With the Necessary
Skills Are Available

To implement Subtitle C, the States and EPA regions must hire almost 1,500 individuals with technical skills. Potential employees can come from a variety of scientific and engineering disciplines, with the exact mix of skills up to the discretion of the program director. Because of this flexibility in selecting from different disciplines, the States and regions should have no difficulty finding employees with the skills necessary.

KEY ASSUMPTIONS AFFECTING THE ANALYSIS

Decision makers should be aware of the following assumptions affecting the analysis.

Authorization and Size Assumptions

The analysis assumes that 35 States will have interim authorization through June 1983 and that all 56 States and Territories

will receive authorization by July 1983. This assumption has a limited effect on the total resources, because we assumed that the cost in workyears of performing a program task is about the same for a State as for an EPA region. However, the authorization assumption is the key factor determining whether the State or the EPA budget pays for the activity.

We also assumed that much of the workload for the activities we analyzed would vary according to the size of the State's hazardous waste program. To estimate the size of that program, we placed the States into five size categories based on the EPA formula for distributing hazardous waste grants to the States. That formula itself is a composite measure, a weighted average that includes State population, amount of hazardous waste generation, number of generators of hazardous waste, and the State's land area. We assumed that the need for resources for oversight varied in the same manner.

Permitting Assumptions

The Agency estimates that 30,000 facilities require hazardous waste permits. Current policy assumes that States and EPA will process these permits over the next six years. To process all 30,000 permits in six years will require a large investment; according to our estimates, about 56 percent of the total workyears required from FY 1981 to 1985 will be for permitting. Stretching the processing of permits out over a longer period would reduce the need for so many resources early in the program.

Also, the EPA research and development program is currently working to improve our understanding of waste disposal technology. Any permits processed before publication of the research findings may need to be rewritten to incorporate improved standards. A longer permit program would tend to reduce the number of permits that must be reviewed each year.

* * * * *

The State and Federal response to the Nation's acute problem of safely disposing of hazardous wastes will be immense. In current (1980) dollars, the cost of State and EPA salaries alone will amount to almost half a billion dollars over the next six years--\$610 million if we assume an inflation rate of 10 percent. Similarly, managing an average of 6,000 people per year will itself be a logistic and strategic problem of considerable magnitude.

Nevertheless, EPA is approaching the problem with foresight; this analysis is one example. Although many of our projections were necessarily based on estimates and assumptions, we believe that making them explicit is the primary benefit of this study.

I. INTRODUCTION

This document is the Operations/Resource Impact Analysis (ORIA) for the regulations promulgated under authority of Subtitle C of the Resource Conservation and Recovery Act of 1976. The purpose of the ORIA is to define the key activities and associated expenditures necessary to implement the hazardous waste management program established by the following regulations and guidelines:

- o Section 3001, Hazardous Wastes Identification and Listing, defines those wastes EPA deems hazardous and therefore subject to Subtitle C requirements.
- o Section 3002, Generator Standards and Manifest System, contains the standards applicable to generators of hazardous wastes. This regulation also contains the mechanics of the manifest system, which will track waste transported from the point of generation to its ultimate disposition.
- o Section 3003, Transporter Standards, authorizes standards for transporters of hazardous waste to assure that such waste is carried carefully.
- o Section 3004, Standards for Facilities, addresses standards affecting owners and operators of hazardous waste treatment, storage, and disposal facilities. These standards define the levels of human health and environmental protection to be achieved by these facilities and provide the criteria against which EPA or State officials will measure applications for permits.
- o Section 3005, Permits Procedures, sets out the scope and coverage of the actual permits granting process for facility owners and operators.
- o Section 3006, State Authorization, contains guidelines under which States may seek interim or full authorization to carry out the hazardous waste program in lieu of an EPA-administered program.
- o Section 3010, Notification, describes the policy requiring any person generating or transporting hazardous wastes or owning or operating a facility that treats, stores, or disposes of hazardous wastes to file a notification with EPA.

The analysis concentrates on State activities, since States will implement much of the hazardous waste program, and on EPA regions, which will handle most of the federal responsibilities. Within the regions, three programs conduct most of the activities. The hazardous waste management program provides support for States developing hazardous waste programs, awards hazardous waste management grants, oversees approved State programs, provides technical review for hazardous waste permits, and operates a federal program in States unwilling or unable to obtain authorization. The hazardous waste enforcement program supports State activities to ensure compliance with the Subtitle C regulations, provides oversight for approved programs, and conducts activities to assure compliance in States that have not received authorization. The hazardous waste permit issuance program supports State efforts to develop adequate permit programs, provides oversight for approved programs, and processes hazardous waste permits in States that have not received authorization.

By combining the entire hazardous waste program under a single long-range strategy, we hope to facilitate a better understanding of roles and responsibilities among organization units, to eliminate duplicative effort, and to provide Agency decision makers with an integrated view of the problems of hazardous waste management.

METHODOLOGY

The major analytic task in producing an ORIA involves defining the relationship between planned activities and achievements and the resources required to produce them. Two necessary preliminary tasks are the development of a list of key activities and the determination of resources required to carry out each activity.

We began our analysis with a list of planned activities contained in an analysis produced by the Office of Solid Waste to support earlier regulations. After adding additional activities described in program office budget materials, we discussed our list with officials from the Offices of Solid Waste and Enforcement. Based on their suggestions, we produced two lists of key activities, one for State programs and one for EPA regional office programs.

Developing estimates of resources required was our next step. Originally, we had hoped to use unit pricing to determine resource estimates. This approach works best for activities performed repetitively. We wanted to establish a "price" in workdays for the production of one key output and determine total resources by multiplying the price per unit times the number of units desired. However, we were unable to obtain

information on numbers of generators, transporters, treaters, storers, and disposers of hazardous waste in each State, the size and complexity of facilities requiring permits, or the likelihood of potential violations requiring enforcement actions. This information will be available after the regulations take effect and the program begins operation.

As an alternative, we used activity pricing. This approach was successful, since costs for most activities tended to vary more because of State characteristics than specific output frequencies. For example, the cost of the activity "develop legislation/regulations" depends more on current regulatory status than on the number of hearings required. The primary characteristics affecting the costs of those activities were relative State program size and the likelihood that the State would receive interim authorization. For these activities, we used pricing estimates for the entire activity and did not cost out the specific outputs produced.

We calculated our resource estimates in workyears, a measure relating time and activity. A workyear is the equivalent of the effort of one person working full-time for one year. One workyear can be produced by one person working full-time for one year, two people working full time for six months, and so on.

Based on our lists of activities and related resources, we prepared a first draft which was circulated in headquarters. We revised that draft considerably to incorporate comments, then circulated the new draft throughout the regions and headquarters. This draft reflects the changes they recommended.

THE ORIA HAS FIVE CHAPTERS

This chapter provides a brief introduction to the ORIA, explaining purpose, methodology, and organization.

Chapter two contains a summary of EPA's strategy for regulating hazardous waste activities.

Chapter three describes the activities that States will perform in implementing Subtitle C and indicates the expected workyear requirements for implementation.

Chapter four describes the activities that EPA regions will conduct in implementing Subtitle C and estimates the resources required to perform those activities.

Chapter five discusses staffing requirements for State and regional hazardous waste programs and draws conclusions about the availability of technical personnel.

II. EPA STRATEGY

GENERAL OVERVIEW OF THE STRATEGY

Hazardous wastes are those wastes which may cause or contribute to adverse acute or chronic effects on human health or the environment when such wastes are not controlled properly. These wastes consist primarily of the by-products of industrial production, conversion, and extraction activities, and may be in the form of solids, sludges, slurries, liquids, or powders. The Section 3001 regulation contains specific definitions of hazardous wastes and lists of wastes considered hazardous.

Almost 54 million metric tons of hazardous wastes are generated annually in the United States. Only 10 percent of these wastes are disposed of safely. Moreover, the Nation continues to curtail emissions to air and water through other environmental laws. Since hazardous waste may also be a by-product of extensive treatment, and since industrial activity will continue to increase, the Agency expects the amount of waste to grow by 30 percent in the next decade.

Because of their high potential for public health and environmental damage, hazardous wastes require special control procedures. Management of these wastes means awareness and control over them from the time of generation through their transportation, temporary storage, treatment, and disposal. EPA believes that this comprehensive management of hazardous wastes should be conducted or coordinated at the State level so that wastes may reach environmentally sound treatment and disposal facilities. The Section 3006 regulation contains the requirements a State must meet to operate a program equivalent to the federal program.

Waste transportation control systems involving manifests or "trip-tickets" to monitor the waste flows are the most effective methods to assure proper handling and tracking of wastes from generation to ultimate disposal. Effective identification and labeling of wastes by the generators are essential to the effective operation of any manifest-based system. The Section 3002 and 3003 regulations contain the regulations generators and transporters of hazardous wastes must meet.

In addition, management of hazardous wastes means more than careful disposal. It implies consideration of alternate methods and schemes, both institutional and technical, to reduce the amount of the wastes as well as their inherent hazards. The Agency believes that reuse and energy recovery, as well as treatment, are desirable before ultimate disposal, especially land disposal.

Any facility which treats, stores, or disposes of hazardous wastes should use the best available technology. EPA or the States will review every facility's operating characteristics and issue operating permits to those facilities which qualify under the Subtitle C regulations. The Agency will work with existing and proposed facilities to assure development of adequate, acceptable waste disposal capacity. Facilities failing to qualify must close down or improve their operations.

The Section 3004 regulations contain technical and administrative standards for treatment, storage, and disposal facilities, and the Section 3005 regulations establish the program for processing operating permits.

To ensure compliance with the Subtitle C mandate, enforcement activities will be conducted at the national, regional, and State levels.

Subtitle C implementation begins with the publication in April 1980 of the first phase of federal regulations describing program requirements. These regulations, which become effective six months after promulgation, establish a federal regulatory program that will ensure that hazardous wastes are transported, treated, stored, and disposed of in a manner which protects public health and the environment.

EPA will establish the desired hazardous waste management network in eight stages:

- (1) identification and listing of hazardous wastes;
- (2) research and development to upgrade technology;
- (3) development of effective State programs;
- (4) notification by hazardous waste generators, transporters, and treatment, storage, or disposal facilities;
- (5) implementation of the manifest system;
- (6) enforcement of interim facility standards;
- (7) permitting of treatment, storage, and disposal facilities;
- (8) compliance monitoring and enforcement.

The RCRA Implementation Calendar on page 13 shows the timing of implementation activities.

IMPLEMENTATION BEGINS WITH HAZARDOUS WASTE IDENTIFICATION AND LISTING

The Section 3001 regulation identifies and lists those solid wastes which are considered hazardous and subject to regulation under Subtitle C. Generally, a waste is considered hazardous if, when improperly treated, stored, transported, disposed of, or otherwise managed, it may cause or contribute to an increase in mortality or serious illness or pose a substantial hazard to human health or the environment.

In addition to defining what is a hazardous waste and what is not, this regulation sets forth the criteria EPA will use to identify and list hazardous wastes. EPA will list a solid waste as a hazardous waste if it possesses the characteristics of ignitability, corrosivity, reactivity, or toxicity defined in the regulation. The regulations also include tests which waste generators, treaters, storers, and disposers can use to identify other wastes which are hazardous but not listed as such.

