Office of the Chief Information Officer

1999-2000 Stakeholder Report

December 15, 1999

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 27, 1999

MEMORANDUM TO: Those on the Attached List

FROM: Stuart Reiter
Acting Chief Information Officer

SUBJECT: OCIO 1999-2000 STAKEHOLDER REPORT

To further the collaboration and dialogue between the Office of the Chief Information Officer (OCIO) and other NRC offices (our stakeholders), I am providing this summary report on Information Technology and Information Management activities across the agency. The report provides an overview of OCIO's function, organization, funding, and outcomes with focus on FY 1999 and FY 2000 drivers, program accomplishments, and goals.

The NRC is in a process of change, re-baselining its performance goals and focusing on defining the appropriate strategies needed to accomplish these goals. Additional emphasis is being placed on outcome orientation and establishing performance measures to form an overall framework for judging NRC performance. As this re-baselining continues, OCIO has, and will engage in a dialogue with program and support offices to explore strategic and tactical opportunities to achieve office goals through the use of information technology.

As NRC's funding and resources are under increasing pressures, we must all look to more efficient ways of conducting the agency's business. OCIO will continue to look to technology drivers to improve our service and decrease our costs. While continuing to provide our baseline services effectively and efficiently, in FY 2000 OCIO will assess our service offerings to ensure they are economically competitive and are well aligned with our stakeholder's needs.

Our IT/IM programs for applications, infrastructure, and information management provide services that support NRC's ability to carry out the agency's mission. While we recognize that significant challenges lie ahead of us, we are pleased with the progress that we have made to date.

Applications

We were one of the first agencies to complete Y2K remediation programs and to comply with the requirements of Clinger Cohen. We have reduced cost as we have eliminated or replaced legacy mainframe applications. We have improved the effectiveness of new application deployments through better coordination across offices. ADAMS, our Agencywide Documents Access and Management System, started production operations in the first quarter of FY 2000 with its full implementation to be phased in during the second quarter of FY 2000. ADAMS positions NRC to take advantage of the benefits from this Agency wide initiative to modernize our document management processes.

IT Infrastructure
Our IT Infrastructure was upgraded this past year to meet agency application and business requirements. We completed development and implementation of new IT infrastructure in areas of video teleconferencing, agency workstation and operating systems environment, and network upgrades including improved connectivity for resident inspectors. In FY 2000 we have major planning efforts ahead of us to replace the agency's long distance voice and data services contract, assess mobile remote computing needs, and acquire a new network infrastructure services and support contract for the agency. Successful agency wide infrastructure efforts reflect the successful partnering between OCIO and regional IT/IM staff.

IM program
Our information management programs have expanded to improve NRC's communication with the public and to improve our own internal Web site. We have piloted a public broadcast capability and in FY 2000 will look at web casting commission public meetings. We are introducing a new public electronic reading room to support public access to agency documents from November 1, 1999 forward. We are improving timeliness and accuracy of agency data on our agency external web page and planning other improvements during FY 2000. For our internal web site, we are looking at best practices and will implement these during FY 2000.

In addition to the above focus areas, within OCIO we have continued initiatives to improve our internal practices. We are continuing to institutionalize modern management practices for information technology, such as data administration, configuration management, standardizing on products and tools and the skill development needs of OCIO staff.

In summary, we look forward to this next year as we continue to work in partnership to align our agency resources in support of NRC's mission. I encourage you to widely distribute this OCIO Stakeholder Report. I look forward to discussing with you how we can work together to find more efficient and effective ways of conducting the agency's business.

Your comments, thoughts, and questions are welcome. Please contact either Jesse Cloud, Chief, Planning and Architecture, or myself.

Restricted Distribution: Please note that this report includes some predecisional funding information and is restricted to internal distribution only.

cc: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan, Jr.
Commissioner Merrifield
Executive Council Members
IT Business Council Members
Office Directors
Regional Administrators
Office of the Inspector General

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MEMORANDUM TO THOSE ON THE ATTACHED LIST DATED: December 27, 1999

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Luis A. Reyes, Regional Administrator, Region II	RGN-II	
James E. Dyer, Regional Administrator, Region III	RGN-III	
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Office of the Chief Information Officer
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1.0 INTRODUCTION

The Office of the Chief Information Officer (OCIO) is responsible for the effective and efficient use of information technology and information management resources in support of the Nuclear Regulatory Commission's (NRC's) mission.

