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PA

Information Resources Management Review Program

FY 1991 Report



Federal IRM Review Program

FY 1991 Report

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Table of Contents

Executive Summary	ES - 1
Background	i
Section I: Agency Summary	I - 1
Section II: Review Synopses	II - 1
Section III: PRA §3506 Compliance	III - 1
Section IV: Major Information Systems	IV - 1
Section V: FY 1992 Program Plans	V - 1
Appendix: FY 1992 Review Summaries	A - 1

Executive Summary

EPA's mission of protecting human health and the environment depends on a wide range of individuals within and outside of the Agency having access to data in order to make informed decisions. The need for sound information policies and practices, and efficient, responsive information systems is a key priority of the Agency's senior management team. EPA is committed to gathering and analyzing the data needed to evaluate environmental risks and trends, measure environmental results, and educate society. The Agency is also committed to promoting and supporting innovative technical solutions to environmental problems. A sound information resources management (IRM) infrastructure is critical to the Agency's ability to provide objective, reliable, and understandable information that helps build trust in EPA's judgement and actions and its ability to work with other government agencies and other nations to ensure they consider the environmental implications of their actions. To achieve its mission, EPA relies on the support and firm commitment of all its managers to support this mission-based infrastructure—one that is designed to promote data sharing, reduce unnecessary duplication of data, and use technology and other IRM resources most effectively, while protecting confidential and sensitive data.

Through the Federal IRM Review Program, EPA assesses its ability to gather timely and accurate environmental data and to evaluate the tools used to compile it across programs and media into information which supports environmental decision-making. The Federal IRM Review Program was initiated in FY 1986 to carry out the provisions of the Paperwork Reduction Act of 1980. The Office of Management and Budget (OMB) and the General Services Administration (GSA) provide guidance and oversight in program implementation, with GSA providing overall management. Specifically, the Federal IRM Review Program seeks to determine:

- If each agency is carrying out its information management activities in an efficient, effective and economical manner in support of program missions and objectives.
- How well each agency is complying with established IRM policies, procedures, principles, standards and guidelines.
- If each agency is complying with Federal agency responsibilities of Section 3506 of the Paperwork Reduction Act (PRA).

IRM reviews may encompass any or all activities of planning, budgeting, organizing, directing, training, and controlling associated with the creation, collection, processing, transmission, dissemination, use, storage and disposition of information by Federal agen-

EXECUTIVE SUMMARY

cies. IRM encompasses both information itself and resources, such as personnel, equipment, funds, and technology.

Each year, GSA identifies IRM review program priority areas that Agencies should address that could lead to better management of resources throughout the government. The seven priority areas for FY 1991 were: major information systems, software modernization, security/privacy, information management, service to the citizen, telecommunications, and ADP management.

EPA has set its own Agency-wide priorities which are specific to the Agency's mission of protecting human health and the environment. EPA's mission-based priorities for FY 1991 were: enforcement, pollution prevention, risk reduction, ecosystem protection, leadership in the international arena, and improved science and data management.

EPA also emphasized the goals documented in its *IRM Strategic Plan (1991-1995)*. These strategic goals will be the focus of IRM initiatives through FY 1995:

- (1) Establish data integration tools and activities.
- (2) Create and manage information systems supporting the environmental community.
- (3) Establish a program to promote information sharing.
- (4) Renew EPA's technology base to provide increased functionality and/or to reduce costs.
- (5) Manage a data administration program to ensure the Agency's ability to use its data fully.
- (6) Enhance productivity through the educated use of technology.
- (7) Improve planning and communications to ensure effective deployment of information and technology.
- (8) Provide quality service with proactive leadership as custodians of EPA information and systems.

In FY 1991, EPA conducted its sixth successful IRM review program. A total of sixteen IRM reviews were conducted to address IRM initiatives such as program systems modernization and improved records management. The sixteen reviews were:

- Information Collection Review—Improvements to the Hazardous Waste Manifest System

FY 1990 IRM REVIEW PROGRAM REPORT

- State/EPA Data Management Review
- Review of Superfund Document Management Initiatives
- Review of the Integrated Administrative System Concept
- Review of Modernization of FINDS
- Review Public Access Program Needs
- Review of Strategic Architectural Issues
- Modernization of STORET
- Locational Accuracy Task Force Review
- Analysis of Computer Security Awareness Program and Information Security Program Requirements
- Superfund Cost Recovery Image Processing System Review
- Detailed Evaluation of IFMS, EPAYS, and ADCR
- Review of Availability of Services for Independent Verification and Validation Activities
- Review of the CLEANUP Information Bulletin Board System
- Review of Information Security Needs in OSWER Life-Cycle Guidance
- Summary of Telecommunications Accomplishments.

The reviews covered program systems, administrative systems, public information needs, and the technology on which they are based. Several reviews took the opportunity to go beyond the basic analysis of the present situation and investigate technical and work-related trends.

Many findings and recommendations resulted from these studies. The Agency evaluated various information technologies and established the Agency's official position on each. The Agency's security program was assessed and revised to ensure that it reflects the best available knowledge. Two information systems were evaluated for their modernization potential. An assessment of hazardous waste manifests showed that the uniform manifest is anything but uniform in implementation, but that a truly standard

EXECUTIVE SUMMARY

manifest processing procedure would be of benefit to both regulators and the regulated community.

Since FY 1990, GSA has been paying increased attention to the government's major information systems due to the enormous investment they represent. For FY 1991, EPA is submitting an update for the previously reported Superfund Cost Recovery Information Processing System (SCRIPS) and initial "baseline" reports for nine other major Agency information systems:

- Aerometric Information Retrieval System (AIRS)
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
- EPA Payroll-Personnel System (EPAYS)
- Grants Information and Control System (GICS)
- Integrated Financial Management System (IFMS)
- Permit Compliance System (PCS)
- Resource Conservation and Recovery Information System (RCRIS)
- Storage and Retrieval of Water Quality Information System (STORET)
- Toxic Chemical Release Inventory System (TRIS).

EPA has already started to plan for and implement the Agency's FY 1992 IRM Review Program. The FY 1992 program plans and priorities are described in Section V of this document.

EPA's IRM Review Program has been beneficial to the Agency by promoting a closer scrutiny of how its information resources are managed. The program also necessitates a more consistent and all-inclusive nature to the reviews themselves. As a result of these reviews, the Agency is aware of the strengths and weaknesses of current IRM operations and has begun to take corrective actions where appropriate.

FY 1990 IRM REVIEW PROGRAM REPORT

We welcome comments on this IRM Review Program Report. Please direct comments and requests for additional copies to one of the following individuals:

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Background

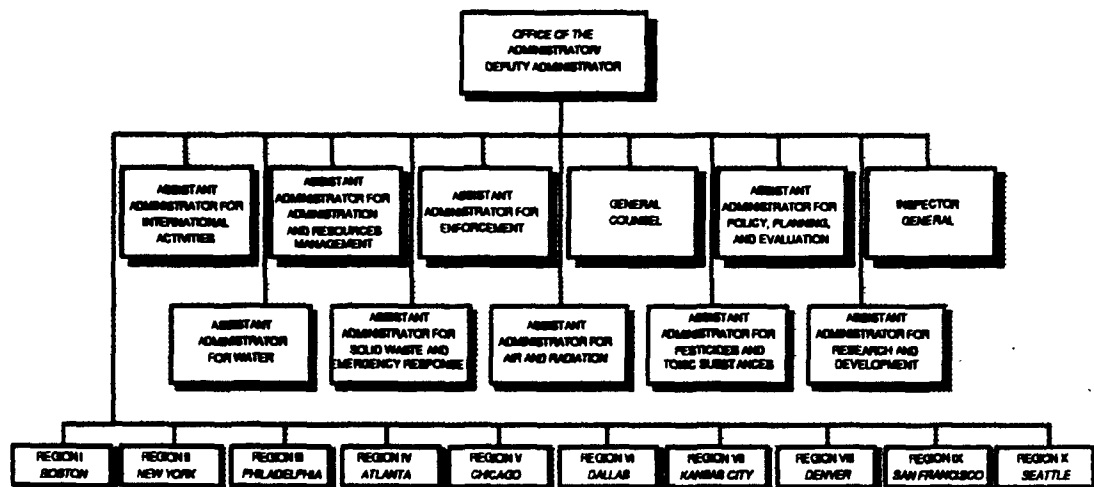
Established as an independent agency in the Executive Branch in December 1970, the U.S. Environmental Protection Agency (EPA) is responsible for executing many of the Federal laws protecting the environment.

EPA was created to permit coordinated and effective governmental action on behalf of the environment. EPA endeavors to systematically reduce and control pollution through the appropriate integration of a variety of research, monitoring, standard setting, and enforcement activities. EPA also coordinates and supports research and pollution prevention activities by State and local governments, private and public groups, individuals, and educational institutions. In total, EPA is designed to serve as the public's advocate for a livable environment.

A simplified version of the EPA organization is presented in Figure 1. The Agency is directed by an Administrator and a Deputy Administrator. The Agency's executive staff includes nine Assistant Administrators who manage specific environmental programs or direct other Agency functions, as well as Associate Administrators and the Agency's General Counsel and its Inspector General.

Ten Regional offices across the country represent the Agency's commitment to strong local programs for pollution abatement and enforcement. The Regional Administrators cooperate closely with

Figure 1. THE EPA ORGANIZATION



BACKGROUND

State and local governments to make sure that Regional needs are considered and that Federal environmental laws are properly implemented. They are also responsible for accomplishing within their Regions the Agency's national program objectives.

EPA Priorities

During FY 1991, EPA established six priorities for achieving its environmental mission:

- Enforcement
- Pollution prevention
- Risk reduction
- Ecosystem protection
- Leadership in the international environmental arena
- Improved science and data management.

Enforcement— Opinion polls confirm that the public places a very high priority on environmental protection. Recently passed Federal environmental statutes have made new administrative penalties available, and States have developed strong law enforcement capabilities as well. In the years ahead, EPA will be looking for more and better ways of coordinating its enforcement efforts with States— especially in the Superfund program, in protecting wetlands, and in cleaning up Federal facilities.

EPA's ability to monitor compliance or control enforcement would be seriously hampered without complete and timely information. In addition, without the proper tools, information that was reliable would not be easily analyzed or shared with States and other Federal agencies. It is, therefore, essential that the Agency continue to address issues of sound science and data management— to develop collection and analysis tools, ensure data quality, and provide for access to and dissemination of data.

Pollution prevention— Pollution prevention has become a guiding principle for all EPA programs— from municipal wastewater treatment to toxic air pollution. Among the many Agency pollution prevention initiatives underway are:

- Achieving a 25% waste reduction by 1992 through recycling and reducing wastes at the source.
- Increasing private sector involvement in financing and providing environmental services (public-private partnerships).

FY 1991 IRM REVIEW PROGRAM REPORT

- Fostering economic growth and progress without irreversibly depleting the planet's natural capital (sustainable development).

It would be difficult to effectively persuade the public of the continued value of these initiatives without sound evidence of its long term benefits and the costs of inaction. Improved science and data management go hand-in-hand with the success of these initiatives.

Risk reduction— One of the greatest challenges facing the Agency today is the setting of priorities and strategies for reducing risk to human health and the environment. Despite the inherent uncertainties in, and continuing controversies over, how to assess risks such as ozone depletion and global climate change, comparative risk assessment is still one of the best indicators of where the U.S. should be directing its limited resources to achieve the greatest results.

Sound science and data management can help to establish priorities and allocate resources based on risk. Science can lend much-needed coherence, order and integrity to the often costly and controversial decisions that must be made. Sound data management is needed to demonstrate results in risk reduction.

Ecosystem protection— Natural ecosystems such as forests, wetlands, and oceans are extraordinarily valuable. Ecosystems contain economically valuable natural resources that feed, clothe, and house the human race.

Existing EPA programs designed to protect ecosystems require the strengthening of existing Federal programs and regulations that protect, maintain, and restore those systems. EPA must also work toward a fully integrated management approach with the Departments of Agriculture, Commerce, and Interior to protect the nation's groundwater and surface water resources. The Agency embarked on an ambitious program of environmental monitoring and assessment to obtain a baseline understanding of major ecosystems. Improved science and data management are essential to the success of this ecosystem characterization effort.

Leadership in the international environmental arena— In response to the President's international initiatives for the environment, a new international data sharing program was launched with a three-fold goal:

- Establish the U.S. as a reliable partner in international information exchange relationships.

BACKGROUND

- Ensure environmental data is in a form useful to other nations.
- Assist developing nations to establish effective local information management capabilities.

The program has already shown some success in helping to build information capacity in regions where that information is critical to environmental and economic decision-making. EPA will continue to strengthen its relationships with international organizations, especially the United Nations INFOTERRA program which is a worldwide network for sharing environmental information.

Improved science and data management— It is no surprise that science and data management issues are essential to each of the previous five priorities. Environmental protection is data intensive, with over two million regulated sources, and effectively managing that data is key to all environmental protection efforts. As the EPA Administrator said, "All we really have is information... Nothing is more important to our integrity in environmental protection than a reputation for dealing in facts, for respecting sound science and sound information." EPA must be able to document its vigorous enforcement programs and to show environmental results. That means that the information technology EPA deploys today will be the cornerstone for protecting our natural resources tomorrow.

IRM Organization

The primary responsibility for overall management of the Agency's information resources is shared by the Office of Policy, Planning and Evaluation (OPPE) and the Office of Administration and Resources Management (OARM). Within OARM, IRM responsibilities are shared between the Office of Information Resources Management (OIRM) and the National Data Processing Division (NDPD). Because information resources are vital to the EPA's success, the Agency has created two institutional frameworks for IRM—the IRM Steering Committee and a cadre of Senior IRM Officials (SIRMOs). These five IRM organizational elements are illustrated in Figure 2 and described in the sections which follow.

OPPE

The Assistant Administrator for Policy, Planning, and Evaluation (OPPE) is the senior official responsible for directing and overseeing the Agency's activities administered under the Paperwork

FY 1991 IRM REVIEW PROGRAM REPORT

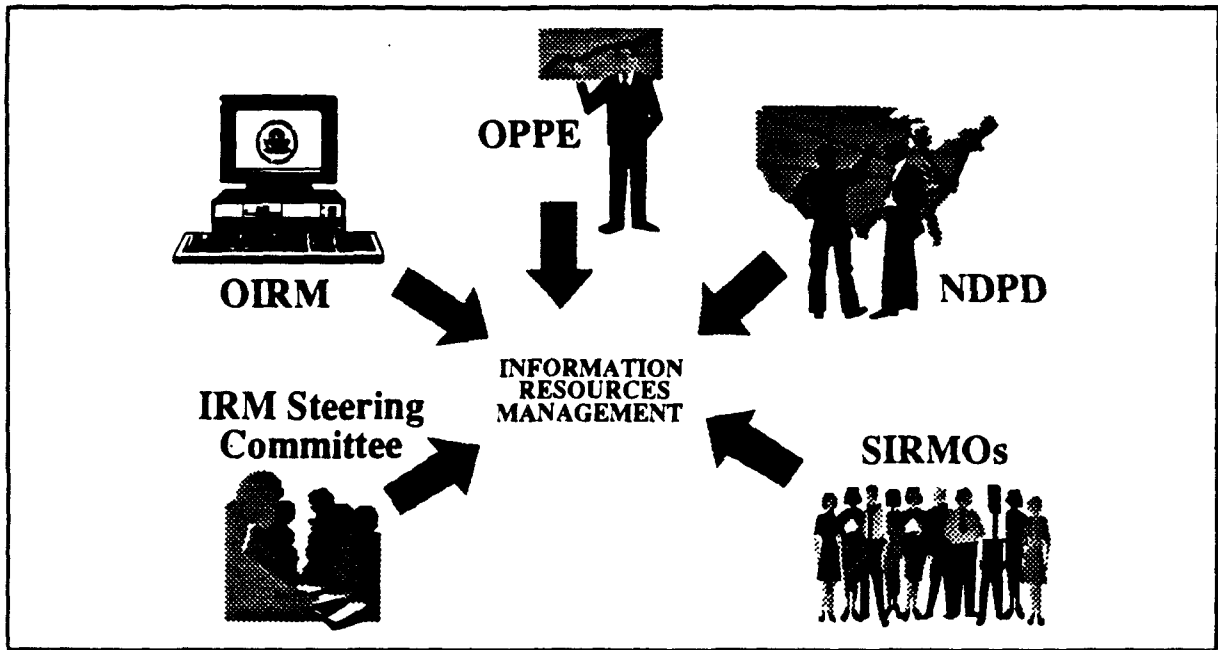


Figure 2. EPA'S IRM ORGANIZATION

Reduction Act of 1980. While the Assistant Administrator has delegated much of his authority under the Act, he has retained the authority for managing information resources in regulatory situations and reviewing all Agency rules, regulations, and data collection instruments to ensure that the Agency does not impose an unnecessary paperwork burden on the public.

OIRM

The Director of the Office of Information Resources Management (OIRM) has primary functional responsibility for development of IRM policy and overall management of the Agency's IRM program. He chairs the IRM Steering Committee and is responsible for the planning, development, and operation of information systems and services in support of the Agency's administrative, programmatic, and research functions. He also administers Agency programs for:

- IRM strategic planning
- Management of IRM support contracts
- Library systems and services
- Records and forms management
- Information security/privacy
- Data administration
- State/EPA Data Management

BACKGROUND

- International data sharing
- The Systems Development Center.

The Director of OIRM also handles approval of software development initiatives, waivers for Federal Information Processing Standards, and microcomputer requisitions.

NDPD

The National Data Processing Division (NDPD), through delegation of responsibilities from the Director of OIRM, is responsible for the definition, acquisition, and implementation of computing and telecommunications technology for the Agency. More specifically, the functional responsibilities of NDPD include:

- Management of information processing resources, including telecommunications, in EPA.
- Operation and maintenance of all general purpose computers and local area networks in Headquarters and RTP.
- Development of architectural strategies and procurement of advanced systems, support equipment, and processing technology to meet Agency-wide requirements.

IRM Steering Committee

In light of the importance of information resources to EPA, it was imperative that senior line managers become better informed about and more actively involved in the development and use of those resources. To this end, the IRM Steering Committee was established in September 1985. The IRM Steering Committee is chaired by the Director of OIRM and has members appointed by the Deputy Administrator representing EPA national, international and Regional programs, the EPA research community, and the States.

The committee advises the Agency's Deputy Administrator on matters of IRM policy and improvements in the responsiveness and efficiency of EPA's IRM programs and operations by:

- Promoting effective communications and exchange on information management policy, standards, and technology issues among senior EPA and State environmental officials.
- Providing a forum for prioritizing and disseminating information regarding IRM issues and concerns of mutual interest to Federal and State agencies.

FY 1991 IRM REVIEW PROGRAM REPORT

- Promoting the development of practices and procedures that support improvements in quality and sharing of environmental data across Agency lines.
- Assisting in the formulation of EPA's strategic information resources management planning and policy agenda.
- Serving as Board of Directors for EPA's System Development Center. In this capacity, the Committee provides advice and guidance on the selection of EPA Systems Modernization Fund project proposals.

Senior IRM Officials

Senior IRM Officials (SIRMOs) are generally responsible for directing and managing office-wide information resources planning, and for ensuring that the information systems and information technology acquisitions within their organizations comply with Federal and EPA policies and regulations. There are twenty-two SIRMOs within the Agency—one for each environmental program and major administrative function, one for the Office of International Activities, and one for each of the ten Regions.

IRM Strategic Planning

In the *IRM Strategic Plan (1991-1995)*, EPA identified eight strategic goals which will be the focus of IRM initiatives. These goals are to:

1. Establish data integration tools and activities.

This goal will be accomplished by providing seamless connectivity to EPA's hardware, software, and telecommunications capabilities; defining formats and protocols that facilitate the exchange and the meaning of environmental and laboratory data; designing, developing and implementing common user information access techniques and electronic reporting capabilities for major EPA program systems; and incorporating data integration tools and activities into the IRM programs of the State and EPA Regional offices.

BACKGROUND

2. Create and manage information systems supporting the environmental community.

This goal can be met by developing and implementing a software engineering development program; developing an application tool kit; providing systems with flexibility to promote State/EPA information partnership; providing systems to ensure the accuracy, consistency, and efficiency of Agency laboratory networks; and developing improved national administrative control and program systems.

3. Establish a program to promote information sharing.

EPA plans to provide tools and capabilities to facilitate information sharing within EPA and between EPA and other environmental organizations and to manage and deliver information and technology transfer for improved access and use of data needed by its own staff, the public, international environmental programs and organizations, and the States.

4. Renew EPA's technology base to provide increased functionality and/or to reduce costs.

To ensure that its technology base is responsive, affordable, and manageable, EPA plans to assess the Agency's business needs; examine the direction of technology; procure selected technologies and capabilities; and implement technologies in an orderly manner and evaluate the results.

5. Manage a data administration program to ensure the Agency's ability to use its data fully.

With this program, EPA expects to define its information architecture to evaluate corporate or shared data needs; provide models, establish data standards, and promote common data management approaches for the management of program, administrative, and scientific data; and establish and manage a process for an effective data administration program.

FY 1991 IRM REVIEW PROGRAM REPORT

6. Enhance productivity through the educated use of technology.

To achieve this goal, EPA plans to establish and manage training programs for IRM professional development; implement training programs for client communities which promote teamwork and information sharing; and provide tools and capabilities to improve the personal and organizational productivity and effectiveness of EPA staff.

7. Improve planning and communications to ensure effective deployment of information and technology.

The Agency's objectives are to develop and implement a cooperative process for IRM strategic planning on an annual basis; to develop an Agency-wide information architecture for program, administrative and scientific systems which includes information strategy plans, major acquisitions, and maintenance; to engage in an active outreach to the environmental community through newsletters, IRM reports, etc.; and to evaluate and reorganize IRM management and communications networks.

8. Provide quality service with proactive leadership as custodians of EPA information and systems.

To achieve this goal, EPA must ensure the security of its information, systems, and ADP equipment; operate and maintain national systems at a high level of performance; and maintain and expand the library network to improve access to information.

Government-Wide IRM Priorities

Each year, GSA identifies government-wide priority areas that agencies should address in their IRM review programs which could lead to better management of resources throughout the government. The seven priority areas for fiscal year 1991 were:

1. Major Information Systems

In view of the Federal government's substantial investment in major information systems, GSA is focusing special attention on those systems. Agencies should have reviewed the efficiency, effectiveness, and economic viability of their major information systems.

2. Software Modernization

Many of the Federal government's application programs are outdated and in need of replacement or improvement. In their fiscal year 1991 reviews, GSA expected agencies to review their application programs from a "service delivery" standpoint to determine whether present software is meeting agency needs and, if deficiencies exist, what improvements are necessary.

3. Security/Privacy

GSA wanted agencies to review the extent of implementation of their security plans, and in particular, of their efforts to provide security awareness and training. Additionally, all Federal agencies must operate in accordance with Public Law 100-503, the "Computer Matching and Privacy Protection Act of 1988." This law states that "No record which is contained in a system of records may be disclosed to a recipient agency or non-Federal agency for use in a computer matching program except pursuant of a written agreement between the source agency and the recipient agency or non-Federal agency." Agencies were to review their compliance with this Act in their review programs.

4. Information Management

Agencies were expected to emphasize the EDI (Electronic Data Interchange) process in their IRM review programs. Agencies should have, for example, conducted EDI reviews to: (1) identify potential agency applications, (2) determine what agency strategies

FY 1991 IRM REVIEW PROGRAM REPORT

have been developed for using EDI, and (3) evaluate agency progress in adopting EDI.

5. Service to the Citizen

Service providers in the private sector, in State and local governments, and in the European governmental community have significantly raised the level and quality of service provided to their customers and citizens by using information technology. Now, to maintain parity with rising citizen expectations, the Federal government is seeking to improve the quality of the Federal service it provides to them. To keep abreast of new and any future activity in this category, GSA asked agencies to begin placing emphasis on the quality and efficiency of delivery of service to citizens. Possible review areas could include: (1) citizen access to and use of personal, consumer and commercial information; (2) interactive processes such as citizen participation in governmental processes; and (3) direct service delivery to the public.

6. Telecommunications

GSA expected agencies to devote a portion of the telecommunications reviews to data interchange within and among agencies. GSA is interested in agencies' implementation of the Government Open System Interconnection Profile (GOSIP) and the Portable Operating Systems Interface for Computer Operating Environments (POSIX) standards.

7. ADP Management

In addressing ADP management, GSA asked agencies to emphasize reviews that attempt to determine whether mechanisms are in place to satisfy the agency's regulatory and managerial responsibilities for the effective and efficient use of information technology. Agencies should have, in particular, focused on: (1) multiple award schedule contracts, as governed by procedures in FIRMR 201-32.206 and (2) access to information technology by users with disabilities, as mandated by the Rehabilitation Act of 1973 and reauthorized in 1986.

IRM Initiatives for FY 1991

The Agency's emphasis on disseminating environmental data and information to the broadest possible audience has challenged the way the Agency has traditionally done its business. EPA's IRM programs work to make environmental data available through technology innovations, data sharing partnerships, and new methods of systems development. With these evolving Agency needs in mind, EPA undertook several IRM initiatives in FY 1990, which have been continued in FY 1991. The seven initiatives listed below address all seven government-wide priorities, as well as the Agency mission-based priorities described earlier.

1. Data Sharing and Integration

EPA's IRM planners realize the significance of data sharing and integration and are involved in various efforts to improve these activities. The Agency developed a multi-year Information Integration Initiative to promote enhanced access to data and to permit integrated environmental analysis. It also initiated the International Data Sharing Program to promote reliable and innovative use of environmental data with our international neighbors.