Commercial establishments generating relatively small volumes of hazardous wastes will not be regulated at first, so that EPA can focus on the most serious situations. With certain exceptions for more hazardous materials, the regulation excludes generators of less than 1000 kilograms of waste per 30-day period. Between two and five years after promulgation, EPA will revise the exclusion to reduce the 1000 kilogram limit to 100 kilograms.

The regulation also includes a "delisting" strategy, under which a specific firm in any sector of industry can demonstrate that its specific waste is not hazardous and should therefore be exempt from regulation. To have its waste removed from EPA's list of hazardous wastes, the firm must submit results of a demonstration showing that the waste does not possess the characteristics contained in the regulation.

EPA's strategy is to start with a limited list of waste streams and hazardous waste tests, and then expand and refine the lists and tests to include the findings of the research program. The anticipated increase in the types of waste regulated by the program will not affect the resource requirements set out in this document.

RESEARCH WILL IMPROVE THE REGULATORY NETWORK

RCRA provides for research to ensure development of additional knowledge and the technology required to deal with hazardous waste problems. EPA's research program, funded at \$24 million

in FY 1981, concentrates on the development of technologies, methodologies, and the scientific data base necessary to achieve environmentally acceptable, cost-effective hazardous waste management (generation through ultimate disposal). The Agency will revise the Subtitle C regulations to incorporate this knowledge as it is obtained.

EPA's Office of Research and Development consulted with the Office of Solid Waste, which has general responsibility for RCRA, to develop three sets of research areas. The first set encompasses short-term, high-priority activities going on now or scheduled to start during this fiscal year. Among current studies are a mobile incinerator, remedial measures for "quick fixes" at uncontrolled dump sites, and a quick indicator test for predicting how contaminants move from a land disposal site into potential sources of drinking water.

Another major output of the 1980-81 research and development program is the development and publication of guidance manuals for the implementation of the Subtitle C regulations. The following manuals will be produced incorporating research results and data: containment; chemical fixation of wastes; liner performance and design; leachate collection; waste and leaching modification; landfill closure procedures; volatile emissions from landfills; prediction of pollution migration in soils; and procedures for conducting incinerator test burns. EPA also will conduct training programs in the use of manuals to help State and regional office permit writers.

During fiscal year 1983 and 1984, EPA's research will examine new ways to sample and analyze wastes. EPA will produce several guidance manuals as well as new equipment for controlling wastes and the by-products of their disposal.

The prognosis after 1985 is for projects considered less urgent than those previously mentioned or those requiring extensive study; for example, continued examination of health effects and of the mechanisms by which waste by-products enter the environment.

AUTHORIZED STATES WILL IMPLEMENT SUBTITLE C

RCRA allows EPA to grant authorization to States to carry out hazardous waste management programs which are equivalent to the federal program. EPA may also grant States interim authorization for up to two years to carry out substantially equivalent hazardous waste programs. The period of interim authorization is intended to provide States with time to develop programs able to receive full authorization. EPA's policy is to encourage maximum State participation.

In establishing the requirements for interim authorization, EPA had to balance a number of somewhat competing interests, including the desire to promote uniform State programs as quickly as possible and the desire not to disrupt existing State efforts through the imposition of separate and parallel federal requirements.

Interim authorization will have two phases, corresponding to the sequenced promulgation of the federal regulations. Phase I will cover generator and transporter requirements and interim facility standards. Phase II will cover permitting of hazardous waste treatment, storage, and disposal facilities. EPA believes the two phases are integral parts of a complete State hazardous waste program; the Agency does not intend to provide authorization for only one phase since it views interim authorization as a stage leading toward full authorization.

States may receive interim authorization for Phase I beginning on the effective date of the initial Section 3001-3005 regulations, expected to be November 1980. States may receive interim authorization for Phase II during the nine months after the Phase II Section 3004 regulation is promulgated in late 1980. In order to give States the full two-year period that Congress intended be available to develop final programs, interim authorization for both phases may continue for 24 months from the effective date of the Phase II Section 3004 regulation. At the end of this period, by June 1983, all interim authorizations will automatically expire and EPA will administer the federal program in any State which has not received full authorization.

EPA will also enter into cooperative agreements with States which do not qualify for authorization during the interim stage. Under this arrangement, the State would be responsible for administering some portions of the federal hazardous waste program, while EPA would operate the remainder.

Working with States to help them develop equivalent hazardous waste programs is one of EPA's highest priorities in 1980 and 1981. With this assistance, 35 States and Territories should have interim authorization by September 1981 and full authorization by July 1983. With heavy regional office involvement, the remaining 21 should develop equivalent programs and receive authorization by July 1983.

EPA will support State efforts to develop acceptable programs by providing technical, legal, and administrative assistance. As State programs begin to function, EPA will work closely with the States to assure that the programs meet its standards. After authorization, EPA will oversee approved programs to assure that they are consistent with national policies and effective.

RCRA provides financial assistance to States for developing, implementing, and enforcing programs to control the transportation, treatment, storage, and disposal of hazardous wastes. To be eligible for hazardous waste management grants, State programs must be capable of receiving authorization under Subtitle C. Grants are awarded by a formula which takes into account a State's population, land area, number of hazardous waste generators, and amount of hazardous waste.

In FY 1979, EPA awarded \$14.5 million in financial assistance to States which showed a good faith effort in developing a hazardous waste program substantially equivalent to the federal program. EPA expects to award hazardous waste grants totalling \$18.6 million in FY 1980 and \$30.0 million in FY 1981.

WASTE HANDLERS MUST NOTIFY EPA

RCRA requires every federal agency or person who generates or transports hazardous waste or who owns or operates a facility for the treatment, storage, or disposal of hazardous waste to file a notification of hazardous waste activity with the Agency. The notification must identify the hazardous waste handled, and the location and general description of the activity. Persons and federal agencies who complete this form and file it with the appropriate EPA Regional Administrator will satisfy their statutory obligation to give notification. Any person who transports, treats, stores, or disposes of hazardous waste without filing a notification of hazardous waste activity is subject to the civil and criminal penalties of Section 3008 of RCRA.

EPA has identified a list of over 400,000 firms--generators, transporters, and treatment, storage, and disposal facilities--involved in handling waste which may be classified as hazardous under RCRA. EPA is sending these firms packages explaining the RCRA program and containing a notification form to be completed and returned to EPA. After EPA receives the notification form indicating that the firm is engaged in a hazardous waste activity, EPA will issue an identification number.

Firms or federal agencies which receive no initial notification package from EPA, but which are now engaged in or later become engaged in hazardous waste activities, are also responsible for filing the notification form with EPA. The information on the notification forms will supply EPA with an initial description of the hazardous waste activities being conducted.

In addition to filing notifications, all treatment, storage, and disposal facilities must also apply for a hazardous waste permit. Existing facilities which file notification and apply

for a permit will be granted interim status so they can operate until their permit application is processed.

THE MANIFEST SYSTEM WILL ALLOW EPA TO TRACK WASTES

After any firm notifies EPA that it is engaged in hazardous waste activities, it must use a manifest system (the only exception being generators which dispose of their waste at the location where it is generated). The manifest system is the mechanism which tracks hazardous waste from "cradle to grave"-- that is, from the generator to the point of ultimate disposition, e.g., the disposal site. Businesses may use any appropriate manifest form, so long as the form provides the information required by EPA. Copies of the manifest must be signed and retained by all who handle the waste, and the final recipient must send the original back to the generator confirming delivery. It is the generator's responsibility to investigate cases in which no confirmation is received and to inform EPA of instances of missing waste. It is the receiving facility's responsibility to ensure that any waste shipment it receives matches with that specified on the manifest. The system is designed to operate with a minimum of interference with normal business practice, and to operate independently of EPA unless waste is reported missing. The aims are to create a record, to ensure tracking and management, and to minimize government involvement.

The manifest system to control shipments of hazardous waste is a major feature of the federal program. Eventually, a manifest system meeting federal standards will be used in all States. However, for the first few years of the program, States may continue to operate their own tracking systems.

INTERIM FACILITY STANDARDS BEGIN PHASE I REGULATION

In April 1980 EPA will publish the Phase I Section 3004 regulation which imposes the first set of standards on owners and operators of treatment, storage, and disposal facilities. When this regulation takes effect in November 1980, existing treatment, storage, and disposal facilities will be required to comply with the interim standards. The Phase II Section 3004 to be published in November 1980 will set forth additional technical standards for permitting treatment, storages or disposal facilities.

Interim facility standards apply and are enforceable until the facility receives its operating permit. The objective of the interim standards is to ensure that facilities function in an environmentally sound manner until the facility can be examined carefully during the permitting process. Interim standards require the following: compliance with the manifest system; preparedness for and prevention of discharges of hazardous

waste; preparation for closure; groundwater monitoring; security to prevent unauthorized access to the facility; training of personnel; and inspection, monitoring, recordkeeping, and reporting.

PERMITS WILL BE REQUIRED OF OPERATING FACILITIES

RCRA requires all treatment, storage, and disposal facilities to obtain permits. These permits are only granted to facilities which qualify under the RCRA regulations. Operating facilities failing to qualify must close down or upgrade. New facilities not qualifying will not be allowed to begin operations.

The permit process will be implemented over several years, beginning in May 1981, when the Phase II Section 3004 regulation become effective. Top priority will go to two types of facility. To reduce the number of dangerous sites, EPA will focus on facilities causing the most severe problems. To ensure that adequate disposal capacity is available, EPA will focus on new facilities. Generally, these priorities will result first in examination of waste treaters and disposers receiving waste transported from a generator at a different site, then generators who dispose of their own waste at their own location, and finally storers of waste generated by others.

Since the technology to contain or destroy many hazardous wastes is still developing, the first permits issued will be based on "best engineering judgment." EPA or an authorized State will issue a permit to any facility that uses the best available technology. As technologies evolve, EPA will translate them into more stringent standards for facilities to meet. This revision of permits to incorporate new technology will ensure the continual upgrading of facilities.

MONITORING AND ENFORCEMENT WILL ASSURE COMPLIANCE

To ensure compliance with RCRA, enforcement activities will be conducted at the State, regional, and national levels. These activities will be directed toward ensuring that all program components are implemented properly and toward prosecuting violators for failure to comply. Thus, the initial enforcement emphasis will be on ensuring the identification of businesses which have failed to notify EPA of their hazardous waste activities, and move on to ensuring compliance with the manifest system and operating standards. Once facilities have received permits, major emphasis will be placed on ensuring that these facilities are complying with permit requirements.

* * * * *

The relative timing of the activities discussed in this chapter is summarized in the RCRA Calendar on the next page.

RCRA Implementation Calendar

Months from Promulgation

-----0-----6-----18-----30-----42-----54-----66

Promulgation	x
Notification	-----x
Regulations Effective	x-----
Phase II Regulations	x
Interim Authorization	x-----x
Full Authorization	x-----
Manifest System	x-----
Phase I Permits	x---x
Phase II Permits	x-----
Permits Enforcement	x-----

Research -----

-----FY80-----FY81-----FY82-----FY83-----FY84-----FY85-----

079 Jn80 080 Jn81 081 Jn82 082 Jn83 083 Jn84 084 Jn85

III. STATE ACTIVITIES AND PRICING

Congress intended for States to implement much of the Subtitle C hazardous waste program. From FY 1980 to FY 1986, effective State hazardous waste programs will carry out four key activities: program administration, operation of the manifest system, processing of permits, and enforcement. Program administration includes three efforts which should be completed by FY 1983, namely, development of legislation and regulations, application for interim and final authorization, and development of program policy and procedures.