This report offers a brief summary of OCIO's function, organization, funding, and outcomes. The report focuses on FY 1999 and FY 2000 drivers, program accomplishments, and goals.

2.0 FUNCTION AND ORGANIZATION

2.1 The OCIO Function at the NRC

The Office of the Chief Information Officer (OCIO) plans, directs, and oversees the delivery of centralized information technology (IT) infrastructure, and information management (IM) services, and the development and implementation of IT and IM plans, architecture, and policies to support the mission, goals, and priorities of the agency. The CIO (Chief Information Officer) represents the NRC on the Federal CIO Council and serves as a member of NRC's Executive Council. OCIO advances the achievement of NRC's mission by assisting management in recognizing where IT can add value while transforming or supporting agency operations. The CIO provides principal advice and assistance to the Chairman, the Commissioners, and other agency executives to ensure that agency IT and IM resources are selected and managed in a manner that maximizes their value, manages risks, and is consistent with Federal laws and regulations.

2.2 Organizational Structure and Roles

The OCIO is organized around four functional areas of activity:

1. Information Technology Infrastructure—Provides for the development, integration, implementation, management, and support of the agency's IT infrastructure which supports the mission and program activities of the NRC.

2. Applications Development—Provides for the coordination of all agency IT applications development and support activities on an agencywide basis.

3. Information Management—Provides information management for the agency; maintains public accessibility to agency information, manages statutory

compliance programs, and supports mandatory external reporting requirements to other agencies (Office of Management and Budget and National Archives and Records Administration).

4. Planning and Resource Management—Manages the agency's Capital Planning Investment Control process, including reviews and decision making on IT investments by the IT Business Council and Executive Council. Proactively assesses and introduces new technologies to agency. Manages agency-wide technology standards and architectures. Within OCIO, provides administrative services, plans and executes the budget, and administers HR functions, including IT training programs.

2.3 Strategies

The OCIO is a service organization to both NRC internal customers and the public. The OCIO plans and executes its activities to provide benefits and values to its customers, reduce costs to the agency, and enable NRC to be more effective in meeting its mission.

The OCIO's strategies used in accomplishing the agency's information and streamlining goal are documented in the "Budget Estimates and Performance Plan, Fiscal Year 2001" issued in September 1998. The OCIO is now in the process of updating these strategies to ensure continued alignment with program and support office's performance goals and strategies evolving from the PBPM (Planning, Budgeting, and Performance Management) process. Current strategies have focused on improving the delivery of information to stakeholders, institutionalizing the framework of the Clinger-Cohen Act, remediations for Y2K issues, establishing a robust and reliable infrastructure, and instilling performance-based management and effective capital planning and investment control practices for IT investments.

3.0 MANAGING INFORMATION AT THE NRC

3.1 Information Technology Function

Managing the agency's information technology (IT) is key to enabling staff to effectively use and communicate information and improve or streamline agency processes. The OCIO maintains and updates a robust and reliable IT infrastructure that includes desktop workstations, networks, applications, timesharing services, and telecommunication support for the NRC Operations Center. To manage agency IT resources effectively in a technical and business environment that is rapidly changing, OCIO supports numerous business and technology assessment and planning procedures. These procedures include a Capital Planning and Investment Control (CPIC) process for new investments in applications and infrastructure, an agency IT

Standards process documented in the Technical Reference Model (TRM), an applications Systems Development Life Cycle Methodology (SDLCM) process, a business alignment process supported by business area teams, a technical assessment process for emerging technologies, a Data Administration process, an Architecture planning process, and a Configuration Management process. The public interests are factored into these assessment and planning procedures as requirements for public access, protections, and interfaces to the agency IT environment are included.