In addition to the State/EPA Data Management Program, the Agency has implemented geographic information system projects in all ten Regions. Recent efforts were also focused on the development of the data communications network required to provide increased access to internal and external parties. This includes establishing a communications line or "point of presence" in every State to support the delegation of authority. As of April 1991, all fifty States and Puerto Rico have established direct communications capabilities. This telecommunications network supports six EPA national systems.

2. Program Systems Modernization

A significant, ongoing IRM initiative is program systems modernization. This modernization effort is critical to effectively integrating environmental data among various program systems. In FY 1991, two major information systems, FINDS (the Facility INDEX System) and STORET (STORage and RETrieval of Water Quality Information System), examined the alternatives and feasibility for modernization.

FY 1991 IRM REVIEW PROGRAM REPORT

This initiative also involves the creation of four new services and IRM activities to support the systems development process. First, the EPA Systems Development Center, which became operational in October 1989, supports, develops, and enhances EPA's mission-critical data systems. It is the Agency's Center of Excellence for systems development. The center institutes more standardized methods of developing systems, thus facilitating the integration of data maintained by various program systems.

The second new service is the EPA Systems Modernization Fund which provides funding assistance for projects to improve the quality of EPA's environmental data and the systems for managing those data. Third, a Systems Development Support Team supports systems planning and development efforts throughout the Agency. Finally, the charter for the IRM Steering Committee has been expanded to establish it as the Board of Directors for the overall modernization initiative.

3. Standards

The success of other IRM initiatives depends on the availability of, and adherence to, well-defined data standards for data elements common among Agency information systems. Development of standards is critical to progress in data integration and improvements in managing for environmental results.

In FY 1991, the Agency's locational data policy was revised to reflect recommendations of the Locational Accuracy Task Force and implementation guidance was drafted on this policy as well as the facility identification data standard. During FY 1991, the Ground-Water Quality Work Group, which included representatives from States, local governments, the regulated community, EPA, and other Federal agencies, developed definitions for the Agency's policy on the minimum set of data elements for ground-water quality. In addition, during the past fiscal year, OIRM developed a catalog of existing Agency and Federal data standards and policies, a document which is intended to help all those who develop systems for the Agency understand the essential set of standards and policies that must be complied with to enable and facilitate data integration. A related initiative was the publication of an amendment to the EPA Federal Acquisition Regulations, which is intended to assure that contractors perform IRM-related work in accordance with EPA policies. Another document entitled *EPA Hardware/Software Standards* was drafted during FY 1991. This document identifies the standards found on Agency contracts and is intended to support integration within the Agency's computing environment.

BACKGROUND

4. Improved Records Management

Emphasis has been placed on improving records management procedures and evaluating opportunities for automating access to and control of records as one mechanism for enforcing and litigating pollution clean-up efforts. These improvements directly support the mission-based goal of ensuring a strong enforcement presence.

During FY 1991, OIRM sponsored the first National Records Management Conference. This was a very successful meeting which established the framework for implementing a number of new records management initiatives. During FY 1991, the regional records disposition schedules were revised, a number of records management documents were published, and the Agency developed a records management communications network for this program. A major Agency initiative involves development of an image processing system using optical disk technology for expanded storage and rapid retrieval of financial documents supporting cost recovery efforts. Other initiatives involve training Headquarters and Regional EPA staffs in the discipline of records management and establishing Regional records centers for better control and management of Agency records. In addition, the Agency organized and conducted a very successful records management clean-up campaign in its Headquarters. The Agency's records management practices were recently evaluated by the National Archive and Records Administration, and the findings of that evaluation are currently being responded to and acted upon by the Agency.

5. Information Technology Acquisitions

In addition to efforts to improve information and records management through procurement of optical disk technology, the Agency is pursuing other information technology acquisitions. EPA will continue to acquire mainstream commercial hardware to ensure that compatible software and technical support will be available in the foreseeable future.

Significant progress has been made in toward defining requirements and obtaining necessary resources for the acquisition of a supercomputer to support the Regional acid deposition monitoring program. An on-site evaluation and the physical site selection has been made in the area of Bay City, Michigan. The bench mark requirements and the technical requirements for the request for proposal are complete. The delegation of procurement authority was obtained from GSA in March 1991. The request for proposal was released in April. Proposals are under review. The contract award is expected in the second half of FY 1992.

FY 1991 IRM REVIEW PROGRAM REPORT

Additional acquisitions of information technology include the expansion of the telecommunications network to meet data sharing needs of the Regions and States and the continued acquisition of microcomputers to improve analysis of data for enhanced decision making. EPA has recently awarded a contract to acquire geographic information system workstations.

6. Public Dissemination

There is an increasing demand on EPA for disseminating information to the public. Specific legal requirements to disseminate information that are affecting EPA include SARA Title III, the Federal Insecticide, Fungicide, and Rodenticide Act, and the Asbestos Information Act. In addition, several environmental bills introduced in the current session of Congress include some requirement for disseminating information. Fulfillment of these requirements demands significant IRM resources.

On a selective basis, EPA is evaluating various technology solutions for disseminating information to the public. Current initiatives include use of paper, micrographics, on-line data bases, and CD-ROM. Moreover, OIRM recently developed a draft policy on data sharing. This policy is particularly relevant as Congress debates Community-Right-To-Know legislation and re-authorization of the Paperwork Reduction Act. A recent review sought to improve awareness within EPA about public access issues and generate recommendations for a strategy which will further improve public access to information maintained by EPA. During FY 1991, EPA published *Access EPA* to foster environmental awareness and improve access to environmental information provided by EPA and other public sector organizations. *Access EPA* is a series of directories that provide contact information and descriptions of services offered by libraries, databases, information centers, clearinghouses, hotlines, dockets, records management programs, and related information sources.

7. Electronic Data Reporting

Since the majority of EPA's data are externally generated, initiatives involving improvements in data reporting by external parties offer considerable potential for progress in information management at EPA. Increased manageability and quality of data are arguments in support of these initiatives in electronic reporting.

Several efforts are currently underway to enhance data reporting by accepting electronic submissions from external parties. These in-

BACKGROUND

clude electronic submissions under the Title III, Toxic Release Inventory, and Superfund Contract Lab programs. EPA established a policy on electronic reporting in July 1990 which encourages use of electronic data interchange (EDI) for environmental regulatory reporting and which specifies that program offices should use either ANSI X12 or EDIFACT standards for EDI. The biggest challenge of this effort will be extending the "transaction sets" to cover subject areas beyond traditional business transactions such as invoices, shipping notices, inventory reports, etc. EPA has chartered an electronic signature workgroup to resolve issues relating to policies and procedures for verifying/authenticating electronic messages.

EPA has several EDI initiatives underway, including:

- The Office of Policy, Planning and Evaluation (OPPE), in cooperation with the National Governors Association, is working with West Virginia and Pennsylvania to pilot the use of EDI for submissions of hazardous waste manifests. They anticipate expanding the pilot to include New Jersey and Arkansas.
- The applicability of EDI is being investigated for a new system for air pollution allowance tracking and trading under the new Clean Air Act.
- The Office of Water is testing EDI as a mechanism for submitting Discharge Monitoring Reports.
- The National Data Processing Division (NDPD) is continuing to pilot the usage of EDI in their contract payment system.
- NDPD is investigating requirements for EDI as a basis for possible procurement of translations software and services from a value added network.
- OPPE/OIRM is investigating the feasibility of using an ANSI X12 transaction set, "Report of Test Results," to replace EPA's own laboratory data transmission standard.

Section I: Agency Summary

EPA's mission of protecting human health and the environment depends on a wide range of individuals within and outside of the Agency having access to data in order to make informed decisions. The need for sound information policies and practices, and efficient, responsive information systems is a key priority of the Agency's senior management team. EPA is committed to gathering and analyzing the data needed to evaluate environmental risks and trends, measure environmental results, and educate institutions and individuals throughout society. The Agency is also committed to promoting and supporting innovative technical solutions to environmental problems. A sound information resources management (IRM) infrastructure is critical to the Agency's ability to provide objective, reliable, and understandable information that helps build trust in EPA's judgement and actions and its ability to work with other government agencies and other nations to ensure they consider the environmental implications of their actions. To achieve its mission, EPA relies on the support and firm commitment of all its managers to support this mission-based infrastructure—one that is designed to promote data sharing, reduce unnecessary duplication of data, and use technology and other IRM resources most effectively, while protecting confidential and sensitive data.

The Federal IRM Review Program has been beneficial to the Agency in instigating a closer inspection of how its information resources are managed. The program also results in a more consistent and all-encompassing nature to the reviews themselves. This section summarizes the objectives and benefits of EPA's FY 1991 IRM Review Program.

IRM Review Program

OIRM coordinates the review process through meetings of SIRMOS and the IRM Steering Committee. By discussing the review program at these meetings, OIRM ensures that any potential duplication in review content is eliminated. In addition, OIRM staff periodically interview SIRMOS to identify IRM-related program initiatives and to assess progress in program-led reviews. Numerous program system managers are consulted for contributions to the review program.

To measure progress in EPA's IRM Review Program, the review team looked at several factors. All nine planned reviews from the FY 1990 report were completed, as were an additional seven re-

I: AGENCY SUMMARY

views. The review team also examined the reviews' contributions to the IRM program's progress in supporting the priorities and initiatives which were described in the Background Section. These assessments were tailored to the individual reviews in recognition of the unique aspects in each review. The reviews ensure that EPA is aware of the strengths and weaknesses of current IRM operations, and that corrective actions are taken quickly. The review team examined the review program outreach activities. The breadth and depth of review topics and review-related outreach activities demonstrate that the Agency has, and is committed to, a well-organized, effective IRM review program. EPA has already begun planning for their FY 1992 review program, the details of which are in Section V.

EPA's IRM reviews are staffed and conducted in a variety of ways, the specifics are described in the individual review synopses. In FY 1991, eight reviews were led by OIRM or NDPD, seven by program offices with SIRMO oversight, and one by a task force. This allocation of "lead responsibility" ensures that the reviews use an appropriate mix of program and technical personnel.

IRM Review Program Objectives

The Agency's IRM goal is to provide a means of managing information efficiently, effectively, and economically to support the Agency's mission while being consistent with applicable laws and regulations. To achieve this goal, EPA has established several IRM-related objectives which are clearly linked to the Agency's priorities, government-wide IRM priorities, and Paperwork Reduction Act §3506 requirements. Based on GSA's response to EPA's FY 1990 report, EPA has revised its objectives to ensure that progress made in achieving them is more easily measured. The objectives are to:

1. Assess EPA's progress in conducting IRM reviews.
2. Provide a focal point for information gathered during the conduct of reviews and provide an Agency-wide forum for disseminating results.
3. Provide guidance in conducting IRM reviews.
4. Provide direction and priorities for the next year's review cycle.
5. Ensure EPA's IRM program adequately supports the Agency's mission priorities.
6. Ensure EPA's IRM program adequately supports government-wide priorities.

FY 1991 IRM REVIEW PROGRAM REPORT

7. Ensure IRM activities at EPA are carried out in an effective, efficient manner and comply with Federal policies and guidelines.

Benefits of the IRM Reviews

The FY 1991 IRM reviews addressed numerous topics. Figure 3 shows the linkages between the reviews and government-wide IRM priorities and Agency IRM initiatives and goals. Section II provides the review synopses and their benefits. Due to space limitations, only selected benefits of the reviews will be discussed here.

Information Collection Review—Improvements to the Hazardous Waste Manifest System should improve the timeliness, completeness, and accessibility of manifest data available to EPA and States for use in regulatory decision-making and enforcement.

State/EPA Data Management Review focused on delivery of high quality information services to States, data integrity issues, and minimization of unnecessary duplication of data through increased data sharing, all of which are important since the States are EPA's partners in protecting the environment.

Review of Superfund Document Management Initiatives should result in streamlined handling and storing of Superfund records. There are currently 3,500 programmatic personnel involved with the management of Superfund documents. A savings of one hour per week through the introduction of more efficient document management would translate into savings of \$20M over 4 years.

Review of the Integrated Administrative System Concept focused on providing high quality information services which minimize duplication of data, promote data sharing, and provide effective ADP and telecommunications capabilities.

Review of the Modernization of FINDS should strengthen the enforcement program, since staff can cross reference facilities and identify violators of more than one statute. A more effective, multimedia based enforcement program should improve the government's ability to recover costs from responsible parties.

Review Public Access Program Needs resulted in a public access policy and strategy. The implementation of the policy and strategy should: (1) improve the public's access to EPA's information and thereby strengthen its relationship with EPA, and (2) promote attainment of EPA's environmental mission by providing a higher quality of information services and by promoting data sharing.

I: AGENCY SUMMARY

Figure 3. PRIORITIES ADDRESSED BY THE REVIEWS

	Review Number 91-															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Gov't-wide priorities																
Major information systems		◆		◆				◆			◆	◆				
Software modernization		◆		◆	◆		◆	◆								
Security/privacy			◆	◆	◆					◆	◆				◆	◆
Information management	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Service to the citizen		◆		◆	◆	◆	◆	◆						◆		
Telecommunications		◆		◆			◆							◆		◆
ADP management		◆		◆	◆		◆	◆		◆		◆	◆	◆	◆	◆
EPA priorities																
Enforcement	◆	◆	◆		◆			◆	◆		◆			◆		
Pollution prevention		◆	◆		◆			◆	◆					◆		
Risk reduction					◆				◆							
Ecosystem protection					◆			◆	◆							
International leadership																
Improved science & data mgmt	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
EPA IRM Initiatives																
Data sharing & integration	◆	◆		◆	◆	◆	◆	◆	◆		◆			◆		
Prog systems modernization		◆	◆		◆			◆								
Standards	◆	◆		◆	◆		◆		◆	◆		◆	◆		◆	
Improved records mgmt	◆		◆	◆						◆	◆					
Info technology acquisitions			◆	◆			◆				◆					◆
Public dissemination		◆	◆			◆								◆		
Electronic data reporting	◆			◆												
EPA IRM strategic goals																
Data integration activities		◆		◆	◆		◆		◆							
Info sys for enviro community	◆	◆	◆		◆			◆			◆		◆	◆	◆	
Information sharing program	◆	◆	◆	◆	◆	◆			◆					◆		◆
Renewed technology base	◆	◆		◆	◆		◆	◆			◆					◆
Effective data administration	◆	◆	◆	◆	◆			◆	◆		◆	◆	◆		◆	
Educated technology usage		◆	◆	◆	◆		◆	◆			◆	◆	◆	◆		◆
Effective info & tech		◆	◆	◆	◆		◆	◆		◆	◆					◆
Quality/proactive service		◆	◆	◆		◆	◆	◆		◆	◆		◆		◆	◆

- 91-1 Information Collection Review — Improvements to the Hazardous Waste Manifest System
- 91-2 State/EPA Data Management Review
- 91-3 Review of Superfund Document Management Initiatives
- 91-4 Review of the Integrated Administrative System Concept
- 91-5 Review of the Modernization of FINDS
- 91-6 Review Public Access Program Needs
- 91-7 Review of Strategic Architectural Issues
- 91-8 Review of the Modernization of STORET
- 91-9 Locational Accuracy Task Force Review
- 91-10 Analysis of Computer Security Awareness Program and Information Security Program Requirements
- 91-11 Superfund Cost Recovery Image Processing System Review
- 91-12 Detailed Evaluation of IFMS, EPAYS, and ADCR
- 91-13 Review of Availability of Services for Independent Verification and Validation Activities
- 91-14 Review of the CLEANUP Information Bulletin Board System
- 91-15 Review of Information Security Needs in OSWER Life-Cycle Guidance
- 91-16 Summary of Telecommunications Accomplishments

FY 1991 IRM REVIEW PROGRAM REPORT

Review of Strategic Architectural Issues demonstrated the Agency's commitment to proactively harnessing computing technology for the benefit of EPA and resulted in standard guidance to assist Regions and program offices on a variety of technical decisions.

Review of the Modernization of STORET emphasized that the system is a valuable repository of historical information, with more than 170 million observations. This modernization should result in the system accepting new data more easily, promoting data sharing and integration, having effective system documentation, and allowing efficient ongoing maintenance and operations.

Locational Accuracy Task Force Review established a more focused Locational Data Policy and promoted Agency-wide dialogue about the policy. The implementation of the policy should result in a common basis for comparing and evaluating data, so that the Agency can achieve truly integrated environmental analysis, planning, and management.

Analysis of Computer Security Awareness Program and Information Security Program Requirements ensures that the Agency has plans and programs in place which effectively secure its computers and the information in those computers.

Superfund Cost Recovery Image Processing System Review resulted in improvements to EPA's implementation efforts for SCRIPS, a system which provides critical support to the Superfund cost recovery and enforcement programs.

Detailed Evaluation of IFMS, EPAYS, and ADCR assessed the extent to which these systems are performing the functions for which they were intended. This fine-tuning of operating efficiency will conserve Agency resources.

Review of Availability of Services for Independent Verification and Validation Activities assured OSWER managers that they will obtain objective, consistent, and thorough verification and validation of the organization's application systems.

Review of the CLEANUP Information Bulletin Board System verified that bulletin board technology can support the transfer of technical information, and that it is managed satisfactorily.

Review of Information Security Needs in OSWER Life-Cycle Guidance should result in a consistent, effective approach to security management which complies with all oversight requirements.

I: AGENCY SUMMARY

Summary of Telecommunications Initiatives benefits the Agency by ensuring that optimal technical resources are available to support the Agency's mission.

The following is a summary of additional Agency services which address EPA as well as Government-wide priorities.

Access to Information Technology by Users with Disabilities—EPA is very committed to providing proactive services to individuals with disabilities. The Agency maintains a very good understanding of the requirements of its employees with disabilities by beginning to identify their needs at the time they join the Agency. EPA has a network of Selective Placement Coordinators who work directly with individual employees with disabilities and with personnel in EPA's Information Centers to identify electronic equipment needs and services for employees with disabilities which are tailored to the individual. During EPA Hardware/Software Open Houses, EPA always includes equipment and software which are tailored to meet the needs of individuals with disabilities.

Service to Citizen—the Public Information Center (PIC) attempts to convey clear, accurate, and timely information to the public and to incorporate information from the public in EPA activities. The PIC strives to represent all programs, since it is the only part of EPA many see. The PIC is relocating to quarters with several features intended to enhance public access: a 35-seat auditorium for showing films and slide presentations, workstations for the use and demonstration of environmental databases, and space for EPA program offices to exhibit materials on their activities.

Multiple Award Schedule Contracts (MASC)—EPA has assumed a proactive stance in ensuring appropriate use of Multiple Award Schedule Contracts. The Agency has a quality assurance staff in the Procurement and Contracts Management Division whose job it is to monitor and evaluate compliance with Federal and Agency procurement regulations, including the use of the MASC. The scope of the quality assurance reviews includes Headquarters as well as Regional and field installations.

International Leadership—The centerpiece of the Agency's international data sharing strategy is the institution of various regional mechanisms to facilitate information exchange, including: the Eastern and Central European Regional Environmental Center, the Southern African Regional Companionship Program, and support for INFOTERRA (the United Nation's environmental information network) and for the International Register of Potentially Toxic Chemicals (IRPTC). Plans are also underway to develop a Caribbean Regional Environmental Center in Puerto Rico.

***Section II:* Review Synopses**

- 91-1 Information Collection Review — Improvements to the Hazardous Waste Manifest System
- 91-2 State/EPA Data Management Review
- 91-3 Review of Superfund Document Management Initiatives
- 91-4 Review of the Integrated Administrative System Concept
- 91-5 Review of the Modernization of FINDS
- 91-6 Review Public Access Program Needs
- 91-7 Review of Strategic Architectural Issues
- 91-8 Review of the Modernization of STORET
- 91-9 Locational Accuracy Task Force Review
- 91-10 Analysis of Computer Security Awareness Program and Information Security Program Requirements
- 91-11 Superfund Cost Recovery Image Processing System Review
- 91-12 IFMS Audit
- 91-13 Review of Availability of Services for Independent Verification and Validation Activities
- 91-14 Review of the CLEANUP Information Bulletin Board System
- 91-15 Review of Information Security Needs in OSWER Life-Cycle Guidance
- 91-16 Summary of Telecommunications Accomplishments

SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

TITLE OF REVIEW: Information Collection Review — Improvements to the Hazardous Waste Manifest System

AGENCY REVIEW NUMBER: 91-1

REVIEW CATEGORIES

<input type="checkbox"/> TELECOMMUNICATIONS	<input checked="" type="checkbox"/> END USER COMPUTING
<input type="checkbox"/> SOFTWARE MANAGEMENT	<input type="checkbox"/> SOFTWARE MODERNIZATION
<input checked="" type="checkbox"/> INFORMATION MANAGEMENT	<input checked="" type="checkbox"/> ELECTRONIC FILING
<input type="checkbox"/> MAJOR INFORMATION SYSTEMS	<input type="checkbox"/> OTHER INFORMATION SYSTEMS
<input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506	<input type="checkbox"/> ADP MANAGEMENT
<input type="checkbox"/> SECURITY/PRIVACY	<input type="checkbox"/> RECORDS MANAGEMENT
<input type="checkbox"/> MAIL MANAGEMENT	<input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123)
<input type="checkbox"/> FINANCIAL (A-127)	<input type="checkbox"/> SERVICE TO THE CITIZEN
<input type="checkbox"/> OTHER _____	

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

A large amount of data is reported to EPA and delegated State environmental agencies yearly from hazardous waste generators, transporters, and treatment, storage, and disposal facilities. The reporting requirements are generally imposed through legislation, and the data may be reported directly to the Agency or to State organizations who later submit the data to the Agency in raw or summarized form. The manifest system, as mandated by the Resource Conservation and Recovery Act (RCRA), was designed to track hazardous waste shipments from the point of generation to the point of disposal. The manifest provides information crucial to Federal and State implementation of RCRA and certain provisions of the Comprehensive Environmental Response, Compensation and Liability Act/Superfund Amendments and Reauthorization Act of 1986 (SARA), most notably those provisions dealing with capacity assurance planning. Because hazardous waste manifest forms are submitted on paper, many States are unable to computerize the data

FY 1991 IRM REVIEW PROGRAM REPORT

they contain and, as a consequence, experience great difficulty—and considerable expense—in using manifest data to manage their hazardous waste programs.

The objective of this review was to improve the present manifest system for shipments of hazardous waste. It built on the activities already started by the International Hazardous Waste Manifest Coordinators' Group (IHWMC) to improve and standardize the hazardous waste manifest activities of State agencies and EPA. This effort was expected to enhance the ability of the State agencies and EPA to:

- Track interstate shipments of hazardous waste.
- Support RCRA information systems associated with such programs as EPA's Biennial Report and the SARA capacity assurance plans required of States.
- Establish historical records of wastes transfers for reference when inquiries arise.

SYNOPSIS OF REVIEW:

Staff from the National Governors' Association (NGA) worked with an advisory group comprised of IHWMC members and EPA staff to carry out the objectives of the review. This project was jointly funded by EPA's Office of Policy, Planning, and Evaluation and the Office of Solid Waste. The review effort was divided into five tasks:

1. Conduct two meetings of the full IHWMC membership to review progress on the tasks listed below, provide direction for further task efforts, and discuss other relevant manifest issues.
2. Prepare formal recommendations to EPA, using the continuing advice and counsel of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO), on improvements for the uniform hazardous waste manifest form.
3. Draft a national manifest guidance manual for State agencies.
4. Identify and recommend the resolution of outstanding issues requiring clarification in the existing EPA manifest regulations.
5. Develop a national manifest guidance manual for the regulated community.

PRIMARY FINDINGS:

The original EPA hazardous waste manifest regulations promulgated in 1980 did not require the use of a specific manifest form. They

SECTION II: REVIEW SYNOPSES

only required that a minimum amount of information be reported. The absence of a standard form resulted in considerable confusion among regulatory agencies and the regulated community because States adopted their own forms. In 1984, a uniform hazardous waste manifest was mandated as the specific form for all shipments of hazardous waste. However, States operating their own manifest programs impose additional reporting requirements and require the submission of manifest copies. The States may use their own coding scheme on the forms, require different types of data, and process the manifests differently. They may also have different usages for the data. These extensive variations in State implementations of the manifest system result in unnecessary expense and delay for the regulated community. They also frustrate State efforts to effectively run their hazardous waste programs.

RECOMMENDATIONS:

The Agency should promptly act on the ASTWMO petition for creating a truly uniform hazardous waste manifest and standardizing manifest processing procedures. To do this, EPA should expand the types of information required on the manifests to include the various data elements which States want to receive. EPA should also work to homogenize the procedures States use/require for submission of manifest information. These changes will make it much easier for the regulated community to comply with manifest-related regulations.

Within a significant portion of the private sector, and increasingly within the public sector, the use of Electronic Data Interchange (EDI) has been seen as a way of making large exchanges of data such as manifests more efficient. Through this mechanism, computers can be made to handle a large portion of the processing required, and the amount of physical handling, reviewing, and processing of the data may be drastically reduced. It was recommended that EDI be investigated as a mechanism for transmitting manifest data from the regulated community to State environmental agencies.

INITIATIVES AND ACTIONS:

One of the products of this review was *A State Guide to the Uniform Hazardous Waste Manifest* which was prepared for EPA by NGA. The guide is intended to serve as a handbook for States to use in developing and maintaining effective manifest tracking programs. It is designed to provide State manifest officials with the basic information about the uses of manifest data, the Federal regulations governing such data, and important issues to consider in developing a State program such as how to ensure data integrity and compliance by the regulated community.