The level of resources required to conduct these activities in any State depends on the likelihood that the State will receive interim authorization and the complexity of hazardous waste management in the State. We categorized the States according to each standard.

To group States with regard to the likelihood of interim authorization, we asked the regional offices for their assessment of State program status. The data fell in four categories. Category I includes the 8 States that the regions expect to receive interim authorization in November 1980; category II includes the 22 States expected to receive interim authorization by May 1981; category III includes the 5 States expected to receive interim authorization by September 1981; and category IV includes the 21 States not expected to receive interim authorization at all. Table 1 on page 16 contains our assumptions regarding interim authorization.

To categorize the complexity of hazardous waste management in each State, we used the hazardous waste management grant formula contained in 40 CFR 35.706-2 and printed in the Federal Register on September 25, 1978. The grant formula takes into account four factors: 1) the ratio of State population to national population (40 percent); 2) the ratio of the amount of hazardous waste generated in the State to the amount generated nationally (40 percent); 3) the ratio of the number of generators of hazardous waste in the State to the number of generators nationally (15 percent); and 4) the ratio of State and area to national land area (5 percent).

To develop size categories, we placed the States in rank order based on their ratios in the grant allocation formula. The data fell in five clusters. Category A includes the 16 States receiving one-half of one percent of the total sums available; category B includes the 7 States receiving between .55 and .68 percent of the sums available; category C includes the 14 States receiving between .86 and 1.56 percent; category D includes the

TABLE 1

Assumptions Regarding Interim Authorization*

Category I. The regions expect 8 States to receive interim authorization in November 1980.

Regions:	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>
States:	RI VT	-	-	-	MN WI	-	IA KS MO	-	CA	-

Category II. The regions expect 22 States to receive interim authorization by May 1981.

Regions:	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>
States:	CT ME MA NH	NJ NY PR	MD DC VA	AL GA MS NC SC TN	IL MI	AR LA	-	MT UT	-	-

Category III. The regions expect 5 States to receive interim authorization by September 1981.

Regions:	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>
States:	-	-	PA	-	-	-	-	-	AZ GU	OR WA

Category IV. The regions do not expect 21 States to receive interim authorization at all.

Regions:	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>
States:	-	VI	DE WV	FL KY	IN OH	OK NM TX	NB	CO ND SD WY	AS HI NV NMI	AK ID

*The table is based on data received from the regions in March 1980. The assumptions in the table are for budget planning purposes only and do not represent policy decisions by EPA on how it will use its resources. The Agency expects the data to change periodically until all States receive authorization.

12 States receiving between 1.7 percent and 3.28 percent; and category E includes the 7 States receiving between 4.1 percent and 10 percent. Table 2 on page 18 contains our assumptions regarding relative State program size. Table 3 on page combines tables 1 and 2 and displays our assumptions regarding both interim authorization and State program size.

To determine the proportion of resources required to conduct activities dependent on State complexity, we compared the median grant ratios from each category. As shown below, resources required vary considerably, with the largest States requiring over twelve times the resources needed by the smallest States to conduct the same activities.

<u>Size Category</u>	<u>Grant Ratio</u>	<u>Number of States</u>	<u>Multiplier</u>
A	.00500 - .00501	16	.25
B	.00554 - .00684	7	.3
C	.00861 - .01560	14	.6
D	.01704 - .03280	12	1.0
E	.04096 - .09977	7	3.0

Beginning on page 20, we define each key activity by describing related subactivities and tasks, estimate the resources needed to perform each activity, then list our assumptions about the timing of the key activity and the workyears required to carry it out.

TABLE 2
Relative State Program Size*

REGION	STATE	PROGRAM SIZE	REGION	STATE	PROGRAM SIZE
I	Connecticut	C	VI	Arkansas	B
	Maine	A		Louisiana	D
	Massachusetts	D		New Mexico	A
	New Hampshire	A		Oklahoma	C
	Rhode Island	B		Texas	E
	Vermont	A			
II	New Jersey	D	VII	Iowa	C
	New York	E		Kansas	C
	Puerto Rico	B		Missouri	C
	Virgin Islands	A		Nebraska	A
III	Delaware	A	VIII	Colorado	C
	Maryland	C		Montana	B
	Pennsylvania	E		North Dakota	A
	Virginia	C		South Dakota	A
	District of Columbia	A		Utah	B
	West Virginia	D		Wyoming	A
IV	Alabama	D	IX	American Samoa	A
	Florida	D		Arizona	C
	Georgia	D		California	E
	Kentucky	D		Guam	A
	Mississippi	B		Hawaii	A
	North Carolina	D		Nevada	A
	South Carolina	C		Northern Marianas	A
	Tennessee	D			
V	Illinois	E	X	Alaska	C
	Indiana	D		Idaho	B
	Michigan	E		Oregon	C
	Minnesota	C		Washington	C
	Ohio	E			
	Wisconsin	D			

*We estimated State program size using the hazardous waste management grant formula contained in 40 CFR 35.706-2. The formula is based on relative population (40 percent); relative amounts of hazardous waste generated (40 percent); relative number of generators of hazardous waste (15 percent); and relative land area (5 percent).

To develop size categories, we placed the States in rank order based on the grant allocation formula ratio. The data fell in five clusters, which we have labeled "A," the smallest, through "E," the largest.

TABLE 3

Assumptions Regarding Both Interim Authorization
and State Program Size*

State Size Category	Interim Authorization Category				Total	
	I	II	III	IV		
A	VT	ME NH DC	GU	VI DE NM ND SD WY	NB NV HI AS NMI	16
B	RI	PR AR MT UT MS	-	ID		7
C	MN IA KS MO	CT MD VA SC	AZ OR WA	OK CO AK		14
D	WI	MA NJ AL GA NC TN LA	-	WV FL KY IN		12
E	CA	NY IL MI	PA	OH TX		7
TOTAL	8	22	5	21		56

*The table is based on data received from regions in March 1980. The assumptions in the table are for budget planning purposes only and do not represent policy decisions by EPA on how it will use its resources. The Agency expects the data to change periodically until all States receive authorization.

STATE PROGRAM ADMINISTRATION

State program administration includes five major activities. These are development of legislation and regulations; development of authorization applications; development of an acceptable hazardous waste program; negotiation of a hazardous waste grant; and program management.

States Require Additional Legislation and Regulations

Several States have drafted enabling legislation and regulations in anticipation of the Subtitle C regulations, while other States have waited to see the final requirements before beginning work. The Office of Solid Waste recently assessed the status of State legislation and regulations. They concluded that every State required some additional legislation and/or regulation to establish the authority and capability for operating hazardous waste programs fully equivalent to the federal program.

Each State will conduct the same general activities and tasks to develop and improve its legislation and regulations:

1. Develop State legislation
 - a. Review federal legislation
 - b. Review model State legislation
 - c. Draft legislation
 - d. Work for passage of legislation
2. Develop State regulations
 - a. Review federal regulations
 - b. Draft regulations
 - c. Work for promulgation of regulations
 - d. Assure public participation

Pricing for this key activity depends on the likelihood that a State will receive interim authorization. (See Table 1 on page 16 for our assumptions regarding interim authorization.) The following is a list of our assumptions and estimates relating to State development of legislation and regulations.

- Category I, II, and III States have each invested 2 workyears of effort in FY 1980 to develop legislation and regulations.
- The 8 category I States will work on legislation and regulations for authorization beginning with promulgation, but most activity will occur during FY 82 and 83. Each State will require a total of two workyears of effort to

modify legislation and regulations to qualify for authorization.

- The 22 category II States will work on legislation and regulations for interim authorization beginning with promulgation, but most activity will occur during FY 81. Each State will require two workyears of effort to prepare for interim authorization. They will work on authorization primarily during FY 82 and 83, expending two additional workyears.
- The 5 category III States will work on legislation and regulations for interim authorization primarily during FY 81, investing three workyears. They will work on authorization during FY 82 and 83, expending two additional workyears over both years.
- The 21 category IV States will not receive interim authorization. They will work on legislation and regulations for authorization during FY 81-83. Each State will require one workyear in FY 81 and two workyears in both FY 82 and FY 83 to qualify for authorization.

The following table summarizes the State workyears required for developing legislation and regulations.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total Workyears</u>
Category I					
interim.....	16	-	-	-	16
final.....	-	-	8	8	16
Category II					
interim.....	44	44	-	-	88
final.....	-	-	22	22	44
Category III					
interim.....	10	15	-	-	25
final.....	-	-	5	5	10
Category IV					
interim.....	-	-	-	-	-
final.....	-	21	42	42	105
Legislation/ Regulation Workyears	70	80	77	77	304
interim.....	70	59	-	-	129
final.....	-	21	77	77	175

Each State Must Develop Authorization Applications

To receive interim authorization or full authorization, each State must demonstrate that its program meets the requirements of the federal regulations. The State shows that its program is adequate in its applications for authorization.

The activities and tasks related to developing authorization include the following:

1. Apply for interim authorization
 - a. Review EPA conditions for interim authorization
 - b. Review legislation and regulations
 - c. Prepare authorization application
2. Negotiate interim authorization
 - a. Meet with EPA to review application
 - b. Meet with regulated community
 - c. Revise application if necessary
 - d. Negotiate memorandum of agreement
 - e. Present Phase II program to EPA
3. Apply for authorization
 - a. Review EPA conditions for final authorization
 - b. Review legislation, regulations
 - c. Prepare authorization application
4. Negotiate authorization
 - a. Meet with EPA to review interim performance and application
 - b. Negotiate memorandum of agreement

We based our pricing for this key activity on our assessment of each State's likelihood of receiving interim authorization and the experience of other programs in processing applications for program delegations.

The following is a list of our assumptions and estimates relating to development of the authorization applications.

- The 8 category I States will apply for Phase I interim authorization in November 1980, Phase II interim authorization in April 1981, and authorization by June 1983. Each State will require one-half workyear to prepare the applications for interim or final authorization.
- The 22 category II States will not apply for Phase I authorization separately, but they will apply for Phase II authorization by May 1981 and authorization by June 1983. Each State will require one-half workyear to prepare the applications for interim or final authorization.
- The 5 category III States will apply for Phase II interim authorization by September 1981 and authorization by June 1983. Each State will require one-half workyear to prepare the applications for interim or final authorization.
- The 21 category IV States will not apply for interim authorization. They will apply for authorization in June 1983, after investing one-half workyear in preparing the application.

The following table summarizes the State workyears required for developing authorization applications.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total Workyears</u>
Category I	-	8	-	4	12
Category II	-	11	-	11	22
Category III	-	2.5	-	2.5	5
Category IV	-	-	-	<u>10.5</u>	<u>10.5</u>
Authorization Application Workyears	-	21.5	-	28	49.5

Each State Must Develop an Acceptable
Hazardous Waste Program

Each State must convert enabling legislation and regulations into an effective hazardous waste program. The activities involved typically are "front end" efforts relating to strategy formulation and capacity expansion. After the initial program development period from FY 1979 to FY 1983, any continuing activities in this area would become part of general program administration.