3.2 Information Management Function

Information management (IM), the ability of NRC staff and stakeholders to prepare, access, communicate, disseminate, and use information, is essential to meeting the agency's performance goals. The OCIO provides IM services to NRC staff through a variety of media and access points, including support for the technical library, agency document and records management, editorial proofing, printing, graphics, reproduction, and Web pages. Additionally, the OCIO serves the public through statutorily mandated programs (such as Freedom of Information Act (FOIA), Privacy Act, records management, and information collections) and non-statutory programs (such as the Public Document Room and the ADAMS (Agency Documents Access and Management System) on-line public reading room).

3.3 Partnering Framework

Over the last few years the NRC, under the leadership of the OCIO, has established and institutionalized roles, responsibilities, and processes designed to ensure the effective and efficient functioning of the IT function on behalf of the NRC's mission. These roles, responsibilities, and processes reflect industrywide "best practice" and are consistent with regulatory guidance (e.g.Clinger-Cohen Act). This partnering framework includes the Executive Council, Information Technology Business Council, and standard procedures for managing IT.

3.4 Executive Council

The Executive Council is a senior management group that reports directly to the NRC Chairman. The Executive Council reviews and approves all major agency IT investments. It provides planning guidance to ensure agency investments are driven by business needs and represent best benefit to the sponsoring office and agency.

3.5 Information Technology Business Council

The Information Technology Business Council (ITBC) is an advisory group made up of senior managers from each NRC office. It provides a forum for partnering information with offices, managing technology change, and better aligning business needs with technical solutions. The ITBC reviews office investment proposals as part of the CPIC process and provides guidance to the CIO.

3.6 Capital Planning and Investment Control Process

The CPIC process is a set of working procedures used by the agency to manage the life cycle of all IT investments in the agency that exceed $50,000. The OCIO coordinates the CPIC process, which includes review and approval procedures for business cases, project management plans, issues, and lessons learned.

3.7 Managing Applications Development and Business Sponsorship

Application investments are proposed and agreed upon by the individual offices. Offices are responsible for presenting the business case for approval by the Executive Council, creating the project management plan, and managing and reporting on the implementation through the project management plan.

3.8 Managing Applications Development With Business Area Teams

Business area teams within the OCIO are focused on business goals, functions, and procedures relevant to a specific business area. Our customers will develop a longterm working relationship with a single OCIO team that participates in sponsor office planning sessions and other key management meetings.

3.9 Managing Technology Change

Agency technology standards and architectures are maintained by the OCIO and the ITBC to provide an integrated, consistent technology environment and to manage technology changes incrementally for the agency.

4.0 BUSINESS ENVIRONMENT: BUSINESS DRIVERS AND CHALLENGES

Alignment With Agency Goals

The NRC is in a process of change, re-baselining its performance goals and focusing on defining the appropriate strategies needed to accomplish these goals. Additional emphasis is being placed on outcome orientation and establishing performance measures to form an overall framework for judging NRC performance. As this re-baselining completes, OCIO has, and will continue to, engage in a dialogue with program and support offices to assess effectiveness and completeness of the current use of, and future needs for, applications and technology.

During this year, both the Nuclear Reactor Arena and the Nuclear Materials Arena have adopted similar performance goals which rely on improving the use of regulatory information. OCIO will be working closely with these program offices to explore strategic and tactical opportunities to use information technology to achieve their goals.

5.0 BUSINESS ENVIRONMENT: TECHNOLOGY DRIVERS AND CHALLENGES

The information technology (IT) industry is in the midst of major changes caused by new technologies, competitive pressures, rapid adoption of the Internet and Electronic Commerce networked technologies, skills shortages, and increased threats from cyber attacks.

Six drivers that have and will continue to influence NRC's direction in technology are highlighted here:

- Continued demand for robust IT infrastructure,
- Increased movement to Web-based computing,
- Increased movement to electronic commerce on the Internet,
- Increased reliance on commercial software,
- Continued uncertainty in long term viability of our agency office suite, and
- Increased demand to protect agency IT assets.

(1) Continued demand for robust IT infrastructure

As IT becomes fully integrated into the agency's business, a robust IT Infrastructure is key to sustaining essential services (e.g. e-mail) and applications. Additionally, the infrastructure must provide a foundation for the adoption of new services over time.