FY 1991 IRM REVIEW PROGRAM REPORT

A pilot project has been initiated which is intended to nurture the growth of EDI among EPA reporting programs by offering technical and systems integration assistance to those programs, reducing the uncertainty and risk to the programs involved, and ensuring a high level of acceptance and cooperation from the reporting communities. Technical assistance has been provided for the implementation of EDI in support of State compliance efforts. As part of the pilot project, EDI implementation guidelines for the hazardous waste manifest have been drafted.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The primary benefit of this review is that it will improve the timeliness, completeness, and accessibility of manifest data available to EPA and States for use in regulatory decision-making. If the recommendations of the review are implemented, it will improve the effectiveness of State enforcement of their hazardous waste programs and reduce the cost of compliance for the regulated community. EDI should eliminate the processing "bottleneck" which limits State usage of manifest data.

This review is in direct support of EDI, one of the Government-wide priorities identified by GSA and OMB for FY 1991. The introduction of EDI into the Hazardous Waste Reporting System should eliminate the processing "bottleneck" which limits State usage of manifest data. Additionally, the introduction of EDI will contribute to significant improvements in records management, substantially reducing the cost of reporting, storing and retrieving information, which in turn will support improved environmental analyses and decisionmaking. There are considerable cost savings and productivity improvements associated with promoting uniform reporting requirements, reducing a significant volume of paperwork, and providing an effective audit trail for Federal and State enforcement officials.

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SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

**TITLE OF
REVIEW:** State/EPA Data Management Review

**AGENCY REVIEW
NUMBER:** 91-2

REVIEW CATEGORIES

- | | |
|---|--|
| <input checked="" type="checkbox"/> TELECOMMUNICATIONS | <input type="checkbox"/> END USER COMPUTING |
| <input type="checkbox"/> SOFTWARE MANAGEMENT | <input type="checkbox"/> SOFTWARE MODERNIZATION |
| <input checked="" type="checkbox"/> INFORMATION MANAGEMENT | <input type="checkbox"/> ELECTRONIC FILING |
| <input checked="" type="checkbox"/> MAJOR INFORMATION SYSTEMS | <input type="checkbox"/> OTHER INFORMATION SYSTEMS |
| <input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506 | <input checked="" type="checkbox"/> ADP MANAGEMENT |
| <input type="checkbox"/> SECURITY/PRIVACY | <input type="checkbox"/> RECORDS MANAGEMENT |
| <input type="checkbox"/> MAIL MANAGEMENT | <input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123) |
| <input type="checkbox"/> FINANCIAL (A-127) | <input type="checkbox"/> SERVICE TO THE CITIZEN |
| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

**OBJECTIVES OF
REVIEW:**

EPA's capacity to identify and examine environmental trends and report on its own performance and that of delegated State programs— to manage for environmental results— depends directly on a program of timely and accurate data sharing with the States. In 1987, EPA initiated the State/EPA Data Management (SEDM) Program to build and maintain the infrastructure needed for effective State/EPA data management and sharing and to integrate data across media and programs so EPA and State managers can target their efforts on environmental results.

Over the last four years, the SEDM Program has helped to foster effective State/EPA partnerships and use of integrated data in decision-making. However, this progress has not been made uniformly across all States and Regions. In order to ensure the success of the Program, it is critical that EPA examine past efforts and determine the future direction of the SEDM Program.

FY 1991 IRM REVIEW PROGRAM REPORT

SYNOPSIS OF REVIEW:

The review of the SEDM Program began with a forum held in cooperation with Harvard University in the fall of 1990. The forum was attended by State, EPA Regional, and EPA Headquarters senior environmental information managers and focused on identifying and addressing key issues of the SEDM Program. The next step of this review involved a comprehensive study incorporating the evaluations and recommendations of over 200 participants. These participants included personnel from State environmental agencies, all ten EPA Regional Offices, EPA Headquarters, the National Data Processing Division (NDPD) in Research Triangle Park, North Carolina, and the Environmental Monitoring and Science Lab (EMSL) in Las Vegas, Nevada. Interviews were conducted with each of the participants in order to solicit their impressions of, and recommendations for, the SEDM Program.

The results of the interviews were summarized in a document entitled the *SEDM Program Assessment*. This document will be distributed to all review participants and to a wide range of State and EPA personnel.

PRIMARY FINDINGS:

The program assessment focused on three fundamental areas of the SEDM Program: data sharing, data integration, and information exchange. The following are the findings from the SEDM Program Assessment:

DATA SHARING

- Improving the sharing of data between States and EPA continues to be a major focus of States and EPA offices.
- Although the telecommunications connections between States and EPA have been greatly improved, expanded, and enhanced telecommunications continues to be of great interest among States and EPA offices.

DATA INTEGRATION

- While many States and EPA offices are involved in many data integration activities such as GIS, much work needs to be done at both the State and EPA level to ensure the timeliness, accuracy, and completeness of data in existing systems, especially in the area of locational data.
- There exists a tremendous diversity in the technical capability of States to integrate data.

SECTION II: REVIEW SYNOPSES

- Several Regions have established successful cooperative State/EPA relationships in assisting States with their data integration efforts.

INFORMATION EXCHANGE

- The State/EPA relationship has improved greatly as a result of the SEDM Program's focus on communication and dissemination of information between EPA and States.

RECOMMENDATIONS:

The most frequently recommended future activities in the SEDM Program were:

- Continue to improve and build upon the existing SEDM communications activities.
- Support State telecommunications capabilities to enhance activities in data sharing and data integration.
- Support State and EPA activities in improving data accuracy.
- Develop a strategy for the SEDM Program to be shared with States and EPA offices.
- Support EPA Regions in the SEDM Financial Assistance Program to ensure maximum benefit of SEDM grants to States.
- Coordinate activities with Program Offices in EPA.

INITIATIVES AND ACTIONS:

The Program Assessment has received support from senior management within the Office of Administration and Resources Management and has been forwarded to Office Directors, systems managers, and State participants. The SEDM Program will be developing a strategic plan that reflects the issues and recommendations raised in this review and outlining the future activities of the Program.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The benefit of this review is that it presents the observations and recommendations of the IRM community regarding the issues and needs of the SEDM Program. This review supports Government-wide priorities of information management, ADP management, telecommunications, and major information systems. It also supports the Agency IRM initiatives of data sharing and integration and standards. It supports many other key initiatives within the Agency's IRM program: complying with EPA goals, policies,

FY 1991 IRM REVIEW PROGRAM REPORT

plans, and strategies; integrating systems across media, functional, and program lines; promoting data sharing; promoting effective ADP and telecommunications resources and facilities; and emphasizing government-wide priorities.

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SECTION II: REVIEW SYNOPSES

AGENCY: EPA

TITLE OF
REVIEW: Review of Superfund Document Management Initiatives

AGENCY REVIEW
NUMBER: 91-3

REVIEW CATEGORIES

- | | |
|---|--|
| <input type="checkbox"/> TELECOMMUNICATIONS | <input type="checkbox"/> END USER COMPUTING |
| <input type="checkbox"/> SOFTWARE MANAGEMENT | <input type="checkbox"/> SOFTWARE MODERNIZATION |
| <input checked="" type="checkbox"/> INFORMATION MANAGEMENT | <input type="checkbox"/> ELECTRONIC FILING |
| <input type="checkbox"/> MAJOR INFORMATION SYSTEMS | <input type="checkbox"/> OTHER INFORMATION SYSTEMS |
| <input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506 | <input type="checkbox"/> ADP MANAGEMENT |
| <input type="checkbox"/> SECURITY/PRIVACY | <input checked="" type="checkbox"/> RECORDS MANAGEMENT |
| <input type="checkbox"/> MAIL MANAGEMENT | <input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123) |
| <input type="checkbox"/> FINANCIAL (A-127) | <input type="checkbox"/> SERVICE TO THE CITIZEN |
| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

Proficient records management is crucial to the efficient and effective management, administration, and execution of the Superfund program. As reported in the FY 1990 IRM Review Program Report, the Office of Solid Waste and Emergency Response (OSWER) conducted the Superfund Document Management Review to identify options for improving the efficiency and effectiveness of records management and document handling practices and systems in the Superfund program. The objective of this current review was to follow up on the previous review with three related studies which:

- (1) Analyze and recommend training to enhance the efficiency and effectiveness of current records management activities.
- (2) Develop/refine guidance for managing Superfund records.
- (3) Complete the concept and definition phases for a Superfund Document Management System (SDMS).

FY 1991 IRM REVIEW PROGRAM REPORT

SYNOPSIS OF REVIEW:

All three studies were conducted by the OSWER.

To help ensure that Superfund personnel are properly trained, OSWER information management staff developed a Superfund records management training plan. The information was collected through interviews and surveys. In order to ensure that the views of those who would be affected were being properly incorporated, intermediate briefings were conducted providing findings to date and allowing for further feedback.

The products of the first study were:

- An approach for incorporating records management into the Superfund training program.
- Follow-up analyses of other interim management improvements previously identified as having the potential to enhance the efficiency and effectiveness of EPA's Superfund records management activities.

The second study examined the records management functions that should occur during the lifecycle of a record. The cycle includes creation, storage, use, and disposition. Examples of topics analyzed are retention schedules, file organization and structure, file indexing, and document turnover procedures (e.g., obtaining final copies of relevant contractor files). Information for this study was collected from Headquarters and Regional personnel through face-to-face and telephone interviews, surveys, Regional site visits, analyses, and semi-annual meetings which updated the study progress and provided an opportunity for further feedback.

The third and final study analyzed the alternatives, advantages, disadvantages, and detailed requirements for improving EPA's Superfund records management and document handling operations through the development of the SDMS— a multi-media system using microform, hardcopy documents, and/or optical disks. Information for this study was gathered through interviews, surveys, and meetings of potential system users such as Superfund records managers, and lawyers.

PRIMARY FINDINGS:

The first study highlighted the need for training on records management for Superfund personnel such as on-scene coordinators and remedial project managers. The types of information that need to be conveyed in the training were also identified.

The second study identified, and initiated development of, the types of guidance which are needed for improved Superfund records

SECTION II: REVIEW SYNOPSES

management. For example, there is a high priority initiative within OSWER designed to create consistent, effective, sound records management practices in those non-EPA organizations that play a key role in implementing the Superfund program. Thus, one type of records management guidance which should be generated would be for non-EPA personnel who submit Superfund records to show how to format and send it. Another type of records management guidance identified as being needed by the study is a records definition and guidance document. It would describe basics such as what a record is and how it is defined and handled. Studying existing guidance for managing Superfund records revealed that the Superfund records disposition schedules which are currently utilized are inadequate.

In the third study, the conceptual phase of SDMS development identified and evaluated alternative solutions to the information management problem, provided a better definition of the problem to be solved, and defined a basic framework for requirements for an information management capability. Specifically, five development alternatives were identified and analyzed: maintaining the status quo, converting all documentation to microfilm, imaging all the documentation, utilizing a combination of image and microfilm technology, or utilizing a combination of image and text management capabilities. The definition phase generated specific, detailed functional and data requirements for the system, provided the basis for a more concrete assessment of benefits and costs, and formed the basis of the detailed design of the system in preparation for the next phase, design.

RECOMMENDATIONS:

It was recommended that the optimal way to provide the training on Superfund records management for non-records-specific personnel would be to create a training film which could then be used whenever and wherever there is a need for training on Superfund records management.

The interim recommendation which resulted from the SDMS study was to use a combination of image and microfilm technology. This option was recommended over relying completely upon imaging technology because of the technical limitations of current imaging systems. However, because the manufacturer claims to be able to rectify the problems, it was recommended that further testing be done before a formal recommendation is submitted. In either a full imaging or hybrid imaging and microform scenario, imaging workstations would be placed in several locations throughout the Regional office, and indexes to documents would be accessible through Novell networks.

FY 1991 IRM REVIEW PROGRAM REPORT

INITIATIVES AND ACTIONS:

Although funds are limited, OSWER is working with a training film production company to determine the time, effort, and budget required to produce a film on Superfund records management.

Work has begun on all three recommended types of guidance on Superfund records management. A framework for developing and issuing guidance for non-EPA personnel on Superfund records management has been generated which reflects all 11 recommendations for the guidance. A records definition and guidance document has been drafted and is currently being reviewed throughout the Agency. New records disposition schedules for the Regional Superfund offices were drafted this year. In FY 1992, a new records disposition schedule will be drafted for the Headquarters Superfund program.

Further action on the SDMS development recommendation was postponed until certain technology issues are resolved. If the manufacturer can correct the problems with current imaging systems, use of imaging technology will be the primary basis for document storage in the SDMS. OSWER has been working and will continue to work closely with OIRM and the Regions throughout the systems development lifecycle.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

All three studies will contribute to improved records management within the Agency. They seek to streamline the handling and storing of Superfund records, which minimizes the problems identified in the FY 1990 Superfund Document Management Review (i.e., lack of backup to vital records, lack of administrative support, and a blizzard of paper being generated and stored), while being cost-effective and increasing efficiency for the Agency.

SDMS, in particular, will result in demonstrable cost savings in the handling and storage of records. There are currently 3,500 programmatic personnel involved with the management of Superfund documents. A savings of one hour per week through the introduction of more efficient document management would translate into savings of \$20M over a 4-year period. SDMS should ensure that all applicable documents are captured and controlled, made available in a timely manner, are complete and accessible to the user, secured if classified or Confidential Business Information, protected if vital, and meet evidence requirements. In addition, the system should reduce professional resources used in clerical activities relating to document management, ensure effective use of physical space, and support the timely preparation of complete and accurate

SECTION II: REVIEW SYNOPSES

document compilations. The intangible benefits of SDMS are improved perceptions of the Superfund program, improved Superfund staff morale, and a mitigation of catastrophic failure risks.

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FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Review of the Integrated Administrative System Concept

AGENCY REVIEW NUMBER: 91-4

REVIEW CATEGORIES

<input type="checkbox"/> TELECOMMUNICATIONS	<input checked="" type="checkbox"/> END USER COMPUTING
<input checked="" type="checkbox"/> SOFTWARE MANAGEMENT	<input checked="" type="checkbox"/> SOFTWARE MODERNIZATION
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<input type="checkbox"/> FINANCIAL (A-127)	<input checked="" type="checkbox"/> SERVICE TO THE CITIZEN
<input type="checkbox"/> OTHER _____	

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

The Administrative Systems Division (ASD) is responsible for providing automated systems and tools that support the administrative needs of the EPA and its staff. Ever-increasing demands require the Agency to provide a widening array of services to an expanding client community. The Integrated Administrative Systems (IAS) concept was visualized in an effort to more effectively respond to these requirements.

The intent of this review was to refine the IAS concept. The refinement resulted in the identification of potential benefits to system managers and users. The evaluation also resulted in the identification of issues relating to an IAS in the EPA environment and the development of a management plan for achieving an IAS.

SECTION II: REVIEW SYNOPSES

SYNOPSIS OF REVIEW:

This review was conducted by OIRM with contractor assistance. Research was conducted to identify functions and relationships among current national systems for which ASD is responsible. Specifically, the following methodology was used:

- Review current documentation on the IAS concept, administrative systems, and ASD organization.
- Identify IAS functional clusters and their relationships.
- Interview personnel involved in administrative functions.
- Review external documentation concerning integrated systems, information engineering, and database systems.

Overall, the ultimate version of the IAS involves a fully integrated set of capabilities implemented across three basic IAS components:

- AdminLAN— will be the customer's window to IAS services, providing office automation and electronic forms functions and permitting staff to initiate administrative transactions and requests for services, access Agency reference sources, and extract data for analysis.
- National administrative systems— will consist of six integrated applications corresponding to the major administrative functional areas: financial management, procurement, grants, human resources, facilities and services, and information resources.
- Administrative enterprise repository (metadata)— will contain administrative transaction-related data, information about data standards and access rights, and reference materials (e.g., policies, procedures, regulations, etc.). Administrative information will be maintained logically in a single repository, but will be distributed based upon functional requirements.

The capabilities of these components will seamlessly provide information access, processing and management throughout the full spectrum of EPA administrative activities.

PRIMARY FINDINGS:

The Agency selected a phased approach to developing the IAS. In this approach, the development of the IAS components and development/redevelopment of existing systems proceed simultaneously with evolutionary phasing of completed capabilities/systems. This is the only practical alternative because it takes advantage of existing efforts, permits use of critical existing systems, and provides considerable intermediate capabilities.

FY 1991 IRM REVIEW PROGRAM REPORT

Increasing the effectiveness of its administrative systems through IAS will assist EPA in meeting current and future challenges by:

- Providing capabilities to keep pace with the increasing tempo of Agency responsibilities.
- Providing timely responses to growing client requests.
- Effectively handling unanticipated, ad hoc information requests.
- Reducing the time and effort directed toward administrative responsibilities.

In addition to increasing functional capabilities, the IAS will enable EPA to provide administrative systems users with simplified access to a wider array of timely, accurate administrative information.

RECOMMENDATIONS:

Introducing the IAS into the current EPA administrative systems development environment represents a formidable undertaking, with far-reaching impacts. Implementation of the IAS requires an understanding of the challenges that must be met if an effort of this magnitude is to succeed. Several short-term goals should be the focus of early IAS efforts:

- Secure EPA management commitment.
- Obtain long-term resource commitments and allocate them in conformance with phased migration development concept.
- Establish a comprehensive program management structure to provide full time coordination.
- Identify and coordinate responsibilities.
- Obtain a consensus on management strategy elements and overall scheduling.
- Transform the IAS concept into a feasible operational approach for systems development efforts.
- Address major short-term development issues:
 - Conduct a technical assessment of existing administrative systems capabilities
 - Determine technical standards and architectures
 - Design and implement essential AdminLAN capabilities.
- Develop a plan to incorporate existing systems resources and integrate current development efforts with the IAS approach.

SECTION II: REVIEW SYNOPSES

Attaining these near-term goals, as part of a coherent overall strategy, will provide an effective basis for initiating and sustaining IAS implementation efforts.

INITIATIVES AND ACTIONS:

Refinements were made to the IAS concept in terms of standards, integration, operability, organizational relationships, information architecture, control, and system applications. Its capabilities were described and potential benefits that EPA will achieve by implementing such a system were identified. There was a detailed analysis of IAS components, and issues to be resolved based upon the IAS concept definition were presented. Documenting the issues enabled the Agency to develop an incremental approach for realizing the IAS concept.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

This review has resulted in not only a more clearly defined IAS concept, but also a management plan for achieving it. The refinement of the IAS concept aligned functional activities to Agency missions/goals.

The IAS should provide many benefits to administrative systems users as well as Agency management. Effective implementation of the IAS should result in significant gains in administrative efficiency and productivity in the following areas:

- Increased interoperability between systems and data sharing
- More coordinated systems development efforts
- Decreased data entry through the elimination of redundancies
- Improved data and systems security
- Decreased system maintenance costs
- Improved responsiveness to Agency clients
- Improved data integrity
- Reduced data storage requirements
- Maximum utilization of hardware and software resources.

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FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Review of the Modernization of FINDS

AGENCY REVIEW NUMBER: 91-5

REVIEW CATEGORIES

<input type="checkbox"/> TELECOMMUNICATIONS	<input checked="" type="checkbox"/> END USER COMPUTING
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<input type="checkbox"/> FINANCIAL (A-127)	<input checked="" type="checkbox"/> SERVICE TO THE CITIZEN
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REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

During the past three years, OIRM has actively sought to institute sound data management practices throughout EPA that will improve data accessibility. To move closer to this goal, EPA has recently adopted two Agency-wide standards. The facility identification data standard requires usage of a facility identification code uniquely identifying facilities regulated under Federal environmental laws. The locational data policy specifies the methodology for the collection and documentation of latitude/longitude coordinates, entity description, accuracy, and method for every facility, point, etc. about which data are collected. Implementation of these two standards will have far-reaching effects on the management and maintenance of all EPA data systems, especially the Facility INDEX System (FINDS). FINDS is the Agency's principal repository of facility cross-reference data.

The objective of this review was to study FINDS to ensure that an adequate information architecture is in place for both on-going and

SECTION II: REVIEW SYNOPSES

future systems development efforts. This was to ensure that it is capable of handling changes such as those necessary in order to implement the facility standard and the locational policy.

SYNOPSIS OF REVIEW:

This review was conducted by OIRM with contractor assistance. Data system managers and information policy developers were interviewed to obtain a clear understanding of their needs, constraints, concerns, and program activities. Specifically, OIRM:

- Generated recommendations on steps to be taken to prepare FINDS for implementation of the Facility Identification Data Standard. This included analyzing the implications of linking FINDS to program data systems through synchronized updates.
- Presented a briefing to the Locational Accuracy Task Force (LATF) on options for a central repository of the facility-related latitude/longitude data required by the Locational Data Policy.

A data model clarifying what data is fundamental to facility data integration was created by identifying entity types, their relationships, and attributes to provide a comprehensive definition of the information processed. A process model was created to describe the functions of facility data integration, specifically data integration and quality assurance. These functions were broken down to their most basic level to provide a clear understanding of the functions and activities which characterize facility data integration and the interdependencies which exist between them.

PRIMARY FINDINGS:

Facility data is contained in many EPA databases. In fact, there are as many as 20 major EPA organizational units collecting program-specific facility information, so variations are inevitable. The same facility may be represented by multiple programs using different names, street, addresses, etc. However, FINDS provides a common data element in the various program information systems and an indicator of which systems contain information on a particular facility, making it critical to the Agency's data integration initiative. Access to EPA's environmental location and basic identification data could be viewed as an incentive for the non-EPA community to share its valuable information resources with the Agency.

To develop the refined spatial data needed in GIS projects, EPA must create and maintain a vigorous, viable, nationally supported system able to act as a gateway to all of EPA's facility, discharge and other environmental entity data. Failing to address this need will result in the development of many separate, disconnected, likely incompatible systems. Extremely poor data access and great

FY 1991 IRM REVIEW PROGRAM REPORT

difficulty in doing the data cross checking needed to insure continued data integrity would be the end result.

Vital EPA and State integrated applications above and beyond GIS uses are at stake, including: tracking multi-media inspection activity, implementing multi-program enforcement, conducting risk assessments, and providing simple State access to application and permitting information.

RECOMMENDATIONS:

Environmental regulators increasingly rely on FINDS to determine which program office systems are monitoring a facility; therefore, FINDS must be tightly coordinated with EPA program data sources to be complete, timely and accurate. OIRM must automate the process of reconciling the data in FINDS and program systems.

FINDS should be used as a repository of locational information. As a centralized source of information on each facility, it is an obvious choice for expanded facility information, namely locational data. The current FINDS system was not designed to address the Agency's existing location data needs— only a single latitude longitude may be tracked at the facility level. For example, the capability does not exist to handle locational data at the discharge or operable unit level, although tracking these entities have become critical to many GIS applications. Therefore, FINDS needs to be expanded to allow multiple locations within a facility.

FINDS also needs added system edit facilities to help users spot changes in program system information in order to identify major facility and discharge status changes and possible data errors.

A database of correct street, city, county, and ZIP-code information is needed. Exploration of both Agency and commercial sources of accurate address data is suggested. The LATF recommended using address matching to quickly generate quality facility data that would, until replaced by more refined data, be available for the many spatial analyses underway in the Agency that require locational data on regulated facilities. While address matching is worth pursuing, this technique needs to be thought of as one element of a larger effort aimed at generating and maintaining quality geocoded information for the Agency's inventory of regulated entities.

Another item identified for further consideration was including integration of corporate data as a new requirement or follow-on enhancement for the redesigned FINDS/Dun & Bradstreet system. This would be supportive of the Agency's goal of achieving data integration and data sharing.

SECTION II: REVIEW SYNOPSES

INITIATIVES AND ACTIONS:

OIRM has adopted a systematic approach to implementing the facility identification data standard by prioritizing the implementation schedule in conjunction with the Office of Enforcement. OIRM is committed to implementing the facility identification data standard in partnership with the program offices. An advisory committee of OIRM officials and program office representatives will coordinate implementation of the facility identification data standard.

Implementation guidance on the facility identification data standard has been drafted and is currently being reviewed by client organizations. Following issuance of the implementation guidance, OIRM will begin working with each program office to negotiate the details of their compliance.

Automation has been initiated to reconcile the data in FINDS with that in program systems in order to ensure data quality/consistency. A FINDS data element dictionary has also been developed to accommodate and more fully define locational information in the system.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

Benefits accrued through the modernization of FINDS include providing high quality information services, improving data integrity, and minimizing unnecessary duplication of data through the implementation of the facility identification data standard. The implementation of the standard in FINDS is one of EPA's key data administration initiatives.

FINDS provides the primary mechanism that the Office of Enforcement uses to link data from the various media-specific systems. The modernization of FINDS will lend strength to the Agency's enforcement program since, by using FINDS, the enforcement staff can cross reference facilities and identify facilities in violation of more than one statute. A more effective, multi-media based enforcement program should result in the improved ability of the government to recover costs from responsible parties. The modernization of FINDS supports software modernization, better information management, and improved ADP management, all of which are government-wide priorities.

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FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Review Public Access Program Needs

AGENCY REVIEW NUMBER: 91-6

REVIEW CATEGORIES

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<input type="checkbox"/> FINANCIAL (A-127)	<input checked="" type="checkbox"/> SERVICE TO THE CITIZEN
<input type="checkbox"/> OTHER _____	

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

The demand by the public to access information maintained by the government, particularly environmental information, has increased greatly within the past few years. Congress has also been responding to the public's desire for environmental information through proposing legislation that contains public access requirements for the Agency. These factors combined with a desire by EPA to provide access to environmental information as a means of facilitating the attainment of stated Agency priorities (e.g., targeting health and ecologic risks and pollution prevention) highlight the importance of public access efforts within EPA.