The State activities and tasks related to program development include the following:

1. Hire and train staff
2. Develop State specific program strategies
 - a. Review data collected on State needs for hazardous waste program
 - b. Consider alternative strategies to meet State needs and Federal guidance
 - c. Develop preferred strategy
 - d. Consult with regional office
3. Prepare program procedures
 - a. Review federal guidance
 - b. Draft operating procedures and review with regional office personnel
 - c. Prepare State hazardous waste management plan (Subtitle D)
 - d. Establish hazardous waste program including manifest and permit procedures
4. Develop public participation procedures
 - a. Plan procedures to inform public of hazardous waste
 - b. Determine need for and location of hearings
 - c. Schedule and plan agenda for hearings
 - d. Plan procedures for using public comments
5. Develop ADP or other information system
 - a. Work with regional office to adapt ADP system to State needs
 - b. Implement system

We assume that these activities will require 1 workyear each year in each of the 16 category A States, 1.2 workyears in each of the 7 category B States, 2.4 workyears in each of the 14 category C States, 4 workyears in each of the 12 category D States, and 12 workyears in each of the 7 category E states. These activities will end by FY 1983.

The following table summarizes the State workyears for program development.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total Workyears</u>
Category A	16	16	16	16	64
Category B	8.4	8.4	8.4	8.4	33.6
Category C	33.6	33.6	33.6	33.6	134.4
Category D	48	48	48	48	192
Category E	<u>84</u>	<u>84</u>	<u>84</u>	<u>84</u>	<u>336</u>
Program Development Workyears	190	190	190	190	760

Each State Will Be Eligible for
a Hazardous Waste Grant Each Year

Financial assistance is available to all States which show good faith in developing and implementing a hazardous waste management program substantially equivalent to the federal program. Each State will be eligible for a hazardous waste grant each year.

The State activities and tasks related to grant negotiation and award include the following:

1. Apply for grant
 - a. Review EPA conditions for hazardous waste grants
 - b. Prepare initial application
2. Negotiate/award grant
 - a. Meet with EPA at State offices to discuss program and grant
 - b. Coordinate with other SEA programs
 - c. Make final application

3. Administer grant

- a. Process grant funds
- b. Prepare progress reports
- c. Participate in review meetings

We based our pricing for this key activity on OSW's estimates of time required to negotiate hazardous waste grants in FY 79 and 80. According to those estimates, each State will require 0.5 workyears to apply for and negotiate grants and receive awards.

The following table shows the State workyears required for negotiating grants.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Grant							
Negotiation							
Workyears:	28	28	28	28	28	28	168

The States Must Manage Their Programs

Program administration includes day to day management of the hazardous waste management activities and special problem solving.

1. Manage program (generally)

- a. Conduct and attend meetings
- b. Receive visitors
- c. Respond to inquiries
- d. Maintain correspondence
- e. Hire and develop staff

2. Manage contracts

- a. Issue requests for proposals
- b. Review proposals
- c. Review technical aspects of contracts
- d. Manage financial aspects of contracts

3. Manage budget system

- a. Develop budget and justification consistent with State budgeting procedures
- b. Manage budget

4. Evaluate personnel and program performance

- a. Identify performance objectives
- b. Review performance with State personnel
- c. Review State progress with regional office
- d. Recommend rewards and sanctions

5. Conduct public awareness activities
 - a. Identify appropriate media
 - b. Issue press releases, hold meetings, etc.
6. Maintain ADP system
 - a. Modify design and program as needs change
 - b. Input data and run reports
7. Provide support services
 - a. Provide maintenance, housekeeping, communications services
 - b. Provide laboratory services

We based our pricing for this key activity on the categorizations by State size (see Table 3). The following is a list of our assumptions and estimates relating to program administration:

<u>Size Category</u>	<u>No. States</u>	<u>Workyears per State</u>		
		<u>FY80</u>	<u>FY81-82</u>	<u>FY83-85</u>
A	16	.9	1.25	2.5
B	7	1.0	1.5	3.
C	14	2.0	3.	6.
D	12	3.3	5.	10.
E	7	10.	15.	30.

The next table summarizes the State workyears for program management.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Program Management Workyears	159.7	237.5	237.5	475	475	475	2059.7

Table 4 summarizes the five activities that make up program administration.

TABLE 4
Total State Workyears for Program Administration

<u>Activity</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Legislation/ Regulations	70	80	77	77	-	-	304
Authorization Applications	-	21.5	-	28	-	-	49.5
Program Development	190	190	190	190	-	-	760.
Grants	28	28	28	28	28	28	168
Program Management	<u>159.7</u>	<u>237.5</u>	<u>237.3</u>	<u>475</u>	<u>475</u>	<u>475</u>	<u>2059.7</u>
Total Workyears	447.7	557.0	532.3	798	503	503	3341.7

THE MANIFEST SYSTEM IS A MAJOR IMPLEMENTATION ACTIVITY

The manifest system is the process for tracking hazardous wastes from generation to the point of ultimate disposition, e.g., disposal. The system is a required part of all authorized programs, although it is an optional part of a state program under interim authorization. Activities included here relate only to operation of the manifest system. Development of strategy and procedures is included in "program development"; enforcement is under its own activity.

The State activities and tasks related to the manifest system include:

1. Provide technical assistance to generators, transporters, and owners/operators of treatment, storage, or disposal facilities (TSDFs).

2. Review reports

- a. Receive exception reports
- b. Receive annual reports
- c. Process for ADP system
- d. Review ADP reports and forward summary reports to regional office
- e. Evaluate data
- f. Respond to discrepancies (shared with enforcement)

The following is a list of our assumptions and estimates relating to the manifest system:

- Each State in category I and II will begin implementing a manifest system in November 1980. EPA will operate the manifest system in category III States from November 1980 until September 1981. EPA will operate the manifest system in category IV States from November 1980 until those States receive final authorization in June 1983.
- Exception reports are processed by hand or computer. Reports are generated and forwarded to Enforcement for setting enforcement priorities.

We estimated the prices for the manifest system based on State size:

<u>Size Category</u>	<u>Price</u>
A	1
B	1
C	2
D	3
E	9

Table 5 summarizes the State workyears required for the manifest system.

Table 5
State Workyears for the Manifest System

	<u>Cat.</u>	<u># States</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total Workyears</u>
I	A	1	1	1	1	1	1	5
	B	1	1	1	1	1	1	5
	C	4	8	8	8	8	8	40
	D	1	3	3	3	3	3	15
	E	1	9	9	9	9	9	45
	Subtotal		22	22	22	22	22	110
II	A	3	3	3	3	3	3	15
	B	5	5	5	5	5	5	25
	C	4	8	8	8	8	8	40
	D	7	21	21	21	21	21	105
	E	3	27	27	27	27	27	135
	Subtotal		64	64	64	64	64	320
III	A	1	1	1	1	1	1	5
	B	-	-	-	-	-	-	-
	C	3	6	6	6	6	6	30
	D	-	-	-	-	-	-	-
	E	1	9	9	9	9	9	45
	Subtotal		16	16	16	16	16	80
IV	A	11	-	-	11	11	11	33
	B	1	-	-	1	1	1	3
	C	3	-	-	6	6	6	18
	D	4	-	-	12	12	12	36
	E	2	-	-	18	18	18	54
	Subtotal		0	0	48	48	48	144
Total Workyears			102	102	150	150	150	654

AUTHORIZED STATES WILL PROCESS PERMITS

After the Phase II Section 3004 regulation (facility permitting) becomes effective in May 1981, all hazardous waste treatment, storage, and disposal facilities must obtain permits to continue or begin operation. RCRA permits are a mechanism for controlling hazardous waste by imposing performance standards on all such facilities. The Agency currently estimates that some 30,000 sites will require permits. We expect to have better information on numbers, types, and location of these sites after the notification process is completed in summer 1980.

Permits will be issued for three general types of facilities, off-site treatment and disposal facilities, on-site treatment and disposal facilities, and off-site storage facilities. Evaluating the performance of off-site treatment and disposal facilities is the highest priority, because of the need to assure adequate capacity for proper waste disposal and because these facilities are the most likely to cause severe environmental problems. Second priority is on-site treatment and disposal facilities, again because of the possibility of environmental problems.

The State activities and tasks related to processing permits include the following:

1. Provide assistance to applicants
2. Receive and review applications
3. Conduct site evaluation
4. Analyze air, water, or soil samples as necessary
5. Issue draft permit and fact sheet or statement of the basis for permit determination
6. Open comment period and hold public hearings
7. Process final permit
8. Conduct further proceedings if necessary

The following is a list of our assumptions relating to State processing of permits.

- Each off-site treatment and disposal facility permit requires 177 workdays of effort by State personnel.
- Each on-site treatment and disposal facility permit requires 119 workdays of effort by State personnel.

- Each off-site storage facility permit requires 47 workdays of effort by State personnel.
- Starting in June 1981, the 30 States in categories I and II will begin processing permits. In September 1981 an additional 5 States from category III will begin processing their permits with EPA assistance.
- EPA will begin processing the permits in the 21 unauthorized States (category IV) from June 1981 through May 1983. In June 1983, these 21 States will receive authorization and will begin issuing the remaining permits.
- All remaining permits will be issued in FY 1986.

The next tabulation summarizes our pricing estimates. They depend both on authorization category and size category.

<u>State Category</u>	<u>No. States</u>	<u>Price in Workyears</u>			
		<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83-85</u>
I, II, III A	5	-	2.8	12.5	12.5
B	6	-	3.3	15.	15
C	11	-	6.7	30.	30
D	8	-	11.1	50.	50
E	5	-	33.3	150.	150
IV A	11	-	-	-	12.5
B	1	-	-	-	15
C	3	-	-	-	30
D	4	-	-	-	50
E	2	-	-	-	150

Table 6 summarizes the results of our calculations.

Table 6

<u>State Workyears Required to Process Permits</u>							
	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Category I, II, III	-	363	1,632.5	1,632.5	1,632.5	1,632.5	6,893
Category IV	-	-	-	742.5	742.5	742.5	2,227.5
Total Workyears	-	363	1,632.5	2,375.0	2,375.0	2,375.0	9,120.5

AUTHORIZED STATES WILL ENFORCE THE PROGRAM

Each State must ensure compliance with manifest, permit and reporting requirements. Enforcement against reporting and manifest violations will begin in November 1980; before June 1981, States will not enforce against permit violation but instead against interim status standards for facilities. As permits are issued (beginning in June 1981), States will begin enforcing against permit violations.

The State activities and tasks related to enforcement include the following.

1. Manifest enforcement (against generators)
 - a. Review exception reports
 - b. Issue notices of warning
 - c. Issue notices of violation
 - d. Issue compliance orders
 - e. Follow-up compliance evaluation inspections
2. Generator enforcement (affirmative inspections)
 - a. Perform compliance evaluation inspections of high priority generators identified from exception report (site visit)
 - b. Conduct compliance evaluation inspections of off-site facilities with significant discrepancies
 - c. Issue notices of warning
 - d. Issue notices of violation
 - e. Issue compliance orders
 - f. Follow-up affirmative inspections
3. TSD facility enforcement (interim status and permit violations)
 - a. Conduct compliance evaluation inspections of facilities
 - b. Issue notices of warning
 - c. Issue notices of violation
 - d. Issue compliance orders
 - f. Follow-up inspection
 - e. Prepare case, if necessary
4. Generator and facility annual reports
 - a. Review reports
 - b. Follow up to assure completeness and accuracy
 - c. Identify non-notifiers

- d. Issue notices of warning
- e. Issue notices of violation
- f. Issue compliance orders
- g. Follow-up compliance evaluation inspections

The following is a list of our assumptions and pricing related to State efforts to assure compliance.