Impact: NRC has established a robust IT Infrastructure to support client requirements. The agency must continue to budget and fund upgrades to its infrastructure to prevent the risk and costs from obsolescence. We will continue to monitor the efficiency and effectiveness of the infrastructure to ensure reliable and efficient operations. We will plan for orderly growth of the infrastructure to accommodate new business needs.

(2) Increased movement to Web-based computing

Web-based computing is reducing the cost of ownership by using thin-clients at the desktop. This has the potential to change the architecture of our infrastructure over time. The Web interface has been widely accepted by the staff and our commercial software vendors are beginning to introduce products with a Web browser interface.

Impact: As programs standardize on the Web interface, we will see transition efforts over time to take advantage of the improved consistency and easy-to-use interface which requires less training. Additionally, the Web browser model places fewer demands on the desktop PC, moving most of the processing to servers. In future years, we may be able to use simpler, cheaper PCs and reduce the cost of maintenance and software upgrades.

(3) Increased movement to electronic commerce on the Internet

Our licensees, the public, and our oversight agencies have embraced 'E-Commerce' and expect us to interact with them electronically.

Impact: NRC has implemented a public Web site to disseminate information to the public. Continued attention will be required in FY 2000 and beyond to improve both the public and internal web sites. We will soon implement Electronic Information Exchange (EIE) technology to securely exchange documents with our licensees and other business partners. Additional demands for public access to NRC regulatory information may require extensions to our IT architecture and services.

(4) Increased reliance on commercial software

Large software vendors are beginning to "federalize" their software products to make them work in a Government environment.

Impact: NRC can use "off-the-shelf" software for common administrative functions such as human resource management, financial management, and document management. Some customizing is still required, but the burden of creating and maintaining original software is reduced. On the other hand, once we are committed to commercial vendors, we will need to follow their lead in technology and business strategies. Routine updates and technology changes may be required. Incremental costs will be incurred when we adopt business practices that cannot be implemented using off-the-shelf software.

(5) Continued uncertainty in long-term viability of our agency office suite

Over the years, NRC has adopted a wide variety of office automation software from several different vendors. One of the vendors, Corel (manufacturer of WordPerfect), has been experiencing market difficulty and is no longer a leader in the office suite marketplace. It is becoming increasingly difficult to integrate products from other vendors with Corel's suite.

Impact: NRC has a significant investment in providing office suite capabilities to all employees. Any transition to another vendor office suite will be costly to the agency and require new staff skills and training. We need to periodically review options for near and longterm requirements.

(6) Increased demand to protect agency IT assets

NRC needs to increase our security efforts as we provide wider public access to agency information, e.g. public access to agency records now provided via ADAMS. Additionally, NRC and other Government agencies are frequently the target of cyber attacks from malicious computer hackers or destructive viruses. The attacks are becoming more sophisticated and contribute to concern over potential "cyber terrorism".

Impact: NRC maintains a "hard outer shell" to protect its regulatory information. We will continue to invest in this protective defense. We will maintain an aggressive program to keep the staff aware of the need for maintaining computer security and we will ensure that key systems are well protected and have contingency plans to respond to security issues.

6.0 OCIO FUNDING TRENDS

The OCIO has focused on reducing the cost of current information technology (IT) functions while providing new services such as network infrastructure to support electronic interfaces and connectivity, and implementing an electronic records system (ADAMS) to streamline agency document management business practices and regulatory work with our licensees.

6.1 Overall Trends

As shown in Table 1, the current OCIO budget for FY 2000 is $31.4 million. From FY 1997 to FY 2001, the OCIO's budget decreased by 26 percent (by $10.8 million) and our full time equivalent (FTE) allocation decreased by 11 percent (by 22 FTE).

Table 1. OCIO Resource Allocation

Resource	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
OCIO FTE	191	177	174	172	169
OCIO Budget ($M)	41.3	40.4	41.9*	31.4*	30.5

* Reflects adjustments to expedite ADAMS backfit and infrastructure upgrades. $1.5 million retrofit funds deducted in FY 99 and $1.3 million readded in FY 00.