The objective of this review was to improve awareness within EPA about public access issues and generate recommendations for a strategy which will further improve public access to information maintained by EPA. The information gathered for the strategy may also be used by OIRM when developing a public access policy which broadly defines Agency goals and outlines roles and

SECTION II: REVIEW SYNOPSES

responsibilities for OIRM and program offices. The public access strategy will facilitate implementation of the policy.

SYNOPSIS OF REVIEW:

This review was conducted by OIRM with contractor assistance. Basic information on public access and dissemination issues was gained by reviewing documentation including the FY '90 Review of Public Information Access Services. To obtain input to the public access strategy, interviews were conducted with over 40 EPA and other Federal government officials. In the fall of 1990, five public access forums were held to increase the awareness of public access to EPA information mechanisms and issues. Sixty EPA Headquarters senior managers participated in the forums and provided input useful in developing a draft policy and strategy on public access. The forums also provided those managers with the information they would need in order to anticipate and plan for public access activities within their respective programs. Topics discussed in the forums included: availability, format, and quality of information; protection of sensitive information; design of information collections and systems; resource constraints; and third-party involvement in providing access.

PRIMARY FINDINGS:

The concerns raised during the information gathering phase of this project revolved around the desire by EPA personnel to achieve four central objectives. EPA wants to:

- Increase its understanding of its audiences.
- Reach the public in the most effective and efficient manner.
- Make quality data available to the public, within available resources, and ensure confidentiality of sensitive information.
- Coordinate its public access activities at all levels so as to improve efficiency and service.

Forum participants indicated that all of the above concerns need to be addressed in a public access strategy and policy and that the policy should provide general guidance and information on Headquarters and Regional office roles and responsibilities— not prescribe specific actions. They also stressed the importance of a wide variety of policy reviewers.

RECOMMENDATIONS:

The strategy recommendations, which address each of the above findings, seek to capitalize on existing capabilities and strengths offered by offices within EPA, to provide support for public access efforts, and to coordinate services where it will improve the

FY 1991 IRM REVIEW PROGRAM REPORT

efficiency and effectiveness of public access efforts. A summary of the specific recommendations are listed below by issue.

- To better understand its audiences, EPA offices should:
 - Analyze current audiences to determine the types and formats of information desired and the reasons for requesting it.
 - Determine if additional audiences exist who would benefit from information maintained by EPA.
- To reach the public effectively and efficiently, EPA should:
 - Anticipate information demand and plan for public access.
 - Develop a central point of contact.
 - Determine the most appropriate mechanisms for information delivery to particular audiences.
 - Investigate the use of third parties to facilitate information access/dissemination.
 - Make the public aware of information types and locations.
- To assure the quality of publicly available data and to ensure the confidentiality of sensitive information, EPA should:
 - Consider level of quality necessary for publicly available information when establishing information collections and systems.
 - Develop data quality feedback mechanisms.
 - Protect sensitive, proprietary, and/or classified information.
 - Tailor availability of technical information to the user's level.
 - Share proven data quality techniques and develop guidance in this area.
- To improve coordination of public access activities, EPA should:
 - Define the roles of various offices and establish inter-office coordination protocols and techniques.
 - Develop means to review consistency of cross-media information.
 - Encourage information exchange among its staff through forums on specific topics or for specific audiences and through informal interactions.
 - Develop useful, understandable reference tools.
 - Centralize/standardize publication services, where practical.
 - Continue to promote data integration.

INITIATIVES AND ACTIONS:

OIRM is developing a public access strategy and working with selected EPA programs to provide support and guidance on providing public access to EPA's information. The strategy will incorporate the above recommendations.

A public access policy for the Agency has been drafted and is currently out for review. The policy establishes the principles

SECTION II: REVIEW SYNOPSES

governing public access to, and dissemination of, information gathered and maintained by EPA as official Agency information. The policy will be incorporated as a new chapter in the Agency's IRM Policy Manual.

In May 1991, EPA sponsored the first Interagency Conference on Public Access. It offered departmental and agency officials an opportunity to discuss issues surrounding public access to government information, particularly that which is collected or generated and maintained in electronic format, and to share experiences to date. Issues discussed included benefits to the citizen, what the agencies are obligated to provide, how best to provide access, who bears the cost, and to what extent agencies can market their products and provide value added information services.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

This review is in direct support of the government-wide priority of service to the citizen. Implementation of the public access policy and strategy will offer many benefits to EPA, while ensuring fulfillment of Federal public access requirements. Public access to information promotes voluntary compliance with environmental protection standards and also promotes development of a personal environmental ethic for citizens and consumers. Improving the public's access to EPA's information strengthens its relationship with EPA. Improvements in public access activities will promote attainment of EPA's environmental mission by providing a higher quality of information services and by promoting data sharing. By developing the public access policy and strategy, the Agency encourages a proactive response to information demands and promotes efficient handling of information requests.

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FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Review of Strategic Architectural Issues

AGENCY REVIEW NUMBER: 91-7

REVIEW CATEGORIES

<input type="checkbox"/> TELECOMMUNICATIONS	<input checked="" type="checkbox"/> END USER COMPUTING
<input checked="" type="checkbox"/> SOFTWARE MANAGEMENT	<input checked="" type="checkbox"/> SOFTWARE MODERNIZATION
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<input type="checkbox"/> FINANCIAL (A-127)	<input checked="" type="checkbox"/> SERVICE TO THE CITIZEN
<input type="checkbox"/> OTHER _____	

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

EPA's National Data Processing Division (NDPD) reviewed seven strategic architectural issues:

- 1) Local area network (LAN) as a national application platform
- 2) Structured Query Language (SQL)/Relational Database Management System (RDBMS)
- 3) Logical mainframe (LMF) futures and Regional servers
- 4) E-mail and document distribution
- 5) Common user interface
- 6) AS/400 utilization
- 7) Information resources management (IRM) training.

SYNOPSIS OF REVIEW:

The review was conducted by NDPD with contractor assistance. For each of the above issues, a project team composed of representatives from NDPD, OIRM, and other appropriate EPA offices and Regions was established to study the impact each of the issues will have on

SECTION II: REVIEW SYNOPSES

the future vision of information resources in EPA. Detailed workplans for each issue were then established so that progress could be easily tracked.

- 1) LAN as a national application platform— The integration of personal computers, LANs, and LAN file servers offered the Agency an alternative to the traditional host processor platform for applications processing. The Agency, however, had not established the criteria for discerning which applications are ideally suited for a host, versus LAN, environment. The Agency studied and evaluated the feasibility of using LANs as a platform for supporting national applications.
- 2) SQL/RDBMS— Two closely related areas experiencing rapid advances in the information systems industry are client server technologies and RDBMS. SQL has been adopted as the standard method for defining and manipulating data in a relational database environment. The Agency assessed the impact of SQL and RDBMS as a maturing technology in order to decide whether the Agency should commit resources to acquire, implement, train for, and utilize this technology.
- 3) LMF futures and Regional servers— The IBM 4381 minicomputers, or LMFs, in each EPA Region did not reach high utilization levels because of the advent of PCs and PC-LANs. As a result, the LMFs were targeted for removal. Now, outside of the widespread use of VAX minicomputers in laboratories and the proposed AS/400 computers for image processing, the Agency has backed away from the use of minicomputers. The goal of this study was to examine the role of minicomputers in the Agency's future computing architecture.
- 4) E-mail and document distribution— Since 1983, EPA has provided computer-based messaging to its employees, affiliates, and contractors. E-mail uses a centralized mail system architecture; all messages, regardless of destination, are routed through the central mail service. The major advantages of this system architecture are the reliability of its message delivery, the ease of message addressing, and the overall ease of system management especially the maintenance of the mail directory. The Agency evaluated the efficiency and effectiveness of this architecture as services expand to include more document distribution and heavier utilization of premium services, such as access to the *Commerce Business Daily* (CBD).
- 5) Common user interface— Currently, the Agency develops applications for a variety of processing platforms and terminals. Each combination of platform and terminal presents a different interface to the user. That is changing— the information systems

FY 1991 IRM REVIEW PROGRAM REPORT

industry is developing common user interface (CUI) standards. The Agency evaluated the emerging standards to which it is willing to commit, what standards will be developed for program function keys, menus, and help functions, and how many user interface standards will be supported.

- 6) AS/400 utilization— With the award of the image processing contract, there was the potential for an infusion of AS/400 systems into EPA. Given the possibility that these systems might have more capacity than would be required for image processing alone, EPA initiated (1) an examination of the AS/400's role in EPA's computing architecture, (2) an analysis of directions for the integration of image and non-image applications, and (3) development of policies for AS/400 usage within EPA. Issues identified as relevant to these three strategic issues were researched and a consensus built among project team members.
- 7) IRM training— As the Agency continues to expend enormous resources to acquire or enhance its computing architecture, it must also find ways to accelerate productivity in service industries, maintain the dynamism of an aging workforce, and improve the educational preparation of all workers. To address these needs, the Agency examined the environments of EPA and the most promising technological tools and methods that would create the training system capabilities needed for the future.

PRIMARY FINDINGS:

Following are some of the key study findings:

- 1) LAN as a national application platform— LANs can serve effectively as a national application platform. (National applications are Agency resources which are mission critical, involve significant sharing of data, and involve wide-spread use of the application itself.) EPA national applications are suitable for LANs when they successfully: provide reliable and timely access to the user community, provide effective data management regardless of physical location, and have performance unimpaired by the limitations of LAN technology.
- 2) SQL/RDBMS— The relational model has significant inherent strengths which make it the driving force behind the current development of almost all database management systems. Further, SQL standardization is providing vendors of relational technology the opportunity to make their products compatible in a distributed environment that extends across all hardware platforms. SQL/RDBMS utilization in a networked environment is benefiting organizations with significant improvements in decision support, workgroup productivity, performance,

SECTION II: REVIEW SYNOPSES

connectivity and data integrity. Integrating environmental data using RDBMS technology should allow manager, planners, scientists, and users to incorporate data into their analyses which was not previously accessible.

- 3) LMF futures and Regional servers— There is continuing Regional interest in processing work locally, and the number of national and/or mission critical applications run in the Regions are likely to increase in the future. The primary technical consideration was the replacement equipment for the LMF. The major choices were LAN servers or the AS/400, both of which are being evaluated separately as strategic architectural issues 1 and 6 respectively.
- 4) E-mail and document distribution— E-mail is critical to the Agency's business, and ease of use is vital to everyone. The cost for providing e-mail through an outside service is expected to increase significantly, but the Agency can meet its e-mail requirements and reduce costs through an in-house e-mail solution. With the growth of LANs throughout the Agency and the availability of LAN software, use of LAN-based e-mail systems is inevitable; however, current LAN systems *alone* cannot adequately support the Agency's e-mail requirements
- 5) Common user interface— A common interface will significantly reduce the learning curve for new users of applications. There are two primary CUI standards: the Apple Corporation standard and the portion of IBM's systems application architecture (SAA) which deals with common user access. The Apple standard is proprietary, but IBM's is an open standard, available to all vendors.
- 6) AS/400 utilization— While the AS/400 has served well as the introductory platform for EPA's imaging program, several factors identified in the research reduced the attractiveness of the AS/400 as the sole long-term image processing platform for EPA. With the recent emergence of PC-LAN-based imaging systems, there is little continuing justification to use a different hardware architecture solely to support imaging.
- 7) IRM training— To meet future employee skill and information needs, training will have to be available, on demand, at any site for multiple purposes and audiences. This will require centralized planning and decentralized delivery. It must demonstrate a measurable impact on job performance, while controlling costs. The majority of training should be delivered at the worksite— embedded in systems and with individualized help and tutoring sessions. The amount of formal, classroom training will be reduced and chosen with care, specifically for

FY 1991 IRM REVIEW PROGRAM REPORT

programs such as the introduction of major new automated systems. As a rule, it will become more efficient to bring the training to the students, by means of distance-learning technology, either at workstations or at centralized training facilities.

RECOMMENDATIONS:

Many recommendations resulted from the studies. Some of the primary recommendations are listed below.

- 1) LAN as a national application platform— National applications require an Agency-managed LAN utility: complimentary but separate from user LANs. The organizational responsibilities to support LANs as a national application platform must be defined. National applications should be managed through their life cycle to support IRM objectives and use of information. They must be managed in accordance with Federal and Agency IRM policy, and EPA's *System Design and Development Guidance* should be updated to incorporate LANs as an architectural platform. LAN guidance must respond to changes/advances in information technology.
- 2) SQL/RDBMS— EPA should implement SQL/RDBMS technology in three independent but related platforms. A SQL/RDBMS should be implemented for the Agency's mainframe, one for the Agency's Novell LAN file-servers, and one for the Agency's scientific processing platform. In order to strengthen competition, the selections should be related but not dependent.
- 3) LMF futures and Regional servers— The long-term future of the Agency will be better served by a transition from the LMF technology to LAN servers in its Regional Offices.
- 4) E-mail and document distribution— A three-phase approach is recommended for improving e-mail. By March 1992, phase 1 should maintain the centralized system architecture, replace purchased Dialcom service with DEC ALL-IN-1 installed on Agency equipment, and build the foundation for inter-system messaging. By FY 1992/1993, phase 2 should integrate IBM e-mail software, select Agency LAN E-mail software, provide acquisition vehicles, resolve/test X.400 capability with LANs, and gradually integrate LAN users with ALL-IN-1. Phase 3 should support user movement to LAN-based e-mail systems.
- 5) Common user interface— The Agency should prepare to adopt CUI standards to provide guidelines to developers and programmers of EPA applications. The guidelines should define a standard layout both for text and graphics interfaces. These

SECTION II: REVIEW SYNOPSES

guidelines should provide the basis for a common user interface and common user actions that will produce the benefits attributable to these standards.

- 6) AS/400 utilization— In view of the preliminary research results, the AS/400 will probably not be a significant long-term component of the EPA architecture other than for image processing.
- 7) IRM training— EPA should develop embedded training in major information systems in order to increase training at the workstation levels. EPA must place a high priority on establishing quality guidelines for the use of new technologies and employee training methodologies and on expanding training staff skills to exploit the power of individualized, interactive media. EPA should look to a centrally-managed system of career-long tracking for employee development and a comprehensive evaluation monitoring system that will link training effectiveness and job performance. To fully implement an integrated training system, EPA should consider a reassessment of training's role and level of advocacy within the organization and, most importantly, the creation of a commission to oversee the various initiatives that will be required.

INITIATIVES AND ACTIONS:

Numerous actions have been taken in response to the study findings.

- 1) LAN as a national application platform— Activity is now underway to complete the policies and procedures which are necessary to implement EPA's LAN infrastructure to support national applications.
- 2) SOL/RDBMS— The IBM software product DB 2 is being implemented on the EPA mainframes and will fully support RDBMS applications in FY 1993. A competitive procurement was completed, and Oracle was selected for the Novell file servers. The implementation planning is beginning. A competitive procurement for a RDBMS for the scientific platform is in progress.
- 3) LMF futures and Regional servers— The applications that were resident on the LMFs were transferred to the Agency's mainframe or to Regional LANs. The Regional LANs were strengthened with additional hardware and software. The LMFs have been removed. The initiative is now operational.

FY 1991 IRM REVIEW PROGRAM REPORT

- 4) E-mail and document distribution— The conversion of e-mail from Dialcom to DEC ALL-IN-1 occurred in August 1991, and training has been provided for users. Work on phase II and III is now being performed. The emphasis is being placed on the integration of LANs into the e-mail architecture.
- 5) Common user interface— A detailed review of CUI has been completed both within and outside of EPA. EPA is in the process of completing the process of fully adopting the standard.
- 6) AS/400 utilization— The issue has been resolved, and the AS/400 is being used to support image processing.
- 7) IRM training— The Agency's senior management is the process of reviewing the recommendations and deciding which to implement.

NEW ARCHITECTURE ISSUE:

Unix — EPA has accepted the Unix operating system as a step toward vendor independence in its procurement process. This architectural issue which was begun in FY 1992 will address the major issue involved in EPA's transition to Unix.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

Evaluating these strategic architectural issues has allowed the Agency to take a proactive approach to harnessing computing technology for the benefit of EPA. This review has resulted in standard guidance to assist Regions, program offices, etc. on a variety technical decisions. These standards will facilitate the management of information and lessen the types of maintenance required for information systems. Standards are also ultimately helpful to data integration efforts by providing a common basis for all Agency participants.

AGENCY CONTACT

AND PHONE NO.: Don Worley, FTS 629-2740 and Ted Harris, FTS 629-2538

SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

TITLE OF
REVIEW: Review of the Modernization of STORET

AGENCY REVIEW
NUMBER: 91-8

REVIEW CATEGORIES

<input type="checkbox"/> TELECOMMUNICATIONS	<input checked="" type="checkbox"/> END USER COMPUTING
<input checked="" type="checkbox"/> SOFTWARE MANAGEMENT	<input checked="" type="checkbox"/> SOFTWARE MODERNIZATION
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<input type="checkbox"/> FINANCIAL (A-127)	<input checked="" type="checkbox"/> SERVICE TO THE CITIZEN
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REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

Developed in the mid 1960s, the STOrage and RETrieval of Water Quality Information (STORET) system is one of EPA's oldest and largest data systems. STORET contains over 170 million observations relating to surface and ground water quality. The system assists State and EPA officials in making pollution control decisions by providing the capability to store, retrieve, and analyze water quality information.

STORET has evolved slowly over a period of close to 30 years. Much of the current STORET software is customized, homegrown code that is neither well documented nor easy to maintain. Much of the software is being maintained by its original developers. Dependence on custom code understood by a few key staff is risky, impedes maintenance, and lengthens time for incorporation of changes.

FY 1991 IRM REVIEW PROGRAM REPORT

The age of STORET made it an obvious candidate for a review of the methods and software used to maintain the system. Another reason for the review is that STORET faces new challenges as EPA's strategic role in environmental protection expands and as technologies are developed to provide cost-effective and flexible system management and enhanced user support.

The objective of this review was to analyze STORET and its related systems in order to establish the feasibility of modernizing (upgrading) the STORET software. This software modernization is intended to greatly facilitate software maintenance and to provide a software environment that will accommodate future requirements consistent with EPA's long range goals while satisfying current user needs. This study was one of several complementary analyses concerning water quality data systems modernization.

SYNOPSIS OF REVIEW:

The review was led by OIRM with contractor assistance. The first part of the review involved studying and documenting much of the current STORET environment, including technical architecture, historical evolution, and life-cycle cost structure, in order to obtain a technical and historical perspective of the system. This perspective provided a framework useful to OIRM in examining possible future directions for the system. Personal interviews were conducted to assess the frequency and extensiveness of STORET usage. Planning and developmental tools, such as Information Engineering Methodology, were used to determine the scope, need, and steps to be taken in modernizing STORET and its associated water data files.

The modernization options identified by EPA for STORET include introducing commercial off-the-shelf data base management software, upgrading system documentation, and undertaking quality assurance and configuration management actions. Utilizing these options should reduce the dependency on key staff for the system's maintenance and provide a software environment that is consistent with long-term system development objectives while continuing to satisfy the requirements of current STORET users.

PRIMARY FINDINGS:

The conclusions drawn as a result of the historical and financial analyses are as follows:

- Since its beginning, STORET has had to adapt to many different computer architectures and operating systems. Many of the program changes in STORET were made to maintain system functionality when moving to different hardware platforms.
- The 1974-75 migration of STORET files from the Boeing Computer Service facility to the EPA National Computer Center

SECTION II: REVIEW SYNOPSSES

caused a certain amount of disruption in service. As a result, some users chose to develop their own systems. Therefore, the STORET modernization must be carefully managed to reduce the risk of system problems and avoid system disruptions.

- To demonstrate its commitment to supporting STORET, EPA must actively involve external users in the modernization efforts in order to incorporate their input on required functionality and their concerns about continued STORET support.
- Since long-term data acquisition costs are significantly higher than system development costs, EPA must continue to invest the required resources in the modernized STORET to keep users contributing data and to maintain user reliance.
- Office of Water (OW) sponsorship of STORET and the close interrelationships with other OW data systems dictates that objectives, roles, and responsibilities for OIRM and OW be carefully coordinated during the modernization process. Indeed, OW and OIRM are jointly approaching modernization of a broad suite of water quality data systems.
- The close ties between STORET and other data systems will cause significant ripple effects during the modernization process. The process must be closely managed to minimize these impacts.

The study of the feasibility of modernizing STORET resulted in the conclusion that there are several feasible options for maintaining and modernizing STORET. STORET's major data files and functions can and should be modernized so that the system can be maintained after its current system managers retire. If modernization is defined by the three options earlier identified, then:

- A commercial off-the-shelf database management system should be introduced for the major data files and functions.
- Documentation should be improved for system components that are transferred to the commercial database management system, but it is infeasible to complete documentation on all operational components of STORET as it exists today.
- A formal quality assurance and configuration management program should be introduced for system components that are transferred to the commercial database management system.

RECOMMENDATIONS:

As the system manager, OIRM needs to convert STORET's major data files and functions to a commercial database management system in order to keep the system running and to promote the

FY 1991 IRM REVIEW PROGRAM REPORT

Agency's data integration capabilities. However, this review leaves OIRM and OW to face a series of decisions to determine the data, applications, and functionality requirements which must be maintained and improved to ensure the continued viability of STORET and related water quality data systems. Decisions need to be made regarding issues such as:

- Which system components (i.e., data files, applications, and functionality) should be retained?
- Should components be preserved in their current form, as an archival system, transition system, or a new system?
- How large will this database become in the future?
- How can OIRM continue to manage the older historical data and to incorporate new types of data?
- How should OIRM improve user interfaces and training?

INITIATIVES AND ACTIONS:

OIRM and OW have convened an executive board to address these and other issues and to oversee a broad water systems modernization effort.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The more than 170 million observations in STORET make it a valuable repository of historical information whose contents should not be lost, and this modernization should allow them to be preserved in a usable format. If a commercial database management system is introduced, there are major benefits to EPA which result primarily from the system being easier to maintain and manage as an ongoing information system—accepting new data easily, promoting data sharing and integration, having effective system documentation, and allowing efficient ongoing maintenance and operations.

OIRM is committed to systems modernization as a strategic goal which is critical to the Agency's mission. Enhancements placing STORET in line with EPA's systems modernization initiative may attract a new client base which could improve the system's attractiveness and utility substantially. It will also allow the system to keep pace with the new technical directions within the Agency such as geographic information systems, public access, and open systems architecture.

AGENCY CONTACT

AND PHONE NO.: William Muldrow [OIRM], (703) 883-8878 and Bob King [OW], (202) 260-7028

SECTION II: REVIEW SYNOPSES

AGENCY: EPA

TITLE OF REVIEW: Locational Accuracy Task Force Review

AGENCY REVIEW NUMBER: 91-9

REVIEW CATEGORIES

- | | |
|---|--|
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REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

OIRM has a number of major efforts underway to develop policies for sound management of information resources, such as the requirement for the use of CAS (Chemical Abstract Service) numbers to identify chemical substances and the assignment of EPA facility identification codes to regulated facilities and sites. Wide-scale adherence to these policies will assure more uniform and consistent (and thus more compatible) information throughout all environmental programs.

To identify the spatial data accuracy requirements of the Agency, the Locational Accuracy Task Force (LATF) was chartered in the spring of 1990 as a subcommittee of the Information Resources Management Steering Committee. The LATF was chaired by the EPA Region VIII Deputy Administrator and included representatives from all Agency programs and Regions, selected State environmental agencies, and the U.S. Geological Survey. These representatives were both at the senior management and technical

FY 1991 IRM REVIEW PROGRAM REPORT

levels. The LATF was charged with answering the following questions:

- What should be the required minimum level of accuracy for all the Agency's locational data?
- How should the Agency implement this requirement?
- What actions need to be taken, by whom, and by what dates?

SYNOPSIS OF REVIEW:

This review was led by the LATF which conducted its activities through meetings, teleconferences, and other oral and written communications. To answer the questions cited above, the LATF reviewed EPA's inventory of spatial data, relevant spatial data standards of other Federal/State/local governments, and the cost and accuracy of various methods for collecting and converting locational coordinates. The Task Force also addressed other related technical issues such as use of locational data precision requirements, quality assurance and quality control procedures, and requirements for ongoing improvement of locational accuracy.

The Task Force developed a concise description of benefits and costs of implementing minimum locational accuracy requirements Agency-wide. The review resulted in recommendations to the IRM Steering Committee on implementing minimal locational accuracy requirements Agency-wide.

PRIMARY FINDINGS:

The LATF collected and weighed a considerable amount of information on geocoding technologies and programmatic requirements in order to reach the following conclusions:

- The consensus of the LATF is that accurate locational data is essential to risk management and multi-media decision making.
- Unless a clear goal is stated, the data in the Agency's databases will continue to have widely varying levels of accuracy.
- To achieve cross-media integration, some EPA programs, Regions, States, and other Federal agencies have already taken significant steps to develop their own locational accuracy policies.
- No matter which geocoding method is chosen, the high costs of equipment, training, and data collection will make the implementation of a standard expensive for the Agency.

SECTION II: REVIEW SYNOPSES

- Acquiring or updating locational data for old data in order to meet a standard will be too costly and difficult. Thus, the accuracy goal should only apply to data collected after the policy is enacted.
- A strategy is needed to help individual programs comply with the proposed recommendations.