- Category I, II, and III States will begin compliance activities in FY 80. Category IV States will begin in FY 83.
- The 16 States in category A will require 2 workyears each year to carry out a complete compliance assurance program; the 7 States in category B will require 3 workyears; the 14 States in category C will require 6 workyears; the 12 States in category D will require 10 workyears; and the 7 States in category E will require 24 workyears.

Table 7

State Workyears Required to Assure Compliance

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total Workyears</u>
I, II, III							
A	10	10	10	10	10	10	60
B	18	18	18	18	18	18	108
C	66	66	66	66	66	66	396
D	80	80	80	80	80	80	480
E	120	120	120	120	120	120	720
IV							
A	-	-	-	22	22	22	66
B	-	-	-	3	3	3	9
C	-	-	-	18	18	18	54
D	-	-	-	40	40	40	120
E	-	-	-	48	48	48	144
Total Workyears	294	294	294	425	425	425	2,157

* * * * *

The following two tables summarize the information on State workyears required to implement Subtitle C. Table 8 on page 35 summarizes the total State workyears required by fiscal year activity. Table 9 on pages 36-7 shows the workyear estimates by State. We have included the State-by-State totals only to show how we derived the resource estimates; EPA will not use these estimates in assessing State programs for authorization.

TABLE 8

Total State Workyears Required To Implement Subtitle C*

		<u>WORKYEARS REQUIRED</u>						
	<u>STATE ACTIVITY</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL</u>
	A. Administer program.....	447.7	557.0	532.3	798	503	503	3341
	B. Operate manifest system..	-	102	102	150	150	150	654
	C. Issue permits.....	-	363	1632.5	2375	2375	2375	9,120.5
3	D. Assure compliance.....	294	294	294	425	425	425	2157
	TOTAL.....	741.7	1,316.	2560.8	3,748	3453	3453	15,272.5

* These figures are based on the timing and pricing factors in the ORIA.

TABLE 9
Total State Workyears, By State*

State	Category		FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	TOTAL
	Auth	Size							
Alabama	II	D	19.9	36.1	73.5	73.5	73.5	73.5	355.5
Alaska	IV	C	4.9	6.9	7.9	49.1	44.5	44.5	157.8
American Samoa	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Arizona	III	C	12.9	24.0	44.9	48.4	44.5	44.5	219.2
Arkansas	II	B	7.7	13.0	23.2	25.2	22.5	22.5	114.1
California	I	E	48.5	94.9	208.5	227.0	213.5	213.5	1,005.9
Colorado	IV	C	4.9	6.9	7.9	49.1	44.5	44.5	157.8
Connecticut	II	C	12.9	23.1	44.9	48.4	44.5	44.5	218.3
Delaware	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
District of Columbia	II	A	6.4	11.1	19.2	16.0	18.5	18.5	89.7
Florida	IV	D	7.8	10.5	11.5	80.0	73.5	73.5	256.8
Georgia	II	D	19.9	36.1	73.5	80.0	73.5	73.5	355.5
Guam	III	A	6.4	12.0	19.2	16.0	18.5	18.5	90.6
Hawaii	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Idaho	IV	D	2.7	4.2	5.2	26.2	22.5	22.5	83.3
Illinois	II	E	48.5	96.4	211.5	227.0	213.5	213.5	1,010.4
Indiana	IV	D	7.8	10.5	11.5	80.0	73.5	73.5	256.8
Iowa	I	C	12.9	21.6	44.9	48.4	44.5	44.5	216.8
Kansas	I	C	12.9	21.6	44.9	48.4	44.5	44.5	216.8
Kentucky	IV	D	7.8	10.5	11.5	80.0	73.5	73.5	256.8
Louisiana	II	D	19.9	36.1	73.5	79.0	73.5	73.5	355.5
Maine	II	A	6.4	11.1	19.2	16.0	18.5	18.5	89.7
Maryland	II	C	12.9	23.1	44.9	48.4	44.5	44.5	218.3
Massachusetts	II	D	19.9	36.1	73.5	79.0	73.5	73.5	355.5
Michigan	II	E	48.5	96.4	211.5	227.0	213.5	213.5	1,010.4
Minnesota	I	C	12.9	21.6	44.9	48.4	44.5	44.5	216.8
Mississippi	II	B	7.7	13.0	23.2	25.2	22.5	22.5	114.1
Missouri	I	C	12.9	21.6	44.9	48.4	44.5	44.5	216.8
Montana	II	B	7.7	13.0	23.2	25.2	22.5	22.5	114.1

* These figures are presented only to give an idea about relative program size. EPA will not use these figures in assessing state programs for authorization.

TABLE 9
Total State Workyears (Con't.)

State	Category		FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	TOTAL
	Auth	Size							
Nebraska	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Nevada	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
New Hampshire	II	A	6.4	11.1	19.2	16.0	18.5	18.5	89.7
New Jersey	II	D	19.9	36.1	73.5	79.0	73.5	73.5	355.5
New Mexico	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
New York	II	E	48.5	96.4	211.5	227.0	213.5	213.5	1,010.4
Northern Marianas	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
North Carolina	II	D	19.9	36.1	73.5	79.0	73.5	73.5	355.5
North Dakota	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Ohio	IV	E	22.5	28.5	29.5	228.0	213.5	213.5	735.5
Oklahoma	IV	C	4.9	6.9	7.9	49.1	44.5	44.5	157.8
Oregon	III	C	12.9	24.0	44.9	48.4	44.5	44.5	219.2
Pennsylvania	III	E	48.5	97.4	211.5	227.0	213.5	213.5	1,011.4
Puerto Rico	II	D	7.7	13.0	23.2	16.0	22.5	22.5	114.1
Rhode Island	I	D	7.7	11.5	23.2	25.2	22.5	22.5	112.6
South Carolina	II	C	12.9	23.1	44.9	48.4	44.5	44.5	218.3
South Dakota	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Tennessee	II	D	19.9	36.1	73.5	79.0	73.5	73.5	355.5
Texas	IV	E	22.5	28.5	29.5	228.0	213.5	213.5	735.5
Utah	II	B	7.7	13.0	23.2	25.2	22.5	22.5	114.1
Vermont	I	A	6.4	9.6	19.2	16.0	18.5	18.5	88.2
Virginia	II	C	12.9	23.1	44.9	48.4	44.5	44.5	218.3
Virgin Islands	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0
Washington	III	C	12.9	24.0	44.9	48.4	44.5	44.5	219.2
West Virginia	IV	D	7.8	10.5	11.5	80.0	73.5	73.5	256.8
Wisconsin	I	D	19.8	34.6	73.5	79.0	73.5	73.5	353.9
Wyoming	IV	A	2.4	3.8	4.8	22.0	18.5	18.5	70.0

IV. REGIONAL OFFICE ACTIVITIES AND PRICING

Over the next several years, EPA regional offices will carry out most of the federal responsibilities in the hazardous waste management program. These responsibilities include assisting the States as they develop and implement hazardous waste programs, overseeing State activities, and implementing effective programs in States that have not received authorization.

Within the regions, three programs conduct most of the activities related to these responsibilities. These are the hazardous waste management program (abatement and control decision unit D210), the hazardous waste enforcement program (enforcement decision unit D305), and the hazardous waste permits issuance program (enforcement decision unit D310). On the following pages, we define each key activity conducted by these programs by describing related subactivities and tasks, then list our assumptions about the timing of the key activity and the workyears required to carry it out.

REGIONAL PROGRAM ADMINISTRATION

Program administration includes day-to-day management of the hazardous waste program and special problem solving. The activities and tasks related to program administration are conducted by each of the three regional decision units and include the following.

1. Hire and develop staff
 - a. Hire staff
 - b. Train staff
 - c. Maintain personnel records
2. Manage program (generally)
 - a. Conduct and attend meetings
 - b. Receive visitors
 - c. Respond to inquiries
 - d. Maintain correspondence
3. Manage contracts
 - a. Issue requests for proposals
 - b. Review proposals
 - c. Review technical aspects of contracts
 - d. Manage financial aspects of contracts

4. Manage budget system
 - a. Identify future workload using Agency analysis procedures
 - b. Determine resources required using Agency budget procedures
5. Evaluate personnel and program performance
 - a. Identify performance objectives
 - b. Review performance with regional office and State personnel
 - c. Recommend rewards and sanctions
6. Conduct public awareness activities
 - a. Identify appropriate media
 - b. Issue press releases, hold meetings, etc.
7. Maintain ADP system
 - a. Modify design and program as needs change
 - b. Input data and run reports
8. Provide support services
 - a. Provide maintenance, housekeeping, communications services
 - b. Provide laboratory services

Program administration will require 5 workyears per region, two each for the Management and Permits decision units (beginning in FY 1981 for Permits) and one for Enforcement.

Table 10

Regional Office Workyears for Program Administration

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)	20	20	20	20	20	20	120
Enforcement (D305)	10	10	10	10	10	10	60
Permits (D310)	0	20	20	20	20	20	100
Total Workyears:	30	50	50	50	50	50	280

THE REGIONS HELP STATES DEVELOP THEIR PROGRAMS

The EPA regions will work closely with the States to develop and strengthen their hazardous waste management programs to qualify for both interim authorization and full authorization. This assistance includes helping States to establish a base program that is fully equivalent to the federal hazardous waste program and to develop the application packages required for interim authorization. This activity is composed of four major tasks:

- o Assist development of legislation and regulations
- o Review state authorization applications
- o Develop a strategy for the State hazardous waste program
- o Assist State program development

In addition, the Regions will help the States at the beginning of the program to notify industrial hazardous waste generators, transporters, and disposers.

The Regions Help States Develop Legislation and Regulations

The regional office activities and tasks related to assisting States develop legislation and regulations are conducted in all three decision units and include the following.

1. Support legislative development
 - a. Support States in drafting legislation
 - b. Support States in legislation process
 - c. Review State legislation
2. Support regulation development
 - a. Support States in drafting regulations
 - b. Support States in regulatory process
 - c. Review State regulations

We based our pricing for this key activity on the likelihood of each State's receiving interim authorization using the four-category approach described earlier. See table 2 on page 15 for the States in each category. The following is a list of our assumptions and estimates relating to developing legislation and regulations. They depend solely on how likely the States are to accept authorization.

- Regions will assist States prepare for interim authorization by providing 0.5 workyears for each category II State and 2 workyears for each category III State.
- Regions will provide 0.5 workyears per State assisting each category I, II, and III State modify legislation and regulations to qualify for authorization (after they have interim authorization).
- Regions will assist each category IV State by providing 0.25 workyears of assistance in FY 80, 1 workyear in FY 81, 2.75 workyears in FY 82, and 2 workyears in FY 83.