Note 1: The OCIO IT budget was approximately 67% of the overall agency IT budget in FY 1999.

6.2 Trends for FY 2000

As shown in Table 2, from FY 1999 to FY 2000, our budget decreased by 25 per cent ($10.5 million) and our FTE allocation decreased slightly (down 2 FTE). The declining cost profile going into Year 2000 is primarily due to the completion of infrastructure programs, the completion of the Year 2000 (Y2K) program, and the completion of ADAMS development.

Table 2. Declining Costs From FY 1999 to FY 2000 ($M)

OCIO Division	FY 1999	FY 2000	Change	Comments
IT Infrastructure	24.5	18.6	(5.9)	Completed programs
Applications Development	4.4	2.3	(2.1)	Completion of Y2K program
Information Mgt	12.4	9.8	(2.6)	Completion of ADAMS
Planning & Resource Mgt	0.6	0.7*	0.1	- -
Total	41.9	31.4	(10.5)	25% cost reduction

* includes Reimbursable Work Item for $0.1 million.

6.3 FY 2000 Allocation of Resources by OCIO Division

The OCIO budget allocates expenses in terms of contract dollars and FTE support. Table 3, below, shows both cost and FTE breakouts by division within OCIO. IT Infrastructure and Information Management Division allocations include contractor support for new development and ongoing services. In FY 2000, as development of infrastructure programs and ADAMS are completed, contract and FTE dollars will shift to support production services.

Table 3. Divisional Resource Allocation

OCIO Division	FY 2000 Expense	FY 2000 FTE
IT Infrastructure (%)	59.1	19.7
Applications Development (%)	7.5	17.3
Information Mgt (%)	31.2	49.1
Planning & Resource Mgt (%)	2.2	13.9
FY 2000 Baseline ($M/FTE)	$31.4M	172 FTE

6.4 FY 2000 Trends for Division-Specific Programs

Funding requirements for each OCIO division for FY 1999 and FY 2000 are detailed below. Funding data is contrasting the current fiscal year with previous funding levels, showing an overall downward trend.

(1) IT Infrastructure Division

Table 4 shows the program funding for the IT Infrastructure Division used to support desktop, network, and data center operations for headquarters and the four regional offices. Much of the operational work is done by contractors under the direction of OCIO program staff.

Table 4. IT Infrastructure Program Funding
(units = $K)

Program	FY 1999	FY 2000	Difference	Comments
Customer Support Center (hotline)	778	640	(138)	Consolidation complete
Desktop Infrastructure (PCs, moves, repairs)	6,586	1,971	(4,615)	Upgrade complete
Telecomm Svcs (voice, data, ops, maint)	8,071	8,392	321	FTS 2000 transition costs
Network Svcs (integration, test and troubleshooting)	6,284	5,235	(1,049)	Upgrade complete
Production Services (data center, servers, backups)	2,782	2,310	(472)	Move from mainframe
Total Infrastructure	24,501	18,548	(5,953)	

(2) Applications Development Division

Table 5 shows the program funding for the Applications Development Division used to provide access to contractor support for applications development and maintenance and develop and maintain the agency's Systems Development Life Cycle Management Methodology and applications configuration management programs.

Table 5. Applications Development Program Funding
(units = $K)

Program	FY 1999	FY 2000	Difference	Comments
Year 2000 Activities	2,337	0	(2,337)	Year 2000 activities completed
Application Support & Integration	2,034*	2,341*	307	Follow-on CISSCO contractor activities
Total Applications Development	4,371	2,341	(2,030)	

* Funds general management support for the CISSCO program, general data base administration for agency applications, and some applications problem resolution activities.

(3) Information Management Division

Table 6 shows the program funding for the Information Management Division used to support the agency's internal business practices for managing agency information and official agency records. Significant transitional support is required for ADAMS; when it is in full production, it will require ongoing operations and Help Desk support.