RECOMMENDATIONS:

The LATF formulated five recommendations for submission to the IRM Steering Committee:

1. *Establish a 25-meter goal*— The Agency should set a 25-meter or better (± 1.0 second) level of accuracy. This goal would apply to new data only.
2. *Set GPS as the standard*— The Agency should set global positioning systems (GPS) technology as its standard geocoding method. More analysis is needed to determine the accuracy and costs of geocoding methods, yet it is clear that the future holds the greatest promise for GPS technology. The Agency should concentrate on the large scale acquisition of equipment and on providing training. In the short term, the Agency should support map interpolation.
3. *Define a deviation process*— The Agency should define a process for programs to request exemptions from the policy. Using the data quality objectives (DQO) process, programs obtain a waiver from either the latitude/longitude policy itself, the accuracy target, the method of data collection, and/or the time schedule.
4. *Pursue incentives*— The Agency should pursue financial and information incentives, rather than enforcement actions, to achieve the target accuracy. The potential financial incentives identified by the LATF are: resource “reserve pools,” “tapping” resources, new grant conditions, fiscal year carryover funds, supplemental funds, fees for data use, State/EPA Data Management grants, and State grants. The potential information incentives identified by the LATF are: State/EPA data sharing, public/private partnerships, and common ground with regulated facilities.
5. *Upgrade FINDS*— The Agency should upgrade the Facility INDEXing System (FINDS), using address matching to populate the database with locational coordinate data. The cost of the effort is estimated at this time to be \$2 million.

FY 1991 IRM REVIEW PROGRAM REPORT

INITIATIVES AND ACTIONS:

EPA is proceeding with all five recommended actions. The recommendations have been adopted by the IRM Steering Committee, endorsed by the Deputy Administrator, and enacted as policy. EPA's Locational Data Policy, originally established in May 1990, was amended in April 1991 to reflect the recommendations of the LATF. The primary purpose of the policy is to ensure the collection of uniform, fully documented locational identification information in all relevant data collection activities pursuant to EPA's many environmental programs. Enacting the policy will improve the overall quality and ensure the compatibility of spatial data throughout EPA.

Guidance has been drafted to help the Agency implement the locational data policy. The draft guidance has been reviewed by the LATF, OIRM/NDPD, and the Agency GIS community. Future versions will undergo more comprehensive review within the Agency and by State environmental agencies.

OIRM is also completing a study which will provide definitive costs, accuracies, and limitations of various geocoding methods. Results of the geocoding study will be reflected in the next draft of the policy implementation guidance.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The review established a more focused Locational Data Policy and promoted Agency-wide dialogue about the policy and its implementation. Although full implementation of the locational data policy will require concerted effort by all parts and partners of the Agency over a number of years, the anticipated benefits of consistently documented locational data are tremendous and well worth the required effort.

The most important benefit is that it will result in a common basis for comparing and evaluating EPA's program data, so the Agency can achieve truly integrated environmental analysis, planning, and management. Data from all programs will be able to be presented on maps, allowing visual association of pollution sources to their potential impacts on environmentally vulnerable sites. This kind of association can help define environmental priorities, target monitoring and compliance programs, and fashion future strategic plans for protecting environmentally threatened areas. The review also protects EPA's tremendous investment in data collection. Collecting good coordinates means data can be reused rather than being recollected. The review has eliminated the need for much duplicative and expensive data collection.

SECTION II: REVIEW SYNOPSES

AGENCY CONTACT
AND PHONE NO.: Steve Hufford, (202) 260-5914

FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Analysis of Computer Security Awareness Program and Information Security Program Requirements

AGENCY REVIEW NUMBER: 91-10

REVIEW CATEGORIES

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| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

The Computer Security Act of 1987 requires that all Federal agencies identify sensitive data processing systems and installations and prepare security plans describing the controls in place to protect sensitive information. EPA prepared such plans and submitted them to the National Institute of Standards and Technology (NIST) and the National Security Agency (NSA) for review. The Computer Security Act also recognizes the need to improve security of the Federal government's computer systems by establishing new programs in computer security awareness, training, planning, and other activities to protect information. It requires that each Federal agency "provide for the mandatory periodic training in computer security awareness and accepted computer security practices of all employees who are involved with the management, use, or operation of each Federal computer system within or under the supervision of that agency."

SECTION II: REVIEW SYNOPSES

This review was composed of two studies. The objective of the first study was to determine how well the NIST/NSA security plan recommendations have been implemented and to recommend an action plan for accomplishing any remaining requirements. The objective of the second study was to analyze the effectiveness of, and provide recommendations for improving, the Agency's computer security awareness program.

SYNOPSIS OF REVIEW:

Both studies were conducted by OIRM with contractor assistance. The security plan study involved reviewing the security plans for sensitive installations and systems and evaluating these plans in the context of the NIST/NSA recommendations. In addition, an approach for conducting and/or documenting risk assessments and certifying EPA systems was developed. The computer security awareness program study evaluated activities performed, resources available, and other initiatives in progress, within EPA and in other agencies. Both studies identified improvements which could be made to the information security program.

PRIMARY FINDINGS:

OIRM has a solid foundation for administering an effective information security program. Generally, the NIST/NSA recommendations may be readily incorporated into the existing plans. The availability of detailed procedural guidelines, in conjunction with having a security specialist available to provide assistance, should greatly enhance compliance with the information security program's requirements.

Conducting specified minimum computer security awareness program activities and ensuring attendance by all EPA personnel can provide an enhanced level of computer security awareness and can satisfy the goals and objectives of the Computer Security Act.

RECOMMENDATIONS:

More extensive security awareness and training will benefit EPA's information security program. Sensitive installations and systems need to be certified Agency-wide. Mechanisms must be established for ensuring that program requirements are complied with throughout the Agency.

To enhance the computer security education program, it was recommended that EPA develop the security training packages suggested by NIST. Upon development of the computer security awareness briefing materials, EPA will then be able to conduct new employee and annual security awareness training.

FY 1991 IRM REVIEW PROGRAM REPORT

INITIATIVES

AND ACTIONS:

In response to the review and to improve the Agency's Computer Security Awareness Program, OIRM developed five computer security awareness briefing packages tailored to specific audiences (i.e., SIRMOS, system managers, personal computer [PC] site coordinators, PC end-users, and mainframe users). Senior information resource management officials (SIRMOS) and system managers have already received training on the information security program. Risk analysis workshops were conducted to provide instruction on how to perform a risk analysis.

MAJOR BENEFITS & ACHIEVEMENTS

OF THE REVIEW:

These studies were important in guiding continued compliance with the Computer Security Act. The studies evaluated the plans and programs that the Agency has in place to effectively secure its computers and the information in those computers. The studies were also important in ensuring that the Agency has taken adequate measures to institutionalize an atmosphere which emphasizes the importance of securing the Agency's information resources.

AGENCY CONTACT

AND PHONE NO.: Steve Hufford, (202) 260-5914

SECTION II: REVIEW SYNOPSES

AGENCY: EPA

TITLE OF REVIEW: Superfund Cost Recovery Image Processing System Review

AGENCY REVIEW NUMBER: 91-11

REVIEW CATEGORIES

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REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

The Superfund Cost Recovery Image Processing System (SCRIPS) is an automated system that captures and stores, on optical disk, digitized images of cost recovery documents that may be retrieved and used in cost recovery litigation. The Agency's cost recovery efforts require the timely compilation of voluminous paper records used to support judicial proceedings. SCRIPS was designed in particular to assist the financial management offices in compiling documentation associated with cost recovery of expenses incurred at the Superfund sites.

The purpose of this review is to provide an assessment of the SCRIPS pilot program, which was conducted during FY 1991. The pilot program provided an opportunity to implement and test SCRIPS in an actual operational environment using active Superfund site files.

FY 1991 IRM REVIEW PROGRAM REPORT

SYNOPSIS OF REVIEW:

This review was conducted by EPA's Superfund Accounting Branch (SAB), Financial Management Division (FMD). In assessing the efficiency and effectiveness of the SCRIPS pilot program, the review determined whether the SCRIPS program objectives were achieved during the pilot program and evaluated the overall acceptance of SCRIPS in the user community.

PRIMARY FINDINGS:

The SCRIPS pilot program was very successful— by FY 1991 year-end, SCRIPS was fully operational in Regions 2, 4, and 7; at the National Contracts Payment Division in RTP, NC; and in the Headquarters and Cincinnati Finance Offices. SCRIPS successfully fulfilled the primary objective of reducing the manual cost recovery processes in the Regional and special finance offices and providing faster response times in assembling Superfund cost recovery packages. Preparation of a cost recovery package now takes several days, rather than several weeks.

SCRIPS has also achieved the objective of improving financial management efficiency by reducing paper-based records, thereby alleviating storage space problems. Using SCRIPS, the financial management offices can eliminate the active site file cost documentation which occupies a large amount of storage space.

SCRIPS also supports the Regional enforcement offices by providing an on-screen feature that allows "blocking out" or redaction of Confidential Business Information and Privacy Act data on cost recovery documentation. A large percentage of cost recovery documents require redaction, and this feature provides enforcement a more efficient manner in which to allocate its time and resources.

Overall, users have been satisfied with SCRIPS performance and have enthusiastically participated in generating ideas for system enhancements. Major hardware and software enhancements have included a "large document" scanning feature, improved bar code readers, and higher capacity printers. These enhancements have produced a system that is much more responsive to the users' needs by simplifying the storage and retrieval of cost recovery documents.

RECOMMENDATIONS:

With contractor support, SAB will be providing recommendations on a long-term strategic plan for SCRIPS as new technologies evolve. These alternatives would make SCRIPS even more responsive, more cost-effective, and better linked with other EPA systems, including the Office of Solid Waste and Emergency Response's image processing initiative for Superfund program records.

SECTION II: REVIEW SYNOPSSES

INITIATIVES AND ACTIONS:

EPA's major initiatives for the upcoming year include:

- Implement SCRIPS in the remaining Regions; it has been proposed that SCRIPS be fully operational in all EPA Regional finance offices by FY 1992 year-end.
- Complete scanning and storing of at least 75% of Agency-wide cost recovery documentation.
- Complete and implement nationwide an interface between SCRIPS and the Agency Superfund Cost Organization and Recovery Enhancement System (SCORES). (SCORES supersedes the Cost Development Management System (CDMS) as the Agency's automated system for preparing Superfund financial reports for litigation/enforcement.) The SCORES/SCRIPS interface is targeted for Beta testing in Region 5 beginning in October 1991.
- Complete evaluation and analysis of the proposal to decentralize SCRIPS to the Regional financial management offices.
- Develop standardized Regional SCRIPS operating procedures; those Regions which have unique requirements or operating environments may require specific procedures designed only for that Region.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

Implementing SCRIPS in all Regional offices is critical to FMD's ability to support the Superfund cost recovery and enforcement programs in a timely manner. Regional resources for cost recovery and enforcement are limited, and SCRIPS will permit much more effective use of those resources by automating redaction and reconciliation activities and freeing staff from other clerical chores.

**AGENCY CONTACT
AND PHONE NO.:** Bob Cluck, (202) 260-6890

FY 1991 IRM REVIEW PROGRAM REPORT

AGENCY: EPA

TITLE OF REVIEW: Detailed Evaluation of IFMS, EPAYS, and ADCR

AGENCY REVIEW NUMBER: 91-12

REVIEW CATEGORIES

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| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

The Financial Management Division (FMD) is responsible for ensuring that financial systems meet the requirements of OMB Circular A-127. At least every three years, the Agency must perform a detailed review of each financial system. These detailed reviews encompass transaction testing to ensure that the systems perform the required transactions accurately.

EPA's official accounting system, the Integrated Financial Management System (IFMS) was implemented in 1989 and is continuing to be modified and upgraded to meet Agency and Federal requirements. The Automated Document Control Register (ADCR) is used to record the commitments and obligations of current fiscal year funds while the EPA Payroll-Personnel System (EPAYS) performs personnel and payroll functions. FMD performed reviews of each of the three systems to verify that the systems meet Federal requirements and EPA needs for financial transaction processing. Each evaluation was conducted in accordance with OMB Circular A-

SECTION II: REVIEW SYNOPSES

127, section IV of the Federal Managers' Financial Integrity Act (FMFIA), and the Joint Financial Management Improvement Program (JFMIP) financial system requirements.

SYNOPSIS OF REVIEW:

Specific areas to be tested were defined in a test plan. The test plan was developed using A-127 requirements, as well as standards defined by the JFMIP's Core Financial System Requirements, Personnel/Payroll System Requirements, and Travel System Requirements. Testing covered areas such as accounts payable, accounts receivable, general ledger, budget execution/funds control, travel, time and attendance processing, leave processing, pay processing, reporting, and internal controls.

Actual transaction testing involved offices located at EPA Headquarters. Testing of IFMS and EPAYS transactions was conducted primarily in the Headquarters Accounting Operations Branch (HAOB), while ADCR testing was conducted in three allowance holder offices: Office of the Inspector General, the Financial Management Division, and the Office of Policy, Planning, and Evaluation. Samples of transactions were selected from current and historical transactions from the current fiscal year. These samples were selected to include a variety of transactions that would test the various processing functions of the systems. In addition to transaction testing, interviews were conducted with key personnel in the responsible offices within FMD and the various offices where transaction testing was accomplished.

At the conclusion of the review, system-specific reports were prepared which presented findings and recommended actions to correct each. The reports are supported by detailed work papers for each system, containing interview notes as well as documentation of the transaction testing sample and results.

PRIMARY FINDINGS:

While the reviews identified several findings that were considered non-conformances for each of the systems, none of the findings were classified as material weaknesses. The non-conformance items are defined as those which do not fully comply with the OMB and JFMIP requirements. In addition to non-conformances, the reviews identified several efficiency items. These identify potential areas for system enhancements, either automated or manual, which would improve the efficient operation of the systems.

RECOMMENDATIONS:

For each non-conformance or efficiency item, a recommendation for correcting the problem was presented. Several of the IFMS findings are areas that will be corrected with new releases of the vendor

FY 1991 IRM REVIEW PROGRAM REPORT

software which are expected soon. The majority of EPAYS findings encompassed only limited numbers of transactions and recommendations involve implementation of minor changes or edit checks.

INITIATIVES AND ACTIONS:

FMD is developing action plans to address the various findings. In addition, FMD is proceeding with implementation of IFMS software upgrades to resolve several of the reported findings. A requirements analysis of funds management in the Agency is currently being conducted. Included in this study will be an evaluation of ADCR capabilities. Results of this study may address some or all of the findings identified in the ADCR report.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The reviews confirmed that IFMS, EPAYS, and ADCR perform financial functions for the Agency that are in general conformance with the Federal requirements as defined by OMB and JFMIP. The reviews also identified or verified several areas that need attention to improve the efficient operation of the systems.

**AGENCY CONTACT
AND PHONE NO.:** Sun Wong, 202-260-9447

SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

TITLE OF REVIEW: Review of Availability of Services for Independent Verification and Validation Activities

AGENCY REVIEW NUMBER: 91-13

REVIEW CATEGORIES

- | | |
|---|--|
| <input type="checkbox"/> TELECOMMUNICATIONS | <input type="checkbox"/> END USER COMPUTING |
| <input checked="" type="checkbox"/> SOFTWARE MANAGEMENT | <input type="checkbox"/> SOFTWARE MODERNIZATION |
| <input type="checkbox"/> INFORMATION MANAGEMENT | <input type="checkbox"/> ELECTRONIC FILING |
| <input type="checkbox"/> MAJOR INFORMATION SYSTEMS | <input type="checkbox"/> OTHER INFORMATION SYSTEMS |
| <input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506 | <input type="checkbox"/> ADP MANAGEMENT |
| <input type="checkbox"/> SECURITY/PRIVACY | <input type="checkbox"/> RECORDS MANAGEMENT |
| <input type="checkbox"/> MAIL MANAGEMENT | <input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123) |
| <input type="checkbox"/> FINANCIAL (A-127) | <input type="checkbox"/> SERVICE TO THE CITIZEN |
| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

To determine whether system managers in the Office of Solid Waste and Emergency Response (OSWER) have adequate access to the expertise needed to conduct independent verification and validation (IV&V) activities for their applications.

SYNOPSIS OF REVIEW:

This informal review was conducted by the OSWER Senior Information Resource Management Official (SIRMO). It was based on extensive personal knowledge of OSWER application development projects and discussions with various system managers.

PRIMARY FINDINGS:

The SIRMO concluded OSWER system managers were aware of the need to conduct independent verification and validation activities throughout the system life-cycle. However, they often had problems

FY 1991 IRM REVIEW PROGRAM REPORT

obtaining the independent expertise required. In general, in-house support was rarely available and obtaining qualified contractor support was a lengthy and resource-intensive process.

RECOMMENDATIONS:

The SIRMO recommended the Information Management staff, an Assistant Administrator-level organization charged with policy development and oversight, obtain a mission contract for independent verification and validation support.

INITIATIVES AND ACTIONS:

Contractor support was obtained and an IV&V methodology developed. The methodology covers IV&V strategy formation, project planning, IV&V execution planning, execution, and post-project evaluation. It requires that system managers work closely with the IV&V contractor to clearly define the goals, scope, life-cycle phases, products, quality factors, and acceptance criteria for each IV&V project. It also discusses the various automated and manual tools and techniques which will be employed to carry out the various verification and validation reviews, inspections, and tests.

MAJOR BENEFITS & ACHIEVEMENTS

OF THE REVIEW: Readily available support is now available to OSWER application system managers. In addition, OSWER management can now be assured that they are obtaining objective, consistent, thorough verification and validation of the organization's application systems.

AGENCY CONTACT

AND PHONE NO.: Asa R. Frost, Jr. (202) 260-6760

SECTION II: REVIEW SYNOPSES

AGENCY: EPA

TITLE OF REVIEW: Review of the CLEANUP Information Bulletin Board System

AGENCY REVIEW NUMBER: 91-14

REVIEW CATEGORIES

- | | |
|---|--|
| <input checked="" type="checkbox"/> TELECOMMUNICATIONS | <input checked="" type="checkbox"/> END USER COMPUTING |
| <input type="checkbox"/> SOFTWARE MANAGEMENT | <input type="checkbox"/> SOFTWARE MODERNIZATION |
| <input checked="" type="checkbox"/> INFORMATION MANAGEMENT | <input type="checkbox"/> ELECTRONIC FILING |
| <input type="checkbox"/> MAJOR INFORMATION SYSTEMS | <input type="checkbox"/> OTHER INFORMATION SYSTEMS |
| <input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506 | <input type="checkbox"/> ADP MANAGEMENT |
| <input type="checkbox"/> SECURITY/PRIVACY | <input type="checkbox"/> RECORDS MANAGEMENT |
| <input type="checkbox"/> MAIL MANAGEMENT | <input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123) |
| <input type="checkbox"/> FINANCIAL (A-127) | <input checked="" type="checkbox"/> SERVICE TO THE CITIZEN |
| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

To determine whether the CLEANUP Information (CLU-IN) bulletin board system, developed by the Office of Solid Waste and Emergency Response (OSWER), is providing effective and efficient support for the transfer of technical information within the hazardous waste clean-up community.

SYNOPSIS OF REVIEW:

The review was conducted by OSWER. It covered the current status of, and future plans for, CLU-IN in light of current and future requirements. The review addressed planning, control, funding, and contracting issues, as well as CLU-IN's functional capabilities, performance, and user support services. The review team conducted interviews with management, surveyed the user community, and performed extensive hands-on testing of the software and inspection of user and technical documentation.

FY 1991 IRM REVIEW PROGRAM REPORT

PRIMARY FINDINGS:

The review concluded that the management and operation of CLU-IN was satisfactorily meeting most current and expected requirements, and that the bulletin board filled an important technical communications niche. However, the review also found that CLU-IN was not fulfilling its entire potential.

RECOMMENDATIONS:

The following recommendations were presented for management consideration:

- Continue efforts to expand the user community.
- Continue efforts to improve telecommunications access.
- Make minor improvements to functionality and "user friendliness."
- Broaden the scope and timeliness of data content.
- Provide more training opportunities.

INITIATIVES AND ACTIONS:

Several of the recommendations supported the continuation of actions already underway. The other recommendations are currently under management consideration.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

The review provided reassurance to management that bulletin board technology can support the transfer of technology information, and that this important resource was managed satisfactorily.

AGENCY CONTACT

AND PHONE NO.: Asa R. Frost, Jr. (202) 260-6760

SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

TITLE OF REVIEW: Review of Information Security Needs in OSWER Life-Cycle Guidance

AGENCY REVIEW NUMBER: 91-15

REVIEW CATEGORIES

- | | |
|---|--|
| <input type="checkbox"/> TELECOMMUNICATIONS | <input type="checkbox"/> END USER COMPUTING |
| <input type="checkbox"/> SOFTWARE MANAGEMENT | <input type="checkbox"/> SOFTWARE MODERNIZATION |
| <input checked="" type="checkbox"/> INFORMATION MANAGEMENT | <input type="checkbox"/> ELECTRONIC FILING |
| <input type="checkbox"/> MAJOR INFORMATION SYSTEMS | <input type="checkbox"/> OTHER INFORMATION SYSTEMS |
| <input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506 | <input type="checkbox"/> ADP MANAGEMENT |
| <input checked="" type="checkbox"/> SECURITY/PRIVACY | <input type="checkbox"/> RECORDS MANAGEMENT |
| <input type="checkbox"/> MAIL MANAGEMENT | <input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123) |
| <input type="checkbox"/> FINANCIAL (A-127) | <input type="checkbox"/> SERVICE TO THE CITIZEN |
| <input type="checkbox"/> OTHER _____ | |

REVIEW SYNOPSIS

OBJECTIVES OF REVIEW:

To determine whether additional guidance is needed to ensure the integrity, availability, confidentiality, and appropriate use of Office of Solid Waste and Emergency Response (OSWER) applications system resources.

SYNOPSIS OF REVIEW:

This informal review was conducted by the OSWER Senior Information Resource Management Official (SIRMO). It was based on extensive personal knowledge of OSWER application development projects, on-going applications system operations, and Federal and EPA information security policy and guidelines.

PRIMARY FINDINGS:

The SIRMO concluded that OSWER application system managers did not have ready access to guidance which specifically integrated

FY 1991 IRM REVIEW PROGRAM REPORT

Federal oversight and EPA security requirements with existing OSWER system life-cycle management guidance.

RECOMMENDATIONS:

The SIRMO recommended the Information Management staff, an Assistant Administrator-level organization charged with policy development and oversight, develop security management guidance to supplement OSWER's directive on system life-cycle management.

INITIATIVES AND ACTIONS:

The Information Management staff developed comprehensive guidance for application system managers which describes security management objectives, decisions, and activities at every OSWER application system life-cycle phase and stage. The guidance ensures compliance with Federal oversight agency and EPA policies, as well as the implementation of cost-effective security measures throughout the life-cycle.

MAJOR BENEFITS & ACHIEVEMENTS OF THE REVIEW:

OSWER application system managers will have access to this guidance early in FY 1992. OSWER management will be assured of a consistent, effective approach to security management which complies with all oversight requirements.

AGENCY CONTACT

AND PHONE NO.: Asa R. Frost, Jr. (202) 260-6760

SECTION II: REVIEW SYNOPSSES

AGENCY: EPA

TITLE OF
REVIEW: Summary of Telecommunications Accomplishments

AGENCY REVIEW
NUMBER: 91-16

REVIEW CATEGORIES

<input checked="" type="checkbox"/> TELECOMMUNICATIONS	<input type="checkbox"/> END USER COMPUTING
<input type="checkbox"/> SOFTWARE MANAGEMENT	<input type="checkbox"/> SOFTWARE MODERNIZATION
<input type="checkbox"/> INFORMATION MANAGEMENT	<input type="checkbox"/> ELECTRONIC FILING
<input type="checkbox"/> MAJOR INFORMATION SYSTEMS	<input type="checkbox"/> OTHER INFORMATION SYSTEMS
<input checked="" type="checkbox"/> COMPLIANCE WITH PRA §3506	<input checked="" type="checkbox"/> ADP MANAGEMENT
<input checked="" type="checkbox"/> SECURITY/PRIVACY	<input type="checkbox"/> RECORDS MANAGEMENT
<input checked="" type="checkbox"/> MAIL MANAGEMENT	<input type="checkbox"/> INTERNAL CONTROL REVIEW (A-123)
<input type="checkbox"/> FINANCIAL (A-127)	<input type="checkbox"/> SERVICE TO THE CITIZEN
<input type="checkbox"/> OTHER _____	

REVIEW SYNOPSIS

NOTE: While 91-16 is not a typical review, on the order of the other reviews encapsulated in this section, this year's telecommunications accomplishments are of sufficient importance to the Agency's operations that they shall be mentioned here.

ACHIEVEMENTS: EPA's National Data Processing Division (NDPD) had the following telecommunications accomplishments in FY 1991:

National Network Backbone Upgrade:

During FY 1991, EPA positioned its national network configuration and operations for substantial performance improvements and savings in mid- and long-term telecommunications costs through a major backbone upgrade, allowing direct in-house access to Agency central computing systems and electronic mail. A limited extension of the existing contract with Tymnet supports access from overseas and other remote locations. Over 90 percent of Agency transactions

FY 1991 IRM REVIEW PROGRAM REPORT

are handled by the newly expanded and significantly enhanced national network. In addition to all major EPA sites, each State has been provided with a "point of presence" from its designated central computing facility to EPA's National Computer Center (NCC) in Research Triangle Park (RTP), NC.