We apportioned the workyears in the ratio 4:1:1 for Management: Enforcement: Permits except in 1980, before the Permits program begins. For that year we used 4:1, Management: Enforcement. The following tabulation sets out regional workyears for developing legislation and regulations:

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total</u>
Management (D210)	35.0	39.7	64.2	53.7	192.6
Enforcement (D305)	8.8	9.9	16.0	13.4	48.1
Permits (D310)	<u>0</u>	<u>9.9</u>	<u>16.0</u>	<u>13.4</u>	<u>39.3</u>
Legislation/ Regulation Workyears:	43.8	59.5	96.2	80.5	280.0

The Regions Must Review State Authorization Applications

The regional office activities and tasks related to reviewing applications for authorization are conducted with resources budgeted in all three decision units and include the following:

1. Review interim authorization application
 - a. Review application for completeness
 - b. Evaluate completed application
 - c. Conduct public comment period
 - d. Make tentative decision on approval/disapproval
2. Negotiate interim authorization
 - a. Review State program plan

- b. Negotiate memorandum of agreement
- c. Make final determination regarding Phase I interim authorization
- d. Review Phase II program
- e. Coordinate comments with headquarters
- f. Make final determination regarding Phase II interim authorization

3. Monitor authorization

- a. Monitor interim authorization
- b. Assist States in developing final authorization plans
- c. Evaluate plans for final authorization

4. Negotiate final authorization

- a. Review interim authorization performance
- b. Negotiate revised memorandum of agreement
- c. Grant final authorization

We based our pricing for this key activity on the likelihood of a State's receiving interim authorization and the experience of other programs in processing applications for program delegations.

The following is a list of our assumptions and estimates relating to development of authorization applications.

- Category III States will include a mix of authorized States and States using cooperative agreements with EPA.
- In FY 81 each category I, II, and III State will receive authorization assistance as in the following tabulation:

<u>Category</u>	<u>Workyears</u>
A	.0625
B	.075
C	.15
D	.25
E	.75

- In FY 83 all States, including category IV, will receive assistance on authorization applications. The pricing remains the same as in FY 81.

We apportioned the workyears among the decision units in the ratio of 4:1:1. The following table summarizes the regional workyears for reviewing authorization applications.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total</u>
Management (D210)	0	5.4	0	7.9	13.3
Enforcement (305)	0	1.4	0	2.0	3.4
Permits (D310)	<u>0</u>	<u>1.4</u>	<u>0</u>	<u>2.0</u>	<u>3.4</u>
Authoriza- tion/Appli- cation					
Workyears:	0	8.2	0	11.9	20.1

Regional Offices Help Each State Develop
An Acceptable Hazardous Waste Program Strategy

The regional office activities and tasks related to developing a program strategy are conducted in all three decision units and include the following:

1. Develop State specific program strategies
 - a. Participate in meetings to provide regional input to federal program strategy
 - b. Consider alternative approaches to meet regional needs
 - c. Develop State strategies
2. Prepare regional program guidance
 - a. Review strategy document provided by headquarters
 - b. Assist states in interpreting and implementing guidance
 - c. Review State hazardous waste management plans
3. Develop public participation procedures
 - a. Provide guidance on public information procedures
 - b. Provide guidance on number, location and timing of hearings
4. Develop ADP or other information systems
 - a. Review design for integrated, coordinated ADP system to process manifest, permit, and report information
 - b. Adapt system to meet regional needs
 - c. Work with States to adapt system to State needs
 - d. Debug system

5. Provide technical/legal assistance

- a. Provide technical assistance to States in developing methods for permitting inspection and monitoring
- b. Provide legal assistance to States

We based our pricing for this activity on two characteristics of each State. We used the likelihood that each State would receive interim authorization as well as the relative State sizes. The following tabulation sets out our estimates relating to strategy development. The price is in workyears per State.

<u>Authorization Category</u>	<u>Size Category</u>	<u>Price in</u>		
		<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>
I, II, III	A	0.44	.25	.25
	B	0.52	.3	.3
	C	1.05	.6	.6
	D	1.75	1	1
	E	5.25	3	3
IV	A	.31	.31	.31
	B	.38	.38	.38
	C	.75	.75	.75
	D	1.25	1.25	1.25
	E	3.75	3.75	3.75

Those estimates of prices reflect the following assumptions about Regional support of State strategy development:

- All activity relating to Phase I interim authorization will occur between April and November 1980 and activity relating to Phase II interim authorization will occur between January and June 1981 (FY 81).
- Although authorization may occur at any time, most activity relating to authorization will occur between January and June 1983 (FY 83).
- The 8 category I States will apply for Phase I interim authorization in November 1980, Phase II interim authorization in April 1981, and authorization by June 1983.
- The 22 category II States will not apply for Phase I authorization separately, but they will apply for Phase II authorization by May 1981 and authorization by June 1983.
- The 5 category III States will apply for Phase II interim authorization by September 1981 and authorization by June 1983.

- The 21 category IV States will not apply for interim authorization. They will apply for authorization in June 1983.

We apportioned the workload among the three decision units for strategy development in the ratio of 4:1:1.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total</u>
Management (D210)	0	50.5	34.2	34.2	118.9
Enforcement (D305)	0	12.6	8.5	8.5	29.6
Permits (D310)	<u>0</u>	<u>12.6</u>	<u>8.5</u>	<u>8.5</u>	<u>29.6</u>
Strategy Development Workyears:	0	75.7	51.2	51.2	178.1

The Regional Offices Oversee
State Program Administration

Regional office oversight of program administration is conducted in the Management decision unit (D210) with the exception of negotiating grants, which is conducted in all three decision units. The activities and tasks include the following.

1. Review State staff hiring and development.
2. Review program management.
3. Review contract management.
4. Oversee budget system.
5. Oversee and review public awareness activities.
 - a. Identify appropriate media
 - b. Issue press releases
6. Explain grant requirements.
 - a. Develop grant conditions
 - b. Conduct guidance visit
 - c. Review initial application

7. Negotiate/award grant.
 - a. Visit State offices
 - b. Coordinate with other program under State-EPA Agreements
 - c. Review and approve final application
8. Administer grant.
 - a. Clarify and interpret grant regulations
 - b. Administer grant funds
 - c. Conduct grant review meetings

We based our pricing for this key activity on the likelihood of a State's receiving interim authorization (see Table 2).

- In FY 81 and FY 82 the regions will oversee State program administration in all category I, II, and III States, i.e., excluding the States (category IV) we do not expect to accept interim authorization.
- In FY 83 through FY 85 the regions will oversee program administration in all States.
- The regions will negotiate a hazardous waste management grant each year with each State.

The pricing, in workyears, for administration and grant negotiation depend on State size (Table 1) and are set out in the following tabulation:

<u>Size Category</u>	<u>Program Administration</u>	<u>Grant Negotiation</u>
A	.05	.05
B	.06	.06
C	.12	.12
D	.2	.2
E	.6	.6

We apportioned the workyears for negotiating grants among decision units in the ratio of 2:1:1 (except for permits, which does not begin until FY 1981). Oversight falls exclusively within the Management decision unit.

The next table summarizes total regional workyears to oversee program administration.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)	4.7	11.2	11.2	14.2	14.2	14.2	69.7
Program Management	(0)	(6.5)	(6.5)	(9.5)	(9.5)	(9.5)	(41.5)
Grants	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(28.2)
Enforcement (D305)	2.4	2.4	2.4	2.4	2.4	2.4	14.4
Permits (D310)	-	2.4	2.4	2.4	2.4	2.4	12.0
Program Administration Workyears:	7.1	16.0	16.0	19.0	19.0	19.0	96.1

Notification Is an Important
Regional Activity In FY 80

The activities and tasks related to data collection include the following:

1. Distributing notification forms
2. Training staff
3. Processing forms returned
4. Sending letters of warning
5. Reviewing and responding to confidential business information requests
6. Providing industry assistance
7. Overseeing notification contract

The following is a list of our assumptions and estimates relating to notification:

- All notification will occur in FY 80. The regional offices will expend a total cost of 20 workyears. In FY 81, five workyears will be required for follow-up.

- The data processing of notification forms will be performed under contract; contract costs are not included in the workyear calculations below.

Because notification is of short duration (primarily FY 1980), we expect the regions will use other-than-permanent employees.

The following table summarizes regional workyears for notification.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)							
Workyears:	20	5	-	-	-	-	25

Table 11 summarizes the workyear expenditures in the regions for the five activities within Program Development.

Table 11

	<u>Total Regional Workyears to Help States Develop Their Programs</u>						
	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)	59.7	111.8	109.6	110.0	14.2	14.2	419.5
Enforcement (D305)	11.2	26.3	26.9	26.3	2.4	2.4	95.5
Permits (D310)	0	26.3	26.9	26.3	2.4	2.4	84.3
Total Workyears:	<u>70.9</u>	<u>164.4</u>	<u>163.4</u>	<u>162.6</u>	<u>19.0</u>	<u>19.0</u>	<u>559.3</u>

THE MANIFEST SYSTEM IS A MAJOR IMPLEMENTATION ACTIVITY

The manifest system is the process for tracking hazardous wastes from generation to the point of ultimate disposition, e.g., disposal. EPA will operate manifest systems in 21 States not authorized to do so.

The activities and tasks related to the manifest system fall in two categories, actual implementation activities conducted by regions and oversight by regions of authorized State programs. Those activities are conducted in the Management decision unit (D210) and include the items listed below.

Regional Oversight
(Authorized States)

Regional Implementation
(Unauthorized States)

- | | |
|--|---|
| 1. a. Provide technical assistance to States on requirements | SAME |
| b. Provide technical assistance to generators, transporters, and owners/operators of TSDFs | |
| 2. Review exception reports. | |
| a. Work with States to specify ADP formats | a. Receive exception reports from generators States |
| b. Review summary reports from States | b. Process for ADP system |
| | c. Specify ADP report formats |
| | d. Review ADP report and forward Summary reports to regional office |

The following is a list of our assumptions relating to the manifest system:

- The regional offices will provide technical assistance to generators, transporters, and facility operators on the use of manifest system before July 1981. The assistance will be in the form of 1/2- to 1-day workshops, requiring an average of 1 workyear per region.
- Regional offices will implement the manifest system in the 21 unauthorized States through 1983.
- Regional offices will oversee State implementation of the manifest system in all category I, II, and III States beginning in 1981 and in category IV States beginning in 1984.
- Exception reports are processed by computer; the reports that are generated that are forwarded to Enforcement for setting enforcement priorities. Key punching for processing of reports is done under contract. Data processing costs are included under "Develop Program."

We estimated the prices, in workyears, as follows for implementation and oversight:

<u>Activity</u>	<u>Authoriza- tion Category</u>	<u>Size Category</u>	<u>Price</u>	
			<u>FY81-83</u>	<u>FY84-85</u>
Implement	IV	A	1	-
		B	1	-
		C	2	-
		D	3	-
		E	9	-
Oversee	I,II,III	A	.05	.05
		B	.05	.05
		C	.05	.05
		D	.75	.75
		E	2.0	2.0
	IV	A	-	0.5
		B	-	0.5
		C	-	0.5
		D	-	0.75
		E	-	2.0

The following table summarizes the workyears for the Manifest system.

Table 12

Regional Workyears for the Manifest System

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Implement	-	48	48	48	-	-	154
Oversee	10	27	27	27	41.5	41.5	164
Management (D210)	_____	_____	_____	_____	_____	_____	_____
Workyears:	10	75	75	75	41.5	41.5	318

EPA WILL PROCESS PERMITS

In FY 1981, EPA will begin a six-year program to issue permits for an estimated 30,000 hazardous waste treatment, storage, and disposal facilities nationwide. States and EPA regional offices will issue permits on a case by case basis using "best engineering judgment" based on general performance standards. This regulatory approach will require individual technical evaluations and increase the number of hearings for permits.

The regional offices will process permits in States without authorization and oversee authorized State programs.

- o In FY 1981, the regional offices will:
 - process Part "A" applications for all States
 - oversee the system for processing permits in 35 category I, II, and III States
 - process permits in 21 category IV States
 - provide special assistance to States as they begin their programs
- o In FY 1982 and 83, the regional offices will:
 - oversee the processing of permits in 35 category I, II, and III States
 - process permits in 21 category IV States.
- o In FY 1984 and beyond, EPA's role will be only oversight, since all States will be authorized to implement the hazardous waste program.