National Video Teleconferencing Implementation:

During FY 1991, NDPD implemented a nationwide EPA video teleconferencing network that includes dedicated video facilities at Agency Headquarters, Research Triangle Park, NC, all ten Regional Offices, all major laboratories, and the National Enforcement Investigations Center in Denver, CO. The sites are connected through the Compressed Video Teleconferencing Service (C-VTS) on FTS2000 System A. The only Agency video teleconferencing rooms that were not operational at the end of FY 1991 were those in Regions 1 (Boston, MA), 3 (Philadelphia, PA), 6 (Dallas, TX), and 7 (Kansas City, KS) and NEIC. These sites, however, will be operational by the end of calendar year 1991. The implementation of this the video teleconferencing service has provided significant benefits to the Agency. It has allowed geographically diverse personnel to participate in meetings of mutual interest without the usually high associated travel costs. To better serve its customers, the Telecommunications Branch began development in FY 1991 of a video teleconferencing user manual to be distributed throughout the Agency in FY 1992.

National Electronic Messaging System Conversion:

In August 1991, EPA converted to Digital Equipment Corporation's (DEC's) ALL-IN-1 as its nationwide electronic messaging system. ALL-IN-1, a well-established and widely used product, was installed on a dedicated DEC VAX computer at EPA National Computer Center (NCC) in Research Triangle Park, NC. NDPD provided extensive system testing, user training, PC script file conversion, and user notification during the transition to ALL-IN-1 from Agency's previous nationwide electronic messaging system, Dialcom.

Audio Teleconferencing System Expansion:

In August 1991, the Telecommunications Branch added 50 ports to the Agency's MultiLink audio teleconferencing system at the WTC to support EPA's growing conference calling requirements. In FY 1991, EPA's Audio Teleconferencing Center supported over 6,400 conference calls on its multipoint bridges. Also during the year, the

SECTION II: REVIEW SYNOPSES

Telecommunications Branch developed an audio teleconferencing user manual to be distributed throughout the Agency in early FY 1992.

Secure Telecommunications Center Operations:

EPA's Secure Telecommunications Center (STCC), located in Waterside Mall, successfully completed its first full year of operations in FY 1991. The Center provides secure facsimile and messaging services, both domestic and international, to authorized Agency personnel. During the fiscal year, the Center received and distributed to selected program offices over 28,060 Department of State (DOS) cables.

Transportable Terminal Implementations:

The Telecommunications Branch in FY 1991 put into operation five International Maritime Satellite (INMARSAT) transportable terminals for alternative communications support of Emergency Response programs in Region 4 and 6. These terminals are also available for use by Agency personnel anywhere in the U.S. and abroad.

Local Area Network (LAN) Implementations:

Local area networks (LANs) have become an integral part of the Agency communications strategy. Each major EPA site (Headquarters, Regional Offices, research facilities) has been configured as a campus network around a "backbone" local transmission facility. At EPA Headquarters in FY 1991, the Telecommunications Branch installed LANs serving more than 1,000 users in many program offices.

Services common to all campus LANs are being consolidated to one national system for information resource sharing: Value-Added Backbone Services (VABS). During FY 1991, EPA Headquarters, all ten Regional Offices, the Cincinnati and RTP nodes, and the National Enforcement Investigations Center (Denver) were all furnished with VABS servers. Installation of this new system, completed in September, provides a platform for low-maintenance national applications distribution and for centrally managed LAN administration.

The Agency's National Locator was recently installed as the first national VABS application. At the end of FY 1991, the National

FY 1991 IRM REVIEW PROGRAM REPORT

Locator database neared completion. The database will contain a directory of 95 percent of Agency personnel nationwide.

Washington Interagency Telecommunications System (WITS) Cutover:

The Telecommunications Branch oversaw the successful cutover in August 1991 of more than 9,000 EPA telephone lines at Waterside Mall (WSM) and the Fairchild Building to the new Washington Interagency Telecommunications System (WITS) dial-tone service. This radical restructuring of the Agency's telecommunications infrastructure took place with no significant disruption in service. C&P Telephone provides WITS service to EPA and other Federal agencies under a GSA contract. At cutover, all WSM and Fairchild phone numbers were changed to a new "260" prefix. Cutover of EPA's Crystal Station 1 and Crystal Mall offices to WITS is scheduled for the first quarter of FY 1992.

Headquarters Voice Messaging System Implementation:

In November 1990, the Telecommunications Branch oversaw implementation of an Octel ASPEN voice mail system at the Washington Information Center (WIC). By the end of FY 1991, Telecommunications had provided voice mailboxes and training to approximately 2,500 users at Waterside Mall, Fairchild Building, and Crystal Station 1. Custom voice-messaging applications had also been created for some Headquarters program offices. A chargeback and billing system was established to recover system costs from program offices. In a survey conducted in the last quarter of FY 1991, users reported overwhelmingly favorable opinions of the voice messaging service.

In FY 1992, other Headquarters sites will be cut over to the ASPEN service, including Crystal Mall 2, the CWA Building (501 3rd Street, NW), and swing spaces. Telecommunications also plans to enhance the service with additional software features, such as integrated facsimile and interactive voice response.

Headquarters Integrated Services Digital Network (ISDN) Implementation:

In FY 1991, the Telecommunications Branch began planning and testing for the implementation of Integrated Services Digital Network (ISDN) enhanced voice and some data services at Headquarters. An ISDN testing facility was established in the Agency's Washington Telecommunications Center (WTC). In

SECTION II: REVIEW SYNOPSES

addition, the Agency awarded a contract to Bell Atlantic Federal Systems for AT&T ISDN voice terminals, network termination equipment, and power supplies. In FY 1992, the Telecommunications Branch will oversee implementation of ISDN terminals and lines over 1,000 users at various Headquarters program offices.

Headquarters Telephone Directories Publication:

During FY 1991, the Telecommunications Branch published two EPA Headquarters telephone directories: the Autumn 1990 edition in October 1990 and the WITS Edition in August 1991.

Washington Telecommunications Center Implementation:

EPA's Washington Telecommunications Center (WTC) opened in January 1991. The WTC provides a consolidated facility for Headquarters telecommunications management, analysts, operational, and technical personnel. The WTC includes the Audio Teleconferencing Center, Unclassified Communications Center, Telecommunications Help Desk, ISDN Testing Laboratory, user and technical training facilities, and a technical library.

MAJOR BENEFITS OF THE

ACHIEVEMENTS: The benefit of these achievements is that they seek to ensure that the Agency has access to the best available technology to assist the Agency while accomplishing its mission of protecting the environment.

AGENCY CONTACT

AND PHONE NO.: David Bittenbender, (919) 541-0849

Section III: PRA §3506 Compliance

Addressing the requirements of Section 3506 of the Paperwork Reduction Act is a central part of the EPA IRM program. Rather than developing a single IRM review to evaluate §3506 compliance, the Agency made compliance evaluation an integral part of the overall review process by weaving it into many different reviews completed during FY 1991. By evaluating compliance in terms of a set of reviews that are also designed to assess progress in achieving government-wide and Agency-specific priorities, EPA obtained a more concrete picture of its status vis-a-vis §3506.

Agency compliance with §3506 is described in detail in the sections that follow. The discussion follows the overall organization of §3506, as documented in Table 2, dealing with each of the requirements sequentially. The synopses for the reviews referenced in this Section were contained in Section II.

§3506 (a): Effective, Efficient Information Management Activities; Compliance with Information Policies, Principles, Standards, and Guidelines Prescribed by the Director

Several of the reviews focused on evaluating the effectiveness of information management activities. The *Analysis of Computer Security Awareness Program and Information Security Program Requirements* and the *Review of Information Security Needs in OSWER Life-Cycle Guidance* evaluated the Agency's information security program and the guidance available to it. In the records management area, the review program included a comprehensive group of reviews: *Information Collection Review — Improvements to the Hazardous Waste Manifest System*, *Review of Superfund Document Management Initiatives*, and *Review of the Integrated Administrative System Concept*.

Several reviews dealt with the important information management activity of end-user computing: *Information Collection Review — Improvements to the Hazardous Waste Manifest System*, *Review of the Integrated Administrative System Concept*, *Review of the Modernization of FINDS*, *Review Public Access Program Needs*, *Review of Strategic Architectural Issues*, *Review of the Modernization of STORET*, and the *Review of the CLEANUP Information Bulletin Board*. The *Review of the Integrated Administrative System Concept* and the *Review of Availability of*

SECTION III: PRA §3506 COMPLIANCE

Table 2.

PAPERWORK REDUCTION ACT §3056 Federal agency responsibilities

(a) Each agency shall be responsible for carrying out its information management activities in an efficient, effective, and economical manner, and for complying with the information policies, principles, standards, and guidelines prescribed by the Director.

(b) The head of each agency shall designate, within three months after the effective date of this Act, a senior official or, in case of military departments, and the Office of the Secretary of Defense, officials who report directly to such agency head to carry out the responsibilities of the agency under this chapter. If more than one official is appointed for the military departments the respective duties of the officials shall be clearly delineated.

(c) Each agency shall—

(1) systematically inventory its major information systems and periodically review its information management activities;

(2) ensure its information systems do not overlap each other or duplicate the systems of other agencies;

(3) develop procedures for assessing the paperwork and reporting burden of proposed legislation affecting such agency;

(4) assign to the official designated under subsection (b) the responsibility for the conduct of and accountability for any acquisitions made pursuant to a delegation of authority under section 111 of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 759);

(5) ensure that information collection requests required by law or to obtain a benefit, and submitted to nine or fewer persons, contain a statement to inform the person receiving the request that the request is not subject to the requirements of section 3507 of this chapter;

(6) implement applicable Government-wide and agency information policies, principles, standards, and guidelines with respect to information collection, paperwork reduction, statistical activities, records management activities, privacy and security of records, sharing and dissemination of information, acquisition and use of information technology, and other information resources management functions;

(7) periodically evaluate and, as needed, improve, the accuracy, completeness, and reliability of data and records contained within Federal information systems; and

(8) develop and annually revise a 5-year plan, in accordance with appropriate guidance provided by the Director, for meeting the agency's information technology needs.

(d) The head of each agency shall establish such procedures as necessary to ensure the compliance of the agency with the requirements of the Federal Information Locator System, including necessary screening and compliance activities.

(Added Pub. L. 96-511, § 2(a), Dec. 11, 1980, 94 Stat. 2819.)

(As amended Pub. L. 99-500, § 101(m) [title VIII, § 816], Oct. 18, 1986, 100 Stat. 1783-308, 1883-338, and Pub. L. 99-591, § 101(m) [title VIII, § 816], Oct. 30, 1986, 100 Stat. 3341-308, 3341-338.)

REFERENCES IN TEXT

The effective date of this Act, referred to in subsec. (b), is Apr. 1, 1981. See section 5 of Pub. L. 96-511, set out as an Effective Date note under section 3501 of this title.

CODIFICATION

Pub. L. 99-591 is a corrected version of Pub. L. 99-500.

FY 1991 IRM REVIEW PROGRAM REPORT

Services for Independent Verification and Validation Activities addressed the software development process, and the *Review Public Access Program Needs* focused on legislated provisions of making information available to the public.

Several reviews were also designed to assess whether or not the Agency is using its information resources efficiently and cost effectively. These included the *Review of Superfund Document Management Initiatives*, *Review of the Integrated Administrative System Concept*, *Review of the Modernization of STORET*, *Locational Accuracy Task Force Review*, *Superfund Cost Recovery Image Processing System Review*, and *Detailed Evaluation of IFMS, EPAYS, and ADCR*.

When these reviews identified opportunities for improvement, appropriate actions were and are being taken. To incorporate OMB guidance into EPA IRM operations, the Agency has established core IRM policies in its *EPA IRM Policy Manual*.

§3506 (b): Senior Official to Carry Out Agency Responsibilities

The delineation of responsibilities between the Assistant Administrator for OPPE and the Director of OIRM in carrying out the responsibilities of the Act was explained in Background section.

§3506 (c): Specific Required Activities

Eight IRM-related activities are mandated under the 1986 reauthorization of §3506. Those requirements and the EPA IRM activities addressing them are listed below.

§3506 (c) (1): Inventory Major Information Systems; Periodically Review Information Resources Management Activities

The Agency has developed an inventory of its major information systems. EPA's Information System Inventory (ISI) contains information on roughly 500 of the Agency's current information systems, as well as some models and databases. It is the definitive source of summary information about EPA systems. The ISI, which is available in hardcopy and automated forms, was developed to enhance the Agency's ability to track major information systems and

SECTION III: PRA §3506 COMPLIANCE

share information across media and program boundaries. The ISI serves to:

- Increase users' awareness of existing Agency information systems
- Reduce duplicative information system development and data collection efforts
- Improve EPA's coordination of information system development
- Provide EPA with the ability to effectively respond to information requests about Agency information systems.

This document was distributed widely throughout the Agency. It has also been made available to contractors through their EPA clients and other parties through the National Technical Information Service.

During the past year, the Agency developed another useful reference guide, *Access EPA*, which is a series of directories which improve access to environmental information services. Each directory provides contact information and a description of the collections and services provided. The directories are maintained by EPA OIRM and are available through the Government Printing Office and the National Technical Information Service. The titles include: Public Information Tools, Major EPA Dockets, Clearinghouses and Hotlines, Major EPA Environmental Databases, Library and Information Services, State Environmental Libraries, and Records Management Programs.

To periodically review information resources management activities, the Agency has fully implemented the Federal IRM Review Program, which is coordinated by the Information Management and Services Division of OIRM.

§3506 (c) (2): Information System Overlap

Because of the uniqueness of the Agency's mission in administering the Federal environmental statutes, duplication or overlap with the systems of other agencies is less an issue than duplication or overlap with the systems of State environmental authorities. The *Review of the Integrated Administrative System Concept* assessed the potential redundancies among the Agency's administrative systems.

FY 1991 IRM REVIEW PROGRAM REPORT

§3506 (c) (3): Paperwork and Reporting Burden

EPA has developed procedures for assessing the paperwork and reporting burden of proposed legislation affecting the Agency. The *Information Collection Review — Improvements to the Hazardous Waste Manifest System* sought to reduce the paperwork burden on the regulated community by standardizing the manifests required for the movement of hazardous materials.

§3506 (c) (4): Accountability for Acquisitions

The Director of OIRM has been assigned the responsibility for acquisitions made pursuant to a delegation of authority from GSA. Accountability for PCs is maintained through the PC planning process where acquisitions are formally approved and tracked. OIRM coordinates closely with the National Data Processing Division, the Procurement and Contracts Management Division, and the Facilities Management Division to ensure accountability for acquisitions.

§3506 (c) (5): Information Collection Requests

EPA has established a process to ensure that small information collection requests (to nine or fewer persons) contain a statement to inform the person receiving the request that the request is not subject to the requirements of §3506 of the Act.

§3506 (c) (6): Implementation of Applicable Information Policies, Standards, and Guidelines

§3506 also requires agencies to implement applicable information policies, standards, and guidelines with respect to certain areas, including information collection, records management, security, privacy, and information sharing. As explained earlier, to incorporate applicable IRM guidance into Agency operations, EPA has established core IRM policies in its *EPA IRM Policy Manual*. The review program was then used to assess Agency progress in implementing those policies. (See *State/EPA Data Management Review*, *Review of Superfund Document Management Initiatives*, *Review of the Modernization of STORET*, *Locational Accuracy Task Force Review*, *Analysis of Computer Security Awareness Program and Information Security Program Requirements*, *Superfund Cost Recovery Image Processing System Review*, *Review of Availability of Services for Independent Verification and Validation Activities*, *Review of Information Security Needs in OSWER Life-Cycle Guidance*, and *Summary of Telecommunications Accomplishments*.)

SECTION III: PRA §3506 COMPLIANCE

§3506 (c) (7): Accuracy, Completeness, and Reliability

The *Review of Superfund Document Management Initiatives*, *Review of the Integrated Administrative System Concept*, and *Review of the Modernization of FINDS* dealt with the accuracy, completeness and reliability of data and records contained within Agency systems for Superfund records, administration, and facilities, respectively. They also resulted in actions to correct the perceived deficiencies.

§3506 (c) (8): Five-Year Plan

In the mid-1980s, the Agency developed and began to implement a five-year ADP modernization plan. The Agency has now developed a new five-year plan for meeting its information technology needs, entitled *IRM Strategic Plan (1991-1995)*. As discussed in detail in the background section, the strategic goals identified in this plan were:

1. Establish data integration tools and activities.
2. Create and manage information systems supporting the environmental community.
3. Establish a program to promote information sharing.
4. Renew EPA's technology base to provide increased functionality and/or to reduce costs.
5. Manage a data administration program to ensure the Agency's ability to use its data fully.
6. Enhance productivity through the educated use of technology.
7. Improve planning and communication to ensure effective deployment of information and technology.
8. Provide quality service with proactive leadership as custodians of EPA information and systems.

FY 1991 IRM REVIEW PROGRAM REPORT

§3506 (d): Federal Information Locator System

The Agency has policies for complying with the requirements of the Federal Information Locator System.

Section IV: Major Information Systems

Annual Report on Major Information Systems

- **SCRIPS — Superfund Cost Recovery Image Processing System**

Initial Major Information System Reports

- **AIRS — Aerometric Information Retrieval System**
- **CERCLIS — Comprehensive Environmental Response, Compensation and Liability Information System**
- **EPAYS — EPA Payroll-Personnel System**
- **GICS — Grants Information and Control System**
- **IFMS — Integrated Financial Management System**
- **PCS — Permit Compliance System**
- **RCRIS — Resource Conservation and Recovery Information System**
- **STORET — Storage and Retrieval of Water Quality Information System**
- **TRIS — Toxic Chemical Release Inventory System**



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Washington, DC 20460

Federal IRM Review Program
ANNUAL REPORT ON MAJOR INFORMATION SYSTEMS

SYSTEM NAME: Superfund Cost Recovery Image Processing System
(SCRIPS)

REPORT DATE: October 1991

Nelson Price for Robert Cluck
Signature of Agency Official

Robert Cluck
Name (please print or type)

Chief, Prog. Dev. & Implementation Section, FMD
Title

10/31/91
Date

Annual Report on Major Information Systems

System Name: Superfund Cost Recovery Image Processing System (SCRIPS)

Report Date: October 1991

ACCOMPLISHMENTS:

SCRIPS was fully operational in the following EPA locations during FY 1991:

RTP, NC	12/90
Headquarters	12/90-1/91
Region 4, Atlanta	2/91
Cincinnati	3/91
Region 2, New York	4/91
Region 7, Kansas City	6/91

PROGRAM COSTS:

All costs expressed in \$1,000s

	<u>In-House Work Years Support</u>	<u>Equipment and Contractor</u>
FY 1991 (Actual):		
Proj. Mgr.	1.0	
FMD	3.0	
ASD	2.0	
NDPD	<u>1.0</u>	
Total	7.0	Total: \$2,155
FY 1992 (Projected):		
FMD	3.0	
ASD	1.0	
NDPD	<u>1.0</u>	
Total	5.0	Total: \$1,655

REVIEW RESULTS:

SCRIPS was reviewed this year. The results are included as review synopsis 91-11.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Aerometric Information Retrieval System (AIRS)

BASELINE DATE: October 1991



Signature of Agency Official

John Bosch

Name (please print or type)

Chief, National Air Data Branch

Title

10/31/91

Date

Initial Major Information System Report

System Name: **Aerometric Information Retrieval System**

Baseline Date: **October 1991**

DESCRIPTION OF SYSTEM:

AIRS is EPA's national repository for ambient air concentration and point-source emission data within the United States. This system stores data from more than 10,000 ambient air quality monitors and 50,000 plants. On-line access is provided to State and local governments.

AIRS is comprised of four subsystems: Air Quality (AQS), Facility (AFS), Area/Mobile Sources (AMS) and Geo-Common (GCS). The system is installed on the IBM mainframe system at EPA's National Computer Center. It is administered by the Office of Air Quality Planning and Standards in Durham, North Carolina.

PROGRAM OBJECTIVES:

The AIRS data management program directly supports the air data needs of EPA and of State agencies to meet requirements of Title I, III, V and VII of the 1990 Clean Air Act. Data are collected from all 50 States. Monitoring is required for the criteria pollutants based on such factors as population, pollutant sources, and geographic area. Point sources emitting more than 100 tons per year of any criteria pollutant (except 5 tons per year for lead and 1000 tons per year for carbon monoxide) must report actual or estimated annual emissions data. AIRS is one of the major systems integral to the State/EPA Data Management Program. AIRS provides States the ability to directly retrieve data, a feature which has contributed to improved timeliness and quality of the data in the system and which, in turn, has supported improved environmental analysis and decision-making.

PROGRAM MILESTONES/SCHEDULE:

Air Quality Subsystem (AQS)

Begin Basic System	1/84
Complete Basic System	7/87
Complete Precision and Accuracy Module	9/91

Facility Subsystem (AFS)

Begin Basic System	3/86
Complete Basic System	4/90
Begin Major Clean Air Act Enhancements	12/90

PC Modules

Complete Point Source PC	6/90
Complete Area and Mobile Source PC	10/91

Area and Mobile Source Subsystem (AMS)

Begin Basic Subsystem	10/91
Complete Basic Subsystem	6/92
Complete Expanded Version	10/93

Initial Major Information System Report

System Name: Aerometric Information Retrieval System

Baseline Date: October 1991

Permits Modules

Begin 10/91
Complete 12/94

PROGRAM COSTS:

All costs expressed in \$1,000s

<u>Year</u>	<u>Authorized Positions</u>	<u>Authorized Contract Funding</u>
FY 1988	18	\$790
FY 1989	18	\$1,342
FY 1990	18	\$2,126
FY 1991	20	\$2,650
FY 1992	21	\$3,350

SCHEDULE FOR REVIEW:

This system is scheduled for review in FY 1992.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Comprehensive Environmental Response,
Compensation and Liability Information System
(CERCLIS)

BASELINE DATE: October 1991

Michael J. Cullen
Signature of Agency Official

Michael J. Cullen
Name (please print or type)

Director, Mgmt & Systems Development Staff
Title

10/31/91
Date

Initial Major Information System Report

System Name: **Comprehensive Environmental Response, Compensation and Liability Information System**

Baseline Date: **October 1991**

DESCRIPTION OF SYSTEM:

CERCLIS is the Superfund database which contains information on all aspects of hazardous waste, from initial discovery to listing on the National Priorities List. This system is used to support management of all phases of the Superfund Program. CERCLIS was initially developed as a mainframe application. WASTELAN is a PC-LAN version of the CERCLIS database used by Regional offices for data input and local analysis needs.

PROGRAM OBJECTIVES:

This system supports EPA Headquarters and Regions for the management and oversight of the Superfund Program. The Superfund Program, with authority from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, established a comprehensive framework to protect public health and welfare and the environment from the adverse effects of hazardous waste sites. This program seeks to monitor and control the manufacture, use, transportation, disposal and management of hazardous waste by enforcing CERCLA and SARA. CERCLIS has two purposes: maintain an automated inventory of abandoned, inactive, or uncontrolled hazardous waste sites and act as a vehicle for regions to report to Headquarters the status of major stages of site clean-up. The system provides a decentralized national system where each region controls and enters its respective data on regional systems.

PROGRAM MILESTONES/SCHEDULE:

1984-1985 — The following steps were initiated:

- Formed the Information Management Task Group
- Formed the Management Advisory Committee
- Assessed integrated (removal, enforcement, remedial) program management information needs
- Assessed Regional project management information needs
- Proposed a "New CERCLIS"

The "New CERCLIS" concept:

- Limited number of nationally required data elements with flexibility for additional Regional and State elements
- Designed to meet integrated remedial, enforcement, and removal requirements
- Central source of data for planning and measuring program accomplishments (SCAP, SPMS, SPR)
- Regional data collection, entry, and QA/QC
- Flexibility of using micro- and mini-computer, as well as mainframe for data entry
- Ability to generate standard and ad hoc reports
- Use of real-time project management capabilities

Initial Major Information System Report

System Name: Comprehensive Environmental Response, Compensation and Liability Information System

Baseline Date: October 1991

1985-1987 — Major CERCLIS activities:

- Requirements and systems concept
- Definition and design
- Development/programming
- Implementation/testing/training
- Parallel operations with existing systems and processes
- CERCLIS established as official Superfund management data source on October 30, 1986

1987-1990 — Development/Implementation of WasteLAN and CleanLAN:

WasteLAN is CERCLIS designed for Regional use. Each Region's version contains only CERCLIS sites under its jurisdiction. WasteLAN is a two-way communication tool between the Regions and CERCLIS; there is no inter-Regional data sharing. CleanLAN is a WasteLAN clone for the U.S. Army Corps of Engineers.

- Each Region developed an action plan
- System management infrastructure established
- Regional requirements analysis/data flow
- Documentation and training
- Parallel operations with existing systems and processes
- System evaluation
- WasteLAN/CleanLAN established as Regional database upon completion of the Region's action plan

1991-1992 — CERCLIS/WasteLAN/CleanLAN Enhancements/Parallel Operations

- Database manager other than System 2000
- Long-range study of relationships of CERCLIS to State and Federal agencies

PROGRAM COSTS:

<u>Year</u>	<u>In-house Costs</u>	<u>Contract Costs*</u>
FY 1988	5.0	\$1,600
FY 1989	4.0	\$1,300
FY 1990	3.5	\$2,600
FY 1991	3.5	\$2,600
FY 1992	3.5	\$2,300

* Expressed in \$1,000s

SCHEDULE FOR REVIEW:

Every year, CERCLIS data quality is audited by the Inspector General.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: EPA Payroll-Personnel System (EPAYS)

BASELINE DATE: October 1991



Signature of Agency Official

J. Michael Whitacre

Name (please print or type)

Chief, Financial Systems Branch (OARM)

Title

OCT 31 1991

Date

Initial Major Information System Report

System Name: EPA Payroll-Personnel System (EPAYS)

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

The EPA Payroll-Personnel System (EPAYS) provides prompt and accurate payroll and personnel services for approximately 19,000 EPA employees and about 700 employees for the Interstate Commerce Commission. Time and attendance data is collected from 23 sites throughout the country and other payroll and personnel data is collected from 14 sites. Data collection is accomplished through the use of the on-line Time and Attendance Payroll and Personnel (TAPP) subsystem. EPAYS data is processed using PL/1 software, and each of the datasets within the system are RACF (Resource Access Control Facility)-protected because of the sensitive nature of the data. An on-line menu driven ad hoc report retrieval subsystem, based on the fourth generation software FOCUS, provides the capability to easily create both pre-formatted and customized reports.