The hazardous waste management program (decision unit D210) is responsible for providing the detailed technical expertise needed to process permits or oversee State permit processing. Management resources make up two-thirds of the total resources for permit processing. The permits issuance program (D310) provides the legal, administrative, and routine technical expertise needed for permit processing and oversight. Resources for the permits issuance program are one-third of the total for permit processing.

Regional Office Permit Processing

The EPA regional offices will process permits in the 21 category IV States from April 1981 until May 1983, when the States become authorized to process their own permits. The regions will concentrate on the two highest priority facilities: off-site treatment and disposal facilities and on-site treatment and disposal facilities. The third type of facility, off-site storage, has a lower priority and will be completed by the States after authorization.

The 21 category IV States contain, according to EPA estimates, approximately 7500 facilities which must be permitted, including 300 off-site treatment and disposal facilities, 6000 on-site treatment and disposal facilities, and 1200 off-site storage facilities.

The permits issuance activities conducted by the hazardous waste management program and the permits issuance program in category IV States in 1982 and 1983 include the following.

1. Receive Part "A" applications, log in and enter key information in data system and review for completeness. Establish a permit file for the applications and subsequent permit actions. Upon completing the review, inform applicant in writing whether or not the application is complete and list any required additional information.
2. Establish a priority for evaluating and processing applications. Evaluate Part "A" completed applications and determine which applicants should submit a Part "B" application. (This could be done simultaneously with the review for completeness.) Based on the priority system, inform selected applicants to submit Part "B" applications. The regulations require that New Source and Part "B" applications for existing sources must be reviewed within 30 days of receipt. Review Part B applications and inform the applicant in writing whether or not the application is complete and list any required additional information.
3. After receiving a complete RCRA permit application, including both parts "A" and "B", for major hazardous waste management facilities, issue a public notice that an application has been received and distribute it as required in the regulations (Part 124.31). (This public notice is in addition to the public notice of the draft permit and is specifically required before EPA notifies the public about the draft permit.)
4. Prepare the draft permit, statement of basis or fact sheet, whichever is applicable, and the administrative record for the draft permit. A site visit may be necessary to verify application data and obtain a better understanding of the facility in order to prepare the draft permit. After the draft permit and supporting documents have been prepared, issue a public notice (following Part 124.11 of the regulations).
5. Review all comments received from the public notice of the draft permit and determine whether a public hearing is warranted.
6. If a hearing is determined to be needed, prepare a public notice for the hearing, identify the hearing panel members and be prepared to provide technical expertise at the hearing. After the hearing, evaluate the record and

determine whether the draft permit needs to be modified. If the hearing raises additional information that warrants changes in the draft permit, process a new draft permit and notify the public of the changes.

7. After the close of the public comment period (including any public hearing periods), prepare the response to comments required by Part 124.19 and the administrative record required by Part 124.20; issue the final permit; and serve notice of that action on the applicant and on each person who has submitted written comments or requested notice when the final permit is issued. The notice must include reference to the procedures available to appeal a RCRA permit determination.
8. Upon receipt of a timely request for an appeal of a RCRA permit under Part 124.21, determine whether to grant or deny the petition and issue an appropriate order. Issue permit if review has been denied or grant review and exhaust Agency review procedures before issuing a final permit, in accordance with Part 124.21. All action on an appeal must be made a part of administrative record and included in the permit file.

The workyears required to operate the permits issuance program in States without authorization (i.e., category IV) depends on State size. The following tabulation summarizes the number of workyears required to process permits in FY 1982 and FY 1983. Because the program starts in mid-FY 1981, we have assigned one-half of the prices in that year as well.

<u>Category IV</u>	<u>Total Workyears Per State</u>	<u>Management (D210)</u>	<u>Permits (D310)</u>
A	2	1.2	0.8
B	2.5	1.5	1.0
C	5	3.0	2.0
D	8	4.8	3.2
E	24	14.4	9.6

The following table summarizes the regional workyears to process permits:

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total</u>
Management (D210)	36	72	72	180
Permits (D310)	<u>24</u>	<u>48</u>	<u>48</u>	<u>120</u>
Permit Processing Workyears:	60	120	120	300

Regional Oversight of State Permits Programs

EPA has a statutory and regulatory responsibility for overview of State-operated programs to assure they are consistent with the requirements of the Resource Conservation and Recovery Act. EPA intends to conduct the overview systematically with a minimum of interference to the States. The overview program should be operated to--

1. Provide the region with a working knowledge of State permitting activities and access to accurate and current permit information.
2. Provide the region with the ability to comment on State issuance of permits which are inconsistent with Federal regulations.
3. Allow the regions to be responsive to State needs for program guidance and technical information to facilitate timely permit issuance.
4. Assure that the States maintain knowledgeable staffs to process and issue effective and enforceable permits consistent with national requirements.

Regional offices will begin oversight of the 35 category I, II, III States in FY 1981 and the 21 category IV States in FY 1984. Oversight includes the following activities:

1. Liaison with State agency.
2. Written agreements with the State agency (Memorandum of Agreement), reviewed and updated as necessary annually.
3. Guidance to States in preparation of annual program plan and plan review and approval. Monitoring and assessment of program commitments and accomplishments. Participation at Regional mid-year and end-of-year evaluations.

4. Formal program and policy review meetings and routine telephone conferences. Timely dissemination and explanation of technical information to help the State draft and defend permits that provide for the safe storage and disposal of hazardous waste. Participation at State public hearing to explain and defend Federal requirements.
5. Review of selected State permit files and permit tracking procedures.
6. Selected facility inspections to assess whether permit requirements are adequate.
7. Continuing review of selected State permit actions for consistency with Federal requirements. The State Director is required to forward to the Regional Administrator copies of draft permits and permit applications for all major hazardous waste management facilities for review and comment. The details of permit review need to be developed as part of the Memorandum of Agreement. A selected number of permits should be reviewed as a minimum, annually. EPA will review annually the State's list of major hazardous waste management facilities to assure all major facilities are properly identified.

We estimate that EPA will need the following workyears for State permit oversight in FY 1982 and beyond:

<u>Category</u>	<u>No. States</u>		<u>Total Workyears Per State</u>	<u>Management (D210)</u>	<u>Permits (D310)</u>
	<u>1982-3</u>	<u>1984-5</u>			
A	5	16	.6	.36	0.24
B	6	7	.6	.36	0.24
C	11	14	1.2	.72	0.48
D	8	12	2.0	1.2	0.8
E	5	7	6.0	3.6	2.4

In FY 1981, the workyears required for overseeing State permitting are .4 for category A and B States, .8 for category C States, 1.3 for category D States, and 4.0 for category E States.

The following table sets out total regional workyears required for permit oversight.

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)	26.2	39.5	39.5	58.0	58.0	221.2
Permits (D310)	17.4	26.3	26.3	38.6	38.6	147.2
Permit Oversight Workyears:	43.6	65.8	65.8	96.6	96.6	368.4

Regional Offices Provide Special Assistance
in Developing Permit Programs

The regions will conduct a special program to work with the States in permitting program development, permits processing, and oversight in FY 81 only.

1. Recommend permit methodologies to States
2. Review proposed permit procedures with States
3. Participate with States in initial permit activities
4. Assist States in designing methods for evaluating and improving permit process to increase permitting efficiency

We based the pricing for this activity on State size, according to the following tabulation. (For definitions of the categories see Table 2.) We believe that the regions must expend a minimum of one workyear for each State.

<u>Size Category</u>	<u>Workyears</u>
A	1.0
B	1.0
C	1.0
D	1.67
E	5.0

The next table summarizes regional workyears for special permit assistance.

	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>Total</u>
Permits (D310)	0	92.0	-	-	92.0

The next table summarizes issuance, oversight, and special assistance.

Table 13

Total Regional Resources for the Permit Program

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Management (D210)	62.2	111.5	111.5	58.0	58.0	401.2
Permits (D310)	41.4	166.3	74.3	38.6	38.6	359.2
Total						
Workyears:	103.6	277.8	185.8	96.6	96.6	760.4

EPA WILL ASSURE COMPLIANCE

In FY 81 regional offices will begin enforcing against reporting, manifest, and permit violations in the 21 States that have not been authorized. In the 35 States with interim authorization EPA's role will be one of overseeing enforcement. In FY 83 and beyond EPA's role will be only oversight, since we expect all 56 States to have authorization.

The regional activities and tasks related to enforcement include the following:

1. Manifest enforcement (against generators).
 - a. Review exception reports
 - b. Issue notices of warning
 - c. Issue notices violation
 - d. Issue compliance orders
 - e. Follow up compliance evaluation inspections
2. Generator enforcement (affirmative inspections).
 - a. Perform compliance evaluation inspections (CEI) of high-priority generators identified from exception reports (site visit)
 - b. Conduct CEIs of off-site facilities with significant discrepancies
 - c. Issue notices of warning
 - d. Issue notices of violation
 - e. Issue compliance orders
 - f. Follow up affirmative inspections
3. TSD facility enforcement (interim status and permit violations).
 - a. Conduct compliance evaluation inspections of major facilities

- b. Issue notices of warning
 - c. Issue notices of violation
 - d. Issue compliance orders
 - e. Prepare case, if necessary
 - f. Make follow-up inspection
4. Generator and facility annual reports.
- a. Review reports
 - b. Follow-up to assure completeness and accuracy
 - c. Identify non-notifiers
 - d. Issue notices of warning
 - e. Issue notices of violation
 - f. Issue compliance orders
 - g. Make follow-up compliance evaluation inspections
5. Notification.
- a. Review data and identify non-notifiers
 - b. Send letters of warning
 - c. Send notice of violation
 - d. Send compliance order
 - e. Conduct follow-up activity
 - f. Institute Civil/criminal proceedings against non-notifiers
6. Regional oversight.
- a. Review State enforcement actions
 - b. Assist States in follow-up and case preparation
 - c. Participate in some State compliance evaluation inspection
 - d. Participate in some State compliance sampling inspections
 - e. Take enforcement actions when States are negligent.
 - f. Provide laboratory support and assure data reliability.

The following is a list of our assumptions related to Regional efforts to assure compliance.

- Category I, II, and III States will begin compliance activities in FY 80; category IV States will begin in FY 83.
- In category I, II, and III States, EPA will conduct only oversight activities; in category IV States, EPA will conduct an enforcement program though FY 83, at which time these States will receive authorization and EPA will conduct only oversight activities.
- EPA will enforce against non-notifiers.

We set out our estimates of prices in the next two tabulations. The first is for States without authorization, in which EPA must conduct enforcement. The second tabulation summarizes the prices for overseeing enforcement programs--i.e., in category I, II, III states for FY 1981 through FY 1985 and in category IV States for FY 1984 and FY 1985.

<u>Category IV</u>	<u># States</u>	<u>Workyears per State in FY 81</u>	<u>Workyears per State in FY 82-83</u>
A	11	.7	.7
B	1	.7	.7
C	3	1.0	1.3
D	4	1.3	2.0
E	2	4.0	6.0

<u>Categories</u>	<u>Workyears per State in FY 81</u>	<u>Workyears per State in FY 82-85</u>
A	.3	.3
B	.3	.3
C	.3	.7
D	.5	1.0
E	1.5	3.0

Enforcement (D305) receives 100 percent of the resources.