The EPAYS/TAPP/FOCUS software is based on an IBM 9000 mainframe that is equipped with bulk data transfer capabilities to quickly move large volumes of data between sites. An off-site IBM logical mainframe serves as the backup to the primary computer, and disaster processing scenarios are fully tested several times a year.

PROGRAM OBJECTIVES:

The Office of Management and Budget (OMB) through its Reform 88 initiative has mandated an overall reduction in the number of payroll-personnel systems in use throughout civilian agencies. EPAYS has been confirmed as an integrated system that meets all of the OMB core requirements for Federal payroll-personnel system, and it includes state-of-the-art features that are among the best in the Federal sector.

The broad Agency objective for EPAYS is to maintain a strict commitment to excellence by constantly evaluating the system's efficiency and effectiveness to ensure continued peak performance. It is the Agency's goal to expand the employee base that is currently being serviced through cross-servicing arrangements with other agencies. The expansion of the EPAYS employee base will ensure the continued existence of the system and EPA's control over the important function of providing payroll-personnel services to its own employees.

PROGRAM MILESTONES/SCHEDULE:

There are constant demands from the Agency's user community and various regulatory agencies to enhance and improve the utility of the system. Recent enhancements include the following:

- Electronic retirement and insurance reporting procedures
- Automated pay recalculation for up to 27 pay periods
- Automated cash awards procedures
- On-the-spot-cash awards
- Laser printed form W-2s
- Leave bank program.

Initial Major Information System Report

System Name: EPA Payroll-Personnel System (EPAYS)

Baseline Date: October 1991

Planned enhancements to the system include the following:

- Laser printed time and attendance document
- Improved disaster recovery processing
- Master file expansion to allow 9 digit zip-codes
- Automated employer tax reporting procedures
- Implementation of 1990 pay reform procedures.

PROGRAM COSTS:

The cost of operating EPAYS/TAPP/FOCUS include salary expenses for EPA staff, the cost of contractor support, and the cost of computer operations. The summary of the cost of operating EPAYS/TAPP/FOCUS from FY 1987 through FY 1991 is detailed below:

All costs expressed in \$1,000s.

	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>
EPA Personnel	\$389	\$410	\$431	\$454	\$498
Contractor Support	630	663	698	734	773
Computer Operation	<u>936</u>	<u>985</u>	<u>1,037</u>	<u>1,091</u>	<u>1,149</u>
Total	\$1,955	\$2,058	\$2,166	\$2,279	\$2,420

SCHEDULE FOR REVIEW:

Each fiscal year, a comprehensive review of management control is conducted on EPAYS/TAPP/FOCUS. Tests are conducted to check for material weaknesses within the system and the entire system environment is tested for high risk areas. Detailed corrective actions are prepared for each area of high risk and/or material weakness. For FY 1991, see review synopsis 91-12.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Grants Information and Control System (GICS)

BASELINE DATE: October 1991



Signature of Agency Official

Michael Kaplan

Name (please print or type)

Chief, Planning and Management Branch (OIRM)

Title

10/31/91

Date

Initial Major Information System Report

System Name: Grants Information and Control System (GICS)

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

GICS is a national information management system containing administrative, project, and financial data for all EPA grants, interagency agreements, and cooperative agreements. The system supports two major client organizations: the Grants Administration Division for all Non-Construction Grant and State Revolving Fund (SRF) Programs, and the Office of Water's Municipal Construction Grants Program. The system resides on the IBM mainframe at EPA's National Computer Center. It uses ADABAS and Natural. Report menus for Headquarters, Regions, and Programs are available for batch and on-line reporting. On-line data entry systems for the Construction, Non-Construction, and SRF Programs have been customized to provide for updating and tracking of the grant process.

PROGRAM OBJECTIVES:

GICS is used for program planning and oversight, project tracking, and management and information reporting. The Municipal Construction Grants Program's subsystem tracks the processing of all wastewater treatment grant applications and active construction grant projects funded by the Construction Grant Program (authorized by the Clean Water Act) from application to construction and closeout. Pursuant to the Water Quality Act of 1987, Federal funding provided to each State Revolving Fund Program is tracked; the Non-Construction Grants Program tracks progress of all other EPA grants-related programs including Non-Point Source, Pesticides, Research and Development, Superfund, and Radon. It also tracks the Agency's Interagency Agreements. GICS data allow program managers and analysts to identify critical or emerging problems and to develop timely plans for alleviating them. GICS is particularly valuable for overseeing State programs, because it can provide data on State workload and monitor progress made toward State commitments. This system provides detailed information on the characteristics and status of individual projects and can be used to compare and evaluate information on a large number of projects. The system is used to generate lists, tables, and summary reports needed to respond to inquiries from EPA senior management, Congress, OMB, State agencies, and the public.

PROGRAM MILESTONES/SCHEDULE:

Assess Feasibility of Regional Automated Grant Document Subsystem on a LAN	1/92
Automation of GAD's Monthly Publication, "Activities of EPA Assistance Program and Interagency/Intergovernmental Agreements"	2/92
Development of Standard SRF Workstation	2/92
Development and Implementation of Asbestos Grants Subsystem	3/92
Development and Implementation of Non-Point Source Program Subsystem	3/92

Initial Major Information System Report

System Name: Grants Information and Control System (GICS)

Baseline Date: October 1991

PROGRAM COSTS:

All costs expressed in \$1,000s

<u>Fiscal Year</u>	<u>FTEs</u>	<u>Authorized Contract Funding</u>
FY 1987	4.0	\$483
FY 1988	4.0	\$535
FY 1989	4.0	\$817
FY 1990	3.25	\$440
FY 1991	3.0	\$580

SCHEDULE FOR REVIEW:

GICS is scheduled for review during FY 1993 or earlier, as resources permit.

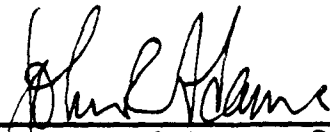


U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Integrated Financial Management System (IFMS)

BASELINE DATE: October 1991



Signature of Agency Official

John Adams

Name (please print or type)

IFMS Project Manager

Title

31 Oct 1991

Date

Initial Major Information System Report

System Name: Integrated Financial Management System (IFMS)

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

IFMS is EPA's official database for both accounting and budgetary data used by program offices to manage their funds for all internal and external financial/budgetary reporting requirements. The system performs funds control from commitments through payment; updates ledgers and tables as transactions are processed; provides a standard means of data entry, edit, and inquiry; and provides a single set of reference and control files. It has table-driven editing, posting, and reporting capabilities. The system supports on-line inquiries, as well as standard and ad hoc reporting. The system operates on EPA's mainframe computer at the National Computer Center in RTP, North Carolina. The system may be accessed via a 3270-type terminal or a PC with an IRMA board. The users of IFMS are the Finance Offices in the Regions, Financial Service Centers, and Headquarters.

PROGRAM OBJECTIVES:

This system supports GAO Title 2 requirements, OMB internal control requirements, and OMB's A-127 initiatives. As part of its support to the Agency's financial and budget information processes, IFMS exchanges financial data through automated system interfaces with the EPA Payroll-Personnel System (EPA YS), the Automated Document Control Register (ADCR), the Grants Information and Control System (GICS), the Contracts Payment System (CPS), the budget preparation system which is called the Resources Management Information System (RMIS), and a Superfund information system called the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).

Some of the data in the system are subject to the Privacy Act, making confidentiality a primary protection requirement. Availability is also a primary protection requirement since the system must be available on a daily basis to support the operations of the Agency. Lastly, integrity is a primary protection requirement because it is extremely important to protect the reliability and accuracy of Agency financial information.

PROGRAM MILESTONES/SCHEDULE:

Previous Accomplishments:

1987	Contract awarded
1988-89	Requirements validation and testing
March 1989	Implementation

Current Status:

Of twelve key requirements originally identified for the system, nine have been met. Already completed, either through original implementation of the system or through enhancements during FY 1989-91, are the following:

- 1) Automated funds control
- 2) Flexibility in account number structure
- 3) Means of avoiding double commitments and obligations
- 4) Timely system data
- 5) Automated interfaces with contracts and grants subsystems

Initial Major Information System Report

System Name: Integrated Financial Management System (IFMS)

Baseline Date: October 1991

- 6) Timely year-end closeout
- 7) Ad hoc reporting capabilities
- 8) Timely travel advance data
- 9) Comprehensive and accurate payroll redistribution

Three key requirements remain from the original list. We expect our development work to complete all of them by the end of FY 1993:

- 1). Complete accounts receivable package — scheduled with the Agency's upgrade to the next version of the commercial software in FY 1992.
- 2) Enhancements to the personal property accounting system, scheduled for FY 1993.
- 3) Integrated budget planning subsystem for program offices. We have already implemented an integrated budget preparation module and are conducting a requirements analysis to further support the program offices. Additional improvements are expected in FY 1992 and FY 1993.

PROGRAM COSTS:

Costs are presented for operations, maintenance and enhancement. They include salary costs as well as contractual services. All costs expressed in \$1,000s

<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>	<u>FY 1992</u>
\$2,200	\$5,400	\$5,000	\$7,200	\$7,100

The system was implemented in March 1989, so operations costs jumped for that fiscal year. During FY 1991, EPA management funded additional costs for development targeted at improvements identified by the clients of the system. We expect system costs to remain essentially stable from that point forward.

SCHEDULE FOR REVIEW:

IFMS was reviewed this year (review synopsis 91-12).



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Permit Compliance System (PCS)

BASELINE DATE: October 1991

Dela Ng
Signature of Agency Official

Dela Ng
Name (please print or type)

Acting Chief, Cmpl Info & Eval Br (OW)
Title

10/31/91
Date

Initial Major Information System Report

System Name: Permit Compliance System

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

PCS is a computerized management information system for tracking permit, compliance, and enforcement status for the National Pollutant Discharge Elimination System (NPDES) Program under the Clean Water Act. PCS contains information on the more than 65,000 active water discharge permits issued to facilities throughout the nation. EPA Regional Offices and State users of PCS are responsible for the entry and quality of the data in the system. PCS resides on the EPA IBM mainframe computer in RTP, North Carolina. PCS uses ADABAS, a data management system for the storage and maintenance of data. Its programs are written in COBOL, using ADASQL to interact with ADABAS, NATURAL, SAS, EASYTRIEVE, and CLIPPER. PCS is composed of ten major software subsystems consisting of: an on-line data entry subsystem running under a Command Level CICS interface, an on-line inquiry system running under TSO, a batch data entry subsystem, a batch update subsystem, a batch generalized retrieval subsystem, a batch Compliance Schedule Tracking subsystem, a batch Discharge Monitoring Report (DMR) Tracking subsystem, a batch Reportable Non-Compliance Determination subsystem, a PC-based data entry subsystem, and a PC-based data retrieval subsystem. Users throughout the country may access PCS through EPA's telecommunications network.

PROGRAM OBJECTIVES:

PCS is one of the EPA's major enforcement information systems. The system identifies and tracks polluters of the nation's waterways through automated violation detection processes. The system automatically reviews millions of records each month and determines the compliance status of each facility according to the requirements in the individual permit. Each permit record typically contains information which identifies and describes the facility to which the permit has been granted; specifies the pollutant discharge limits for that facility; records the actual amounts of pollutants measured in the facility's waste-water discharges; and tracks the facility's history of compliance with construction, pollutant limits, and reporting requirements. Within the 10 EPA Regional offices and 38 NPDES-delegated States, PCS supports over 600 State, Regional and Headquarters users. These users are made up of enforcement, permit, data processing and planning personnel, and program managers. PCS supports requests for information from Congress and State legislatures, as well as Freedom of Information requests submitted by the public.

PROGRAM MILESTONES/SCHEDULE:

The following is a list of major enhancements made to PCS that have increased the capabilities of the system for the users. The list covers the period from January 1989 until September 1991.

<u>Enhancement</u>	<u>Installed</u>
1) Develop a DMR non-Receipt Report This report provided users with a tool for tracking non-receipt of monitoring data in PCS.	2/89
2) Develop PCS Management Graphics This set of retrieval software allows graphical display of inspection and permit issuance information in PCS.	2/89

Initial Major Information System Report

System Name: Permit Compliance System

Baseline Date: October 1991

- | | | |
|-----|---|------|
| 3) | Implement the Effluent Data Statistics System in PCS
This set of retrieval software creates statistical reports and graphs of effluent limit and monitoring data from PCS. | 2/89 |
| 4) | Develop the Managers Quarterly Non-Compliance Report (QNCR)
This report provided a management tool for Regional and State users to display the compliance status of NPDES permits. | 2/89 |
| 5) | Develop the PCS-PAL extract (and PC retrieval subsystem)
Provided an easy-to-use PC version of the Managers QNCR. | 2/89 |
| 6) | Develop a Manager's Inquiry Subsystem
This subsystem is a menu system for on-line retrieval of PCS information that requires little knowledge of specialized PCS acronyms. | 4/89 |
| 7) | Develop the SPMS (now STARS) Moving Base Report
Automated Agency-mandated progress report to relieve the burden of manually compiling the information each quarter. | 2/89 |
| 8) | Develop the Administrative Penalty Tracking capability
Added new information to PCS to support Penalty Tracking as part of Enforcement Actions taken by Regions. | 4/89 |
| 9) | Develop the Coordinators QNCR
Specialized retrieval to assist PCS users in developing the QNCR. | 4/89 |
| 10) | Develop PCS Inspection Scheduling capabilities
Added new information to PCS to support the scheduling and tracking of future inspections. | 4/89 |
| 11) | Develop the PCS Overview Training Package
This PC-based package provided a summary of PCS to people unfamiliar with PCS and the NPDES program. | 2/90 |
| 12) | Develop the PCS Quality Assurance Retrieval
This report allows detailed, field-by-field, analysis of information in PCS based on a standardized set of criteria. | 3/91 |

The following projects are underway in response to programmatic initiatives:

- 1) Latitude/Longitude Information in PCS
In this project, USGS maps were sent to permitted facilities and were returned with the pipe outfall locations marked. This information will be used in PCS mapping applications.
- 2) Public Access Feasibility Study
This project is to analyze the public's requirement for direct access to the PCS database and develop an implementation strategy.

Initial Major Information System Report

System Name: Permit Compliance System

Baseline Date: October 1991

- 3) **Electronic Data Interchange (EDI) Study and Pilot**
This project will investigate the use of EDI technology for getting permit monitoring information directly from the facilities.
- 4) **Quality Assurance Manual and Procedures**
A guide to assist the EPA Regions and States in developing procedures for their own Quality Assurance Plan.

The following are enhancements that are scheduled for FY 1991:

- 1) **Develop Sludge Tracking Capabilities**
Adding new information to PCS which will store and allow reporting of sludge tracking information that is required as part of NPDES permits.
- 2) **Develop Range Checking Capability**
Modification to data entry software that will perform range validity checking on monitoring data going into PCS.
- 3) **Security Modifications to PCS**
In order to make PCS more directly available to other program offices within EPA and to the public, a modification will be made to separate sensitive information in PCS from non-sensitive. Access to the sensitive information is limited to users within the NPDES program.

PROGRAM COSTS:

All costs expressed in \$1,000s

	In-House Support (Workyears)	Contractor Support Costs (Software Development, Maintenance, Operations, Training, and Data Entry)
FY 1989	6.5	\$1,297
FY 1990	6.5	\$1,657
FY 1991	6.5	\$1,947

SCHEDULE FOR REVIEW:

There is a project currently underway to review the quality of data in PCS. This project will establish criteria to be used in evaluating the data. The criteria will then be used to do an analysis of the data Region-by-Region and establish a 'level of confidence.' This information will provide users and management with a better understanding of how PCS information can be used for environmental analysis. Results of this project as of the end of FY 1992 will be reported next year for the Regions that have been completed.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Resource Conservation and Recovery Information System (RCRIS)

BASELINE DATE: October 1991

Kenn C. Phelps Jr
Signature of Agency Official

Myra Galbreath
Name (please print or type)

Chief, Information Mgmt Branch (OSW)
Title

10/31/91
Date

Initial Major Information System Report

System Name: **Resource Conservation and Recovery Information System (RCRIS)**

Baseline Date: **October 1991**

DESCRIPTION OF SYSTEM:

RCRIS is a national system which supports the Resources Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities which generate, transport, and treat, store, or dispose of hazardous waste. The system is used by EPA Headquarters and Regions, as well as States with RCRA implementation responsibilities. RCRIS provides interactive, on-line data edit checking and offers additional facilities for processing and reporting. It is used interactively on a day-to-day basis at the State and Regional level and is updated via batch uploads and merges on a monthly basis to the National oversight database.

PROGRAM OBJECTIVES:

This system allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under the RCRA Program. Information comes from the regulated community through notification forms and permit applications. This information, along with inspection information is entered into the system by the Regions and States and uploaded to the national system. RCRIS tracks a range of information related to facilities involved with hazardous waste, including handler identification, permit application status, compliance monitoring and enforcement information, RCRA program management information, and facility management planning information. RCRIS also tracks corrective action information which supports the permit-writing and enforcement activities of the corrective action program. RCRIS helps ensure that current and future hazardous waste management practices are, and continue to be, protective of human health and the environment through information support to the program for key activities such as promulgating regulations, issuing permits, applying highly visible compliance monitoring, and using timely and appropriate enforcement.

PROGRAM MILESTONES/SCHEDULE:

1991 Accomplishments:

- During 1991, EPA Headquarters, Regions, and States began the full implementation phase for RCRIS. During the year, half of the States nationally, covering six Regions, successfully completed the transition to official RCRIS operations.
- The operating environment improved through enhancements to critical technical functions, strengthened national user support operations, and specialized technical training for database administrators.
- The knowledge and skills of Regional and State program and system staff were enhanced through a National RCRA Information Systems User Group Conference and further supported by regular conference calls targeted at key issues or activities, as well as on-site implementation assistance from Headquarters and technical team staff.

1992 Goals:

- RCRIS implementation will be completed nationally by January of 1992.
- Ongoing attention and support will be targeted towards further expanding the direct management and operation of RCRIS by States.

Initial Major Information System Report

System Name: Resource Conservation and Recovery Information System (RCRIS)

Baseline Date: October 1991

PROGRAM COSTS:

All costs expressed in \$1,000s

<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>
\$1,664	\$2,561	\$3,307	\$3,307	\$3,460

SCHEDULE FOR REVIEW:

1992 System Reviews

- During this year, separate reviews will be conducted on data quality assurance measures and internal technical efficiency for system resource-intensive aspects of RCRIS.
- The data quality review will assess the primary areas of interest from a program perspective and identify measures to strengthen data quality. Measures are expected to include not only system features (for example special purpose data quality reports), but also program guidance, procedures, and training.
- The technical review will target structural and processing flow issues where analysis indicates there is the potential for significant improvements to the reliability, efficiency, and ease of use of the system.



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, D.C. 20460

Federal IRM Review Program
ANNUAL REPORT ON MAJOR INFORMATION SYSTEMS

SYSTEM NAME: Storage and Retrieval of Water Quality Information
System (STORET)

REVIEW DATE: October, 1991

Andrew M. Holman
Signature of Agency Official
for
Joseph Sierra
Name (please print or type)

Chief, Software Development and Maintenance Br., OIRM
Title

10/30/91
Date

Initial Major Information System Report

System Name: Storage and Retrieval of Water Quality Information (STORET)

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

STORET is a user-owned system. Information is contributed to the system by a number of organizations including Federal, State, interstate agencies, universities, contractors, individuals, and water laboratories. The STORET system assists State and EPA officials in making pollution control decisions by providing a capability to store, retrieve and analyze water quality information. STORET is a compendium of hydrologic and water quality databases and analytical capabilities. Available capabilities include statistical analyses, graphics, and mapping. The STORET subsystems are:

- The Water Quality File (often referred to synonymously as "STORET") which currently contains over 170 million observations of water quality from over 700,000 sampling sites. Data are organized by station and, for a station, by date, time and depth. Information are defined in terms of parameter codes which usually define a combination of substance, medium and units or measurement.
- The national Biological Information System (BIOS) which contains biological monitoring data. Three components of BIOS include the field survey, toxicity, and tissue residue sampling data. The field survey component is complete; the tissue residue and toxicity components are under development. BIOS does not support any one particular program, but rather houses a specialized subset of sampling data. BIOS currently has species count data used in biological diversity analyses (an indicator of environmental stress) indexed by an EPA-developed taxonomic file. Data records in BIOS are also organized by location as well as indexed by taxonomy. The data in this taxonomic file are supplied to EPA by the National Oceanographic Data Center (NODC) after collection and validation.
- The Daily Flow System which contains daily observations from USGS's network of over 36,000 stream gauge stations. This data, used in conjunction with water quality data and permit information, can be used to perform analyses such as waste load allocations.

Current emphasis of control decisions are: issuing water quality-based National Pollution Discharge Elimination System (NPDES) permits; inclusion of toxic pollutants in water quality standards; evaluating water quality impacts of control programs; and assessing levels of toxic pollutants, including dioxin and other bio-accumulative pollutants from the aquatic biological data, hydrologic data, stream-reach data, ground-water data, and other related information. The system is used by State and EPA analysts to assemble and analyze data to support each of the above types of decisions.

PROGRAM OBJECTIVES:

STORET was developed in the mid-1960s by the U.S. Public Health Service to collect and disseminate basic information on the chemical and physical quality of the nation's waters. Today, the system is applicable to programs initiated under the Federal Water Pollution Control Act, as amended, with emphasis on Section 305 (b). The system is also applicable to programs initiated under the Toxic Substances Control Act (TSCA) and the Resource Conservation and Recovery Act (RCRA). Various enhancements have occurred since it was originally designed and developed. A combination of issues, including changing legislative and Agency priorities (emphasizing data integration and cross-media analysis) related to EPA's future water quality requirements, have led to the need for a system feasibility and requirements analysis. The purpose of this system initiative

Initial Major Information System Report

System Name: Storage and Retrieval of Water Quality Information (STORET)

Baseline Date: October 1991

is to evaluate STORET's performance and its capability to support changing Agency mission needs.

PROGRAM MILESTONES/SCHEDULE:

(See attached chart for historical perspective.) STORET and other related water systems are currently undergoing an extensive modernization effort. (See review synopsis 91-8 for details.)

PROGRAM COSTS:

Costs reflect computer usage charges, personnel, travel, equipment, and contract support. All costs expressed in \$1,000s.

<u>Fiscal Year</u>	<u>Total Cost</u>
1984	\$2,295
1985	\$2,640
1986	\$2,738
1987	\$2,844
1988	\$3,578
1989	\$4,556
1990	\$4,829
1991	\$3,750

SCHEDULE FOR REVIEW:

STORET was reviewed this year (review synopsis 91-8).

STORET MILESTONES

	KEY EVENTS	HARDWARE	SYSTEM DESIGN	DATA	ORGAN. CHANGES
1990 -			Interactive station storage menus developed.		
1989 -		System upgraded to IBM ES-9000.	Interface to WBS with plotting (WBLOC).		
1988 -	Established Water Quality DSSC		Interactive retrieval menus developed.		
1987 -	First component of BIOS implemented.		Implemented interface to PCS, BIOS implementation.	Addition of biological monitoring data.	
1985 -		System upgraded to IBM 3090.		Addition of ground water data.	
1984 -					Transferred system support to OIRM.
1980 -		System moved to EPA-owned IBM 3081 computer, operated in MVS environment.		Parameter and type of station index added.	
1977 -		System upgraded to IBM 307Q/168	System accessed using Alpha software.	Addition of hydrologic unit information, precursor of REACH.	Performed system operations by ComNet, Inc.
1974 -		System upgraded to IBM 307Q/155	System accessed using Wylbur software.		Performed system operations by Optimum Systems, Inc.
1973 -		System upgraded to IBM 306Q/65	Implemented General Point Source file		
1972 -	Daily Flow subsystem acquired from USGS.		General Query s.w. to access most IHS files. Implemented TSO system.		
1971 -	System moved to Boeing Computer Services.		Keyword and value concepts.		Performed system operations by Boeing Computer Services, Inc.
1970 -	System moved to EPA, computing performed by US Time Sharing.	Remote access via modems, graphics capabilities.	Developed conversion programs to input data, graphics capabilities.		Moved system responsibility to EPA Office of Water; performed system operations by U.S. Time Sharing, Inc.
1968 -	System moved to Dept. of the Interior.	IBM computer, random disk files, HASP job entry, card reading terminals.		Data element: Lat/Long added.	Moved system responsibility to Department of Interior.
1964 -	Implementation of system by Public Health Service.	Honeywell computer, sequential tape design.		Data elements: State, County, RMI added.	Implemented system by Public Health Services.
1961 -	Original design of system.		Parameter number concept developed.		



U.S. ENVIRONMENTAL PROTECTION AGENCY
401 M Street, SW
Washington, DC 20460

Federal IRM Review Program
INITIAL MAJOR INFORMATION SYSTEM REPORT

SYSTEM NAME: Toxic Chemical Release Inventory System (TRIS)

BASELINE DATE: October 1991

Steven D. Newburg-Rinn
Signature of Agency Official

Steven D. Newburg-Rinn
Name (please print or type)

Chief, Public Data Branch (OTS)
Title

Oct. 31, 1991
Date

Initial Major Information System Report

System Name: Toxic Chemical Release Inventory System (TRIS)

Baseline Date: October 1991

DESCRIPTION OF SYSTEM:

TRIS is a public-access system which contains information from facilities on the amounts of over 300 listed toxic chemicals that are released directly into the air, water, or land or that are transported to off-site dumping facilities. The system contains information on: facility and substance identification, environmental chemical release, off-site waste transfer, and waste treatment/minimization. The EPA internal system is available to authorized users of the Agency's mainframe computer. A publicly accessible version of the system is provided by the National Library of Medicine through TOXNET. TRIS data is also available on magnetic tape, CD-ROM, dBase and Lotus diskettes (by State), and microfiche. The microfiche is available at a library in every U.S. county, and the various distribution means are available for purchase from the National Technical Information Service or the Government Printing Office.

PROGRAM OBJECTIVES:

This system was mandated by the Emergency Planning and Community Right to Know Act (Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986). This legislation is based on the premise that citizens have a "right to know" about toxic chemicals in their communities. Use of this system is intended to encourage planning for response to chemical accidents and to provide the public and government information about possible chemical hazards in communities.

The Toxic Release Inventory has become the nation's first chemical-specific, multi-media database of emissions. It is a powerful tool for citizens to evaluate the chemical risks in their community and set priorities for risk reduction efforts. Similar uses of the TRI database for evaluating environmental quality are apparent to national and Regional EPA and State and local environmental officials. Through an IRM review, EPA has identified actions to reduce system costs, strengthen data reliability, and reduce the time required to release the data to the public. These improvements will provide a more timely and accurate database for the public to use for long-term environmental planning and pollution prevention.

PROGRAM MILESTONES/SCHEDULE:

Because of the mandate for EPA to collect and report the data from the Toxic Chemical Release Inventory, a mission needs analyses and options analysis were conducted during the early phases of this system. Because the statutory authority and the reporting rule governing TRIS change, the requirements and options analyses undergo frequent review to permit EPA to respond to the changes. Most recently, the Pollution Prevention Act (PPA) dictated major changes in the information required to be submitted for TRIS.

The mission needs and requirements analyses are complete. The TRIS design document updates are nearly so, and development work for the system revisions is in progress. Because of the volume of data and submissions received and the need to retain material across years, a process analysis has documented the costs and benefits of implementing an imaging system for the storage and retrieval of images and data. Most of the milestones given below address the effort in this direction.

Sept. 1991 - Mission needs and requirements analyses based on new requirements of PPA and on user requests for system enhancements.

Initial Major Information System Report

System Name: Toxic Chemical Release Inventory System (TRIS)

Baseline Date: October 1991

- Oct. 1991 - Updates to system design documents and review by NDPD.
- Oct. 1991 - Hardware/software options analysis completed and forwarded to NDPD for review/comment/approval for progress on imaging pilot.
- Dec. 1991 - Acquisition of equipment needed for development of imaging pilot. Determination of feasibility of OCR equipment.
- Jan. 1992 - Installation of pilot imaging equipment.
- Feb. 1992 - Design documentation for imaging pilot system to permit capture of data and images from Form Rs submitted. Implementation plan for pilot project. Pilot target of 10,000 forms established.
- Apr. 1992 - Acquisition and installation of equipment for pilot.
- May 1992 - Completion of programming for TRIS as modified by the PPA requirements and for new enhancements approved by OTS system managers.
- June 1992 - Completion of testing of modified TRIS and acceptance of system.
- June 1992 - Completion of coding for pilot imaging system for TRIS.
- July 1992 - Initial data entry into modified TRIS from Form Rs for reporting year 1991.
- July 1992 - Testing and acceptance of pilot imaging system equipment.
- Aug. 1992 - Installation and testing of pilot system software.
- Oct. 1992 - Implementation of pilot imaging system.
- Nov. 1992 - Evaluation of pilot project.
- Dec. 1992 - Plan for full-scale implementation of imaging system for TRIS.

Initial Major Information System Report

System Name: Toxic Chemical Release Inventory System (TRIS)

Baseline Date: October 1991

PROGRAM COSTS:

The costs to PDB/IMD/OTS for TRIS have been (and are) as follows:

<u>FY</u>	<u>IN-HOUSE</u>	<u>CONTRACTS*</u>
1987	2.2	\$ 700
1988	2.5	\$ 900
1989	2.8	\$1,000
1990	3.2	\$1,100
1991	3.9	\$1,200
1992	5.2	\$1,300 - TRIS/PPA 750 - TRIS/Imaging

NOTES ON COSTS:

In-house costs are the work years attributable to support for the mainframe TRIS system and development of the LAN-based data-entry system. They do not address NDPD and other EPA resources devoted to this system, nor do they address the production data-entry LAN. Contracts here are those funded by PDB/IMD/OTS for system maintenance and development efforts. FY 1992 costs are projected, based on budget requests.

*Costs expressed in \$1,000s

SCHEDULE FOR REVIEW:

FY 1993— Report on results of imaging system pilot project.

Section V: FY 1992 Program Plans

EPA has already started planning and implementing its FY 1992 IRM Review Program. Priorities, goals, and initiatives from previous years have been evaluated, and changed as necessary, to assess and reflect a continued relevancy. This section will describe EPA's plans for their FY 1992 IRM Review Program.

Planned Priorities and IRM Goals

In order to focus energies on the issues and concerns of greatest importance today, GSA and EPA have identified government-wide and Agency-specific priorities for FY 1992. These priorities and the strategic IRM goals for the Agency are included in the following.

EPA Priorities

Recently, EPA revised its strategic direction to clarify its mission and objectives. EPA is committed to using quality management processes that encourage teamwork and promote innovative and effective solutions to environmental problems. In particular, the Agency is committed to ensuring that:

- Federal environmental laws are implemented and enforced effectively.
- U.S. policy, both foreign and domestic, fosters the integration of economic development and environmental protection so that economic growth can be sustained over the long term.
- Public and private decisions affecting energy, transportation, agriculture, industry, international trade, and natural resources fully integrate considerations of environmental quality.
- National efforts to reduce environmental risk are based on the best available scientific information communicated clearly to the public.
- Everyone in our society recognizes the value of preventing pollution before it occurs.
- People have the information and incentives they need to make environmentally responsible choices in their daily lives.

V: FY 1992 PROGRAM PLANS

- Schools and community institutions promote environmental stewardship as a national ethic.

The Agency-wide goals and objectives which support these mission-critical priorities emphasize the importance of IRM in the Agency. For example, providing leadership in the nation's environmental science, research, and assessment efforts requires (1) gathering and analyzing the data needed to evaluate environmental risks and trends, measure environmental results, and inform the public and (2) providing objective, reliable, and understandable information that helps build trust in EPA's judgement and actions.

IRM Strategic Goals for 1991-1995

During FY 1992, the goals from the *IRM Strategic Plan (1991-1995)* will still be in effect. They describe how the Agency will create the IRM foundation which is necessary for the Agency to be able to fulfill its mission. These goals, which are described fully in the Background section, are to:

1. Establish data integration tools and activities.
2. Create and manage information systems supporting the environmental community.
3. Establish a program to promote information sharing.
4. Renew EPA's technology base to provide increased functionality and/or to reduce costs.
5. Manage a data administration program to ensure the Agency's ability to use its data fully.
6. Enhance productivity through the educated use of technology.
7. Improve planning and communications to ensure effective deployment of information and technology.
8. Provide quality service with proactive leadership as custodians of EPA information and systems.

Government-Wide IRM Priorities

GSA has set seven government-wide IRM review program priorities for the FY 1992 IRM review program; they are carried over from previous years, although some of the areas of emphasis within the priorities have changed:

FY 1991 IRM REVIEW PROGRAM REPORT

Information Management

Continuing with this priority from last year, agencies are expected to emphasize in their IRM review program two key elements: information proficiency and electronic data interchange (EDI). Agencies should conduct EDI reviews to: (1) identify potential agency applications, (2) determine what agency strategies have been developed for using EDI, and (3) evaluate agency progress in adopting EDI.

Major Information Systems

All agencies have information systems that require special continuing management attention because of their importance to the agency's mission; their high development, operating, or maintenance costs; or their significant impact on the administration of agency programs, finances, property, or other resources. These systems should be reviewed at least once every three years with a focus on how they support mission program objectives.

Software Modernization

Many of the Federal government's application programs are outdated and in need of replacement or improvement. In their fiscal year 1992 reviews, GSA would like agencies to review their application programs from a "service delivery" standpoint. The reviews should determine whether present software is meeting agency needs and, if deficiencies exist, what improvements are necessary.

Service to the Citizen

The Federal government is a vast repository of information that is vital to its citizens, and the free flow of information from the government to its citizens and vice versa is essential to a democratic society. The government is seeking to improve access to information, and by definition, the quality of services it provides. Agencies should be looking at the quality and efficiency of its delivery of services to citizens. Especially important are the major information systems vital to program delivery and how they support services.

Telecommunications

GSA would like agencies to devote a portion of the telecommunications reviews to data interchange within and among agencies. The application of standards continues to be an important area of telecommunications. In particular, agencies should conduct reviews to determine whether Government Open System Interconnection Profile (GOSIP) standards are being implemented. Additionally, agencies should be conducting reviews to determine whether the Portable Operating Systems Interface for Computer Operating Environments (POSIX) standard is used in the acquisition and development of operating systems.

V: FY 1992 PROGRAM PLANS

ADP Management

GSA would like agencies to emphasize reviews that attempt to determine whether mechanisms are in place to satisfy their regulatory and managerial responsibilities for the effective and efficient use of information technology. Agencies should, in particular, focus on: (1) access to information technology by users with disabilities, as mandated by Section 508 of the Rehabilitation Act of 1973 and reauthorized in 1986 (this area should be the subject of a review at least once every three years); (2) usage of Multiple Award Schedule Contracts (MASC), as governed by procedures in FIRMR 201-32.803; and (3) quality of procurement and contracting information systems.

Security/Privacy

To ensure compliance with the Computer Security Act of 1987, GSA would like agencies to review the extent of implementation of their security plans, and in particular, of their efforts to provide security awareness and training. Additionally, all Federal agencies must operate in accordance with the Computer Matching and Privacy Protection Act of 1988. This law states that "No record which is contained in a system of records may be disclosed to a recipient agency or non-Federal agency for use in a computer matching program except pursuant of a written agreement between the source agency and the recipient agency or non-Federal agency." Agencies should review their compliance with this Act as part of their IRM review program.

IRM Initiatives

The IRM initiatives begun by EPA in FY 1990 will continue to be emphasized in the FY 1992 IRM Review Program. Since these initiatives have already been described in the Background Section, only a listing of the initiatives will be provided here:

1. Data Sharing and Integration
2. Program Systems Modernization
3. Standards
4. Improved Records Management
5. Information Technology Acquisitions
6. Public Dissemination
7. Electronic Data Reporting.

FY 1991 IRM REVIEW PROGRAM REPORT

IRM Review Program

EPA is confident that the diversity of its FY 1992 review portfolio will enable the Agency to measure its progress in achieving the new government-wide and EPA-specific priorities, as well as IRM strategic goals. EPA has planned nine reviews for FY 1992. A summary description of each of the planned reviews is included in the Appendix. The reviews planned for 1992 are:

- IRM Communications Strategy Study
- Review of EPA Privacy Act Guidance
- Review of EPA's System Design and Development Guidance
- Review of the Secondary Use of Scientific Data
- Review of Agency's Data Integration Initiative
- Review of Superfund Records Disposition Schedules
- Impact Analysis for OTS Image Processing System
- Review of IFMS Account Number Structure
- LAN Security Review.

EPA will continue to strive to meet the IRM Review Program objectives set in FY 1991, as described in Section I, since the Agency believes that these objectives are integral to a thorough, well-managed review program. OIRM will continue to coordinate the review program through meetings of SIRMOS and the IRM Steering Committee. As in years past, the reviews for the coming fiscal year will be led by a variety of program offices and cover multiple facets of IRM. This breadth and depth of program scope helps to ensure that the importance of efficient and effective utilization of information resources is kept at the forefront of everyone's mind.

To measure progress in EPA's IRM Review Program, the review team will compare the number of reviews planned to the number of reviews conducted. The review team will also examine the reviews' contributions to the IRM program's progress in supporting the priorities and initiatives which were described in this section. These assessments will be tailored to the individual reviews in recognition of the unique aspects in each review. The review team will also examine the review program outreach activities.

Appendix

FY 1992 Review Summaries:

- 92-1 IRM Communications Strategy Study
- 92-2 Review of EPA Privacy Act Guidance
- 92-3 Review of EPA's System Design and Development Guidance
- 92-4 Review of the Secondary Use of Scientific Data
- 92-5 Review of Agency's Data Integration Initiative
- 92-6 Review of Superfund Records Disposition Schedules
- 92-7 Impact Analysis for OTS Image Processing System
- 92-8 Review of IFMS Account Number Structure
- 92-9 LAN Security Review

APPENDIX: 1992 REVIEW SUMMARIES

TITLE: IRM Communications Strategy Study

REVIEW NUMBER: 92-1

REVIEW SCOPE: OIRM and the National Data Processing Division (NDPD) are jointly responsible for managing most aspects of EPA's IRM Program. Establishing and maintaining effective communication channels is a fundamental ingredient in delivering IRM services to the Agency. The volume of information managed, the complexity of the issues involved, and the large number of people and organizations needing to be informed requires OIRM/NDPD to ensure that they are using the most effective and efficient methods to reach their constituents. Fulfilling their commitment to EPA's total quality management program, OIRM/NDPD will assess the effectiveness of their communication systems and clients' perceptions of Agency IRM services.

**BRIEF
DESCRIPTION:**

OIRM, with contractor assistance, will review the current IRM communications environment within EPA. The analysis will focus on identifying major work processes/products and events that require communication with organizations outside of OIRM/NDPD, determining the respective target audiences, and selecting the most appropriate processes and communications media to use. This study will involve:

- Reviewing OIRM pilot survey results.
- Surveying managers and staff and conducting individual and group interviews with selected personnel in order to collect data on current communications systems.
- Assessing current OIRM/NDPD communications systems by identifying areas of concern, such as duplicative efforts or communication gaps, and earmarking what is working well.
- Developing a communications strategy and implementation plan. The plan will identify steps OIRM/NDPD management can implement to improve delivery of IRM services to their clients.

**AGENCY CONTACT
AND PHONE NO.:** Jean Sammon, (202) 260-7820

FY 1991 IRM REVIEW PROGRAM REPORT

TITLE: Review of EPA Privacy Act Guidance

REVIEW NUMBER: 92-2

REVIEW SCOPE: OIRM is responsible for managing the Privacy Act Program in EPA. OIRM works closely with the Office of General Counsel in advising clients of their responsibilities under the Privacy Act. The original EPA Privacy Act Manual was issued in 1986. This document needs to be updated and expanded to include recent legislative requirements such as the Computer Matching and Privacy Protection Act of 1988. It also needs to include more useful procedural detail than is included in the existing manual. The objective of this project is to develop a revised draft in preparation for Agency-wide review.

BRIEF DESCRIPTION: This review will be conducted by OIRM with contractor support. It will involve reviewing established and proposed Federal Privacy Act legislation. In the course of EPA's revision of this guidance document, OIRM's Privacy Act Officer, personnel from the Office of General Counsel, and managers of past Privacy Act systems of record will be interviewed in order to develop an understanding of their respective needs and requirements which should be addressed in the revised Privacy Act Manual. These individuals will also identify appropriate format, style, and content changes. Based on this research, OIRM will produce an options paper containing a detailed outline of the topics needing to be addressed in the revised Privacy Act Manual and recommended changes in style and format.

AGENCY CONTACT AND PHONE NO.: James Keys, (202) 260-8236

APPENDIX: 1992 REVIEW SUMMARIES

TITLE: Review of EPA's System Design and Development Guidance

REVIEW NUMBER: 92-3

REVIEW SCOPE: EPA's *System Design and Development Guidance* provides the framework for all information system design and development activities at EPA, whether they are conducted by EPA or contractor personnel. Information is one of EPA's primary products, and the *Guidance* helps determine how well EPA's information systems manage Agency information. Because of the great importance of the system design and development process to resultant automated support for EPA's mission functions and because of the need for guidance of the highest quality, OIRM is engaging the Agency IRM community in planning an update to the *Guidance*. The core *Guidance* currently has six volumes, most of which were originally produced in 1987 and reproduced in 1989, so many are in need of technical refreshment.

The updated *Guidance* must address issues and new technologies that dramatically change systems development, such as: emphasizing prototyping, recommending computer-assisted software engineering tools and information engineering methodologies, promoting open system development, clarifying mainframe versus local area network platform issues, promoting common user interface, and promoting electronic data interchange in systems' communications.

**BRIEF
DESCRIPTION:**

OIRM, with contractor assistance, will analyze issues related to revising and updating the Agency's *Guidance*. The objective is to thoroughly plan an effective, focused, and forward-looking revision for the *Guidance* and to communicate that plan to all affected parties. It will involve the following steps:

- Assessing EPA's current system design and development environment within which the *Guidance* will be updated.
- Conducting a work session to define the scope and identify key issues for the update.
- Analyzing the high priority issues identified during the work session and recommending options for addressing them.
- Conducting work sessions to achieve consensus and resolve key issues for the update.
- Developing a comprehensive approach for the update.

**AGENCY CONTACT
AND PHONE NO.:** Steve Hufford, (202) 260-5914

FY 1991 IRM REVIEW PROGRAM REPORT

TITLE: Review of the Secondary Use of Scientific Data

REVIEW NUMBER: 92-4

REVIEW SCOPE: OIRM is responsible for ensuring the effective and efficient use of EPA's information resources. OIRM's Scientific Systems Staff (SSS) is delegated responsibility for oversight of the IRM activities in EPA's Office of Research and Development (ORD).

The SSS is currently assisting the Science Subcommittee of EPA's IRM Steering Committee in reviewing the effective utilization of EPA's scientific data. The review will focus on how that data are currently used for purposes beyond that for which it was originally intended and will identify opportunities for improving the data to maximize secondary use.

BRIEF

DESCRIPTION: This review is being conducted in two stages. The first stage involves review of the general status and trends of effective use of EPA's scientific data. Interviews will be conducted with two broad groups of Agency staff— individuals involved in developing environmental data and individuals involved in managing that data. Other groups will likely be added to the interview schedule. The objective of this first stage is to develop recommendations designed to improve the reusability of environmental data. Phase two involves the development of data elements that will aid future decisions utilizing scientific data— "data usability indicators."

AGENCY CONTACT

AND PHONE NO.: Richard Johnson, (919) 541-1132

APPENDIX: 1992 REVIEW SUMMARIES

TITLE: Review of Agency's Data Integration Initiative

REVIEW NUMBER: 92-5

REVIEW SCOPE: EPA must integrate comprehensive sets of environmental, health, economic, legislative, and social demographic information in order to evaluate remedies for a variety of domestic and international environmental problems. Information that is shared with the larger environmental community is recognized and managed as a valuable resource. Vigilant management ensures that data definitions, data formats, and data quality are effectively designed into automated systems and document collections. Advanced environmental data integration models and analytical techniques promote more intelligent, proactive environmental policy.

Data integration is pivotal to achieving the Agency's overall mission. The current emphasis on a broad environmental agenda presents the best opportunity since EPA was established to restructure its data and capabilities outside the confines of single media approaches. This review will evaluate EPA's foundation for data integration.

**BRIEF
DESCRIPTION:**

This review, conducted by OIRM and the IRM Steering Committee with contractor assistance, will assess progress to date on numerous activities necessary for data integration including:

- Planning an information strategy which defines the mission-critical functions and information needs of EPA's programs and developing appropriate information architectures. The Scientific Systems Staff will be integrally involved in this planning and are reviewing secondary usage of scientific data (review 92-4).
- Organizing currently available Agency data and databases by identifying and categorizing existing program systems and databases, developing data models of priority and mission-critical databases, auditing data quality and consistency, and working with program offices to implement data standards and data quality objectives necessary for data integration.
- Assessing, prioritizing, acquiring, and preparing base geographic data sets in anticipation of the spatial analysis and display needs of environmental managers.
- Prototyping the hardware/software environment to support the anticipated storage, analysis, access, and delivery needs of any data integration system.

**AGENCY CONTACT
AND PHONE NO.:** Rick Martin, (703) 883-8789

FY 1991 IRM REVIEW PROGRAM REPORT

TITLE: Review of Superfund Records Disposition Schedules

REVIEW NUMBER: 92-6

REVIEW SCOPE: Document management is critical to the management, administration, and execution of the Superfund program. Documents are generated to: initiate cleanup actions; record technical conditions, activities, decisions, and remedies; communicate with the public; identify, negotiate or litigate with responsible parties; and track costs and schedules for cleanup activities.

This review supplements the FY 1991 Review of Superfund Document Management Initiatives (91-3) which developed and refined guidance for managing Superfund records. One of the findings of the review was that the current Superfund records disposition schedules are inadequate. As a result, new records disposition schedules for the Regional Superfund offices were drafted. This review will support the development of a new records disposition schedule for the Headquarters Superfund program.

BRIEF

DESCRIPTION:

The study will be conducted, with contractor support, by OIRM and the Office of Solid Waste and Emergency Response (OSWER). The scope of the study deals with site-related documents supporting pre-remedial, remedial, removal, and enforcement actions. These include management, financial, technical, and enforcement documents and exclude documents supporting program activities unrelated to the cleanup of hazardous waste sites, such as program management and regulatory development.

AGENCY CONTACT

AND PHONE NO.: Michael Miller, (202) 260-5911

APPENDIX: 1992 REVIEW SUMMARIES

TITLE: Impact Analysis for OTS Image Processing System

REVIEW NUMBER: 92-7

REVIEW SCOPE: The Office of Toxic Substances (OTS) receives, safeguards, and disseminates documents received as a result of the Toxic Substances Control Act (TSCA). Each year, OTS receives tens of thousands of pages of documents from the chemical industry and other entities regulated by TSCA. Also, the review of these documents generates similar tens of thousands of pages of documents each year. Currently, OTS is using microform technology to provide an archival function for these documents. This technology is no longer practical, efficient, or timely. Following extensive preliminary analyses, it was determined that use of optical disk imaging technology was the best means to alleviate the problems associated with the receipt and handling of certain TSCA documents. The specialized imaging equipment has been purchased, and software has been developed. The production system will be run as a pilot, using the New Chemicals Program (NCP) documents and review process as its inputs. This analysis seeks to ensure that OTS project managers have thoroughly planned the integration of this new technology into the processes of the NCP by identifying potential risks and their solutions.

**BRIEF
DESCRIPTION:**

This review will be conducted by OTS with contractor assistance. It will determine the degree to which OTS is ready to accept and use imaging technology in the NCP and the effects of integrating imaging into OTS' current work practices. The focus of the analysis is the OTS organization as a whole, regarding the NCP and any damage that may be done to the process if problems arise with the imaging system implementation. The result will be an impact analysis which presents analytical results as well as recommendations.

Documents prepared during the imaging system life-cycle development will be used as references, and interviews will be conducted with project managers, selected OTS managers and users, and other persons as are determined to be necessary. These staff will provide the perspective of their individual offices and information on the consequences of use or non-use of the imaging system. They may also give input on future plans that are undocumented and, therefore, otherwise unavailable.

**AGENCY CONTACT
AND PHONE NO.:** Joanne Martin, (202) 260-3756

FY 1991 IRM REVIEW PROGRAM REPORT

TITLE: Review of IFMS Account Number Structure

REVIEW NUMBER: 92-8

REVIEW SCOPE: The existing financial account number structure has been used by the Agency since 1970. The account number is used to identify programs and functions throughout the Agency; it is included in all the administrative systems comprising the overall financial management system and numerous other systems with which it interfaces. Subsequent to the development of the original account number structure, the Agency implemented the Integrated Financial Management System (IFMS). Recent reviews have indicated that the existing structure for classifying financial data may not be able to accommodate the Agency needs beyond the next three to four fiscal years.

It is essential that a redesigned account number structure be technically compatible with the commercial financial software which is the basis of the IFMS, while providing appropriate financial, budgetary, and organizational information for the foreseeable future.

BRIEF

DESCRIPTION:

This review will be conducted by the Office of Administration and Resources Management with contractor assistance. The review will involve surveying Headquarters and field program, financial management, and budget offices to develop an understanding of their requirements. The result of the review will be detailed technical specifications for the revised EPA account number structure. The technical specifications will be developed at a level of detail and in a format that is suitable for use by EPA systems development staff and system managers to guide the modification of their systems to accommodate the redesigned account number structure.

After technical specifications are developed, walk-through sessions will be conducted with key users of the account number structure to obtain their concurrence on the specifications. Once issues or problems raised in these sessions are resolved, documentation and training materials will be developed to explain the recommended structure.

AGENCY CONTACT

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APPENDIX: 1992 REVIEW SUMMARIES

TITLE: LAN Security Review

REVIEW NUMBER: 92-9

REVIEW SCOPE: This review will deal with the integrity, availability, confidentiality and appropriate use of selected local area networks (LANs) within the Office of Solid Waste and Emergency Response (OSWER).

BRIEF

DESCRIPTION: The Information Management staff within the Office of the Assistant Administrator for OSWER plans to conduct security review of selected LANs within that organization. The first LAN to be reviewed will be one which provides office automation support to the Assistant Administrator and Staff organizations. A qualitative risk analysis which identifies potential adverse events, threats, and vulnerabilities of all LAN resources will be conducted. Cost-effective security measures will be identified and recommended and their implementation monitored.

AGENCY CONTACT

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