The next table sets out the total workyears associated with assuring compliance.

Table 14

Total Regional Workyears to Assure Compliance

	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>Total</u>
Conduct	24.6	32.3	32.3	-	-	89.2
Oversee	<u>18.1</u>	<u>34.0</u>	<u>34.0</u>	<u>49.7</u>	<u>49.7</u>	<u>185.5</u>
Total Enforcement (D305) Workyears	42.7	66.3	66.3	49.7	49.7	274.7

* * * * *

The next four tables summarize EPA's regional workload. The first three (Tables 14, 15, 16) set out totals for the Management, Enforcement, and Permits decision units. Table 17 provides a total for all regional resources connected with the hazardous waste program.

Table 15

Summary of Hazardous Waste Management Resources (D210)FY 1980 - FY 1985

<u>REGIONAL ACTIVITY</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL</u>
Administer regional program	20	20	20	20	20	20	120
Assist State program development	59.7	111.8	109.6	110.0	14.2	14.2	419.2
Operate manifest system	-	48.0	48.0	48.0	-	-	144.0
Oversee manifest system	10	27	27	27	41.5	41.5	174
Process permits	-	36	72	72	-	-	180
Oversee permits issuance	<u>-</u>	<u>26.2</u>	<u>39.5</u>	<u>39.5</u>	<u>58</u>	<u>58</u>	<u>221.2</u>
TOTAL Workyears	89.7	269.0	316.1	316.5	133.7	133.7	1258.7

Table 16

Summary of Hazardous Waste Enforcement Resources (D305)

		<u>FY 1980 - FY 1985</u>						
<u>REGIONAL ACTIVITY</u>		<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL</u>
63	Administer regional program	10	10	10	10	10	10	60
	Assist State program development	11.2	26.3	26.9	26.3	2.4	2.4	95.5
	Conduct States compliance program	-	18.1	34.0	34.0	49.7	49.7	185.5
	Oversee State compliance program	-	24.6	32.3	32.3	-	-	89.2
	TOTAL Workyears	21.2	79.0	103.2	102.6	62.1	62.1	430.2

Table 17

Summary of Hazardous Waste Permitting Resources (D310)

<u>REGIONAL ACTIVITY</u>	<u>FY 1980 - FY 1985</u>					<u>TOTAL</u>
	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	
Administer regional program	20	20	20	20	20	100
Assist State program development	26.3	26.9	26.3	2.4	2.4	84.3
Process permits	24.0	48.0	48.0	-	-	120
Oversee permits process	17.4	26.3	26.3	38.6	38.6	147.2
Provide special permits assistance	92	-	-	-	-	92
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL Workyears	179.7	121.2	120.6	61	61	543.5

Table 18

Summary of Total Regional Workyears for
the Hazardous Waste Program

<u>REGIONAL ACTIVITY</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL</u>
Administer regional program	30	50	50	50	50	50	280
Assist State program development	70.9	164.4	163.4	162.6	19	19	599.3
Operate manifest system	-	48	48	48	-	-	144
Oversee manifest system	10	27	27	27	41.5	41.5	174
Process permits	-	60	120	120	-	-	300
Oversee permits process	-	43.6	65.8	65.8	96.6	96.6	368.4
Provide special permits assistant	-	92	-	-	-	-	92
Conduct State compliance	-	18.1	34	34	49.7	49.7	185.5
Oversee State compliance program	-	24.6	32.3	32.3	-	-	89.2
TOTAL Workyears	110.9	527.7	540.5	539.7	256.8	256.8	2232.4

V. AVAILABILITY OF PERSONNEL

The purpose of this chapter is to assess the availability of personnel resources necessary to implement the Subtitle C regulations. The analysis has three sections. The first section divides our total workyear estimates into general occupational classifications and assesses the availability of individuals with relatively scarce skills. The second and third sections describe the staffing requirements for individual State and regional office hazardous waste programs, respectively.

IMPLEMENTATION REQUIRES A VARIETY OF SKILLS

We determined the total workyears required for each key activity by adding the State and regional workyear estimates derived in Chapters three and four. We decided to use FY 1983 as the base year for assessing availability of personnel because more workyears will be needed then than any other year. We grouped the FY 1983 key activities into three categories, "program management," "permits," and "compliance." Finally, we divided the total workyear estimates into general personnel classifications, based on judgments of regional and headquarters personnel.

Table 19 on page 68 displays the analysis. As the table shows, program management workyears are 40% administrative, 30% clerical, 10% legal, and 20% technical. Permits and enforcement workyears are 15% administrative, 20% clerical, 25% legal, and 40% technical.

Based on our workyear estimates and the above percentages, States and EPA will need 952 administrative workyears, 981 clerical workyears, 887 legal workyears, and 1,467 technical workyears in the largest year of the program. Individuals with administrative, clerical, or legal skills should be readily available.

The technical personnel required by State and regional hazardous waste programs can come from a variety of disciplines, with the exact mix of skills up to the discretion of the program director. Among the scientific and engineering disciplines likely to produce employees are civil, sanitary, chemical, and environmental engineers; chemists; biochemists; biologist; hydrologists; public health specialists; etc.

Over the last decade U.S. colleges and universities awarded between 67,000 and 70,000 bachelor's degrees and 30,000 master's and doctoral degrees in these disciplines each year. Although the employment rate for individuals with technical skills is very high (about 96 percent), we do not anticipate any difficulty finding and hiring individuals with the necessary qualifications.

TABLE 19
Skills Required To Implement Subtitle C

	General Personnel Classification								Total
	Administrative		Clerical		Legal		Technical		
	% Requirement		% Requirement		% Requirement		% Requirement		
Program management...	40%	494	30%	371	10%	124	20%	247	1,236
Permit Process.....	15	384	20	512	25	640	40	1,024	2,560
Compliance.....	15	74	20	98	25	123	40	196	491
Total Workyears		952		981		887		1,467	4,287

¹This personnel classification includes scientific and engineering disciplines such as civil, sanitary, chemical, and environmental engineers; chemists; biochemists; biologists; hydrologists; public health specialists; etc.

STATE PROGRAMS MUST
INCREASE IN SIZE

In chapter three we analyzed the activities which States would conduct to implement Subtitle C. According to our estimates, State programs must increase considerably to carry out these activities successfully.

In FY 1980, States are devoting approximately 750 workyears to hazardous waste activities. As indicated in table 8 on page 35, State investment will increase to about 1300 workyears in FY 1981, 2560 workyears in FY 1982, 3750 workyears in FY 1983, and then decline to 3450 workyears thereafter.

EPA hazardous waste grants support much of the State effort. For fiscal year 1982 and beyond, the States must match EPA's grants, supplying 25 percent of the amount from their own funds. If grants are to continue to support State programs at the same level, grant funds must increase to a maximum of \$103 million, as shown below. We considered the effects of inflation on those grants. The next tabulation sets out the amounts assuming a 10 percent inflation rate.

	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>Total</u>
EPA Grants	18.5	30.0	57.5	92.3	93.7	103.0	395.0
State Match	0	0	19.2	30.7	31.2	34.4	115.5

REGIONAL PROGRAMS WILL
INCREASE IN FY 1981

The tables on pages 62-64, Tables 15, 16, and 17, displayed the workyears devoted by each of the three regional hazardous waste programs to each key activity over the next five years. The information was taken directly from the activity pricing contained in chapter four.

As the tables show, each program will increase considerably from FY 1980 to 1981. The hazardous waste management program (D210) will increase from 81.5 workyears to 264.8, a total increase of 183.3 workyears. The hazardous waste enforcement program (D305) will increase from 36.0 workyears in FY 1980 to 80.5 workyears. The hazardous waste permits issuance program (D310) will increase from zero in FY 1980 to 157.8 workyears in FY 1981.

Tables 20, 21, and 22 show the distribution among the regions which would result if the ORIA assumptions were used as the basis for distribution. In each case the distribution shown is based on the activity pricing information from chapter four.

Table 20

Hazardous Waste Management (D210) FY 1981 Resources
Based on the ORIA*

ACTIVITY	REGION										TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	
A. Administer regional program	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	20.0
B. Assist State program development	8.1	10.4	13.9	15.7	20	9.5	5.4	6.7	13.9	8.0	111.6
C. Operate manifest system	—	1	4	6	12	12	1	5	4	3	48
D. Oversee manifest system	3.25	3.25	3.5	4	5.25	1.25	1.5	1	3	1	27.0
E. Process permits	—	.6	3.0	4.8	9.6	9.3	.6	3.3	2.4	2.2	35.8
F. Oversee permits issuance	2.2	3.4	3.6	3.8	6.1	1.0	1.4	0.5	3.1	1.0	26.1
TOTAL	15.55	20.65	30.0	36.3	54.95	35.05	11.9	18.5	28.4	17.2	268.5
% ORIA	5.79	7.69	11.17	13.52	20.47	13.05	4.43	6.89	10.58	6.41	100
ORIA Distribution	15.33	20.36	29.58	35.80	54.20	34.56	11.73	18.24	28.02	16.97	264.8

*Actual fiscal year 1981 resource targets differ slightly from the ORIA distribution.

Table 21

Hazardous Waste Enforcement (D305) FY 1981 Resources
Distribution Based on the ORIA*

ACTIVITY	REGION										TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	
A. Administer regional program	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	10
B. Assist State program development	1.8	2.4	3.35	3.7	4.7	2.35	1.2	1.6	3.3	1.85	26.25
C. Conduct State compliance program	-	.7	2.0	2.6	5.3	5.7	.7	3.1	2.8	1.7	24.6
D. Oversee compliance	2.0	2.3	2.4	2.6	3.8	.8	.9	.6	2.1	.6	18.1
TOTAL	4.8	6.4	8.75	9.9	14.8	9.85	3.8	6.3	9.2	5.15	78.95
% ORIA	6.08	8.11	11.08	12.54	18.75	12.48	4.81	7.98	11.65	6.52	100
ORIA Distribution	4.89	6.53	8.92	10.09	15.09	10.05	3.87	6.42	9.38	5.25	80.5

*Actual fiscal year 1981 resource targets differ slightly from the ORIA distribution.

Table 22

Hazardous Waste Permits (D310) FY 1981 Resources
Distribution Based on the ORIA*

ACTIVITY	REGION										TOTAL
	I	II	III	IV	V	VI	VII	VIII	IX	X	
A. Administer regional program	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	20.0
B. Assist State program development	1.8	2.4	3.35	3.7	4.7	2.35	1.2	1.6	3.3	1.85	26.25
C. Process permits	-	.4	2.0	3.2	6.4	6.2	.4	2.2	1.6	1.5	23.9
D. Oversee permits process	1.5	2.3	2.4	2.6	4.0	0.7	1.0	.3	2.1	0.6	17.5
E. Give special permits assistance	6.1	8.7	10.7	12.0	19.3	9.7	4.0	6.0	11.0	4.0	91.5
TOTAL	11.4	15.8	20.45	23.5	36.4	20.95	8.6	12.1	20.0	9.95	179.15
% ORIA	6.36	8.82	11.42	13.12	20.32	11.69	4.80	6.75	11.16	5.55	100
ORIA Distribution	10.04	13.92	18.02	20.70	32.06	18.45	7.57	10.65	17.61	8.76	157.8

*Actual fiscal year 1981 resource targets differ slightly from the ORIA distribution.