Table 6. Information Management Program Funding (units = $K)

Program	FY 1999	FY 2000	Difference	Comments
Information Services (FOIA, Privacy, Library, PDR)	645	540	(105)	BRS at PDR ended LPDR program closed
Publishing Services	3,606	2,981	(625)	Reduction due to ADAMS
Records Management	3,550	3,726*	176	Decreased estimate for document processing
ADAMS	4,665	2,558	(2,107)	Development completed
Total Information Management	12,466	9,805	(2,661)	

*Included FY 99 commitments of $1.3M for retrofit of historical documents

(4) Planning and Resource Management Division

Table 7 shows the program funding for the Planning and Resource Management Division used to support technology planning, standards, Capital Planning and Investment Control process, Data Administration and Performance Measures programs, and Computer Security Oversight programs. Note: the division also supports OCIO HR and budgeting functions.

Table 7. Planning and Resource Management Program Funding (units = $K)

Program	FY99	FY00	Difference	Comments
Planning and Architecture	472	602	130	Strategic Plan activity
Admin and Resource Mgt	0	0	0	
Computer Security Oversight	100	40	(60)	Training initiative completed Penetration Study completed Independent rvws deferred
Total Planning and Resource Mgt	572	642	70	

6.5 FY 2000 Trends for Computer Security

The Computer Security Oversight program is conducted primarily with in-house resources. The OCIO Planning and Resource Management Division manages the agency's computer security policy, provides assistance to IT application sponsors in developing computer security and business continuity plans, conducts a computer security awareness program, responds to computer security incidents, and performs independent reviews of the security of agency IT infrastructure and applications. IT application sponsors in each NRC office are responsible for funding appropriate applications-specific computer security and business continuity initiatives to protect their applications. The OCIO funds for security initiatives relating to the IT infrastructure and OCIO-sponsored applications, like ADAMS, are covered in the appropriate OCIO division budgets.

7.0 APPLICATIONS PROGRAM

This section presents a description of current active projects by program and management support offices and their budgets for these new systems. They are grouped by Nuclear Reactors arena, Nuclear Materials arena, and Management Support area.

7.1 Applications Portfolio Cost Distributions

Funding for applications, development, and maintenance is provided by the sponsoring office. NRC's IT funding carried in program and support office budgets for currently active application initiatives is $28.5 million. Table 8, below, provides a summary by program area and management support.

Table 8. Cost Distribution by Program Arena and Mgt. Support Area (units=$M/%)

Program	Total Cost Estimates ($M)	% of Total
Nuclear Reactors	4.2	14.8
Nuclear Materials	.7	2.4
Management Support	23.6	82.8
Total	28.5	100.0

7.2 Nuclear Reactors Program

The Office of Nuclear Reactor Regulation (NRR) continues to develop and implement applications to support the Reactors Oversight Program. Table 9, below, is a brief summary of the current Nuclear Reactor Arena projects.

Table 9. Application Projects, Nuclear Reactors Arena (units = $K)

Active CPIC Projects–Nuclear Reactors (000)				
Project	**Office**	**Due Date**	**Total Estimated Cost**	***Project Description***
RPS - Reactor Program System	NRR	12/01	$ 2,700.0	*Reactor Planning, Inspection, Reporting, and Licensing Functions*
Automated Performance Measures	NRR	9/00	$ 250.0	*Automate the standard data and graphs for NRR program performance reporting.*
OLTS - Operator License Tracking System	NRR	12/31/99	$ 280.0	*Tracking of operator licensing data.*
EATS - Enforcement Action Tracking System	OE	2/00	$ 489.7	*Implemented in October 1999.*
Performance Indicator (PI) Project	NRR	1/1/00	$ 300.0	*Automate a reactor performance data collection for the new Reactor Oversight process; delayed until April 2000.*
ETS Portable Satellite Phones	IRO	10/30/99	$ 205.3	*Portable satellite telecommunications units to supplement the Emergency Telecommunications System at nuclear power plants.*
Total			$ 4,225.0	

Investments in the Reactor Program System (RPS) continue as additional modules are brought up. The new Reactor Performance Indicator System will support reactor oversight processes with performance data submitted electronically by the licensees. Performance indicators will be calculated from these data, which will influence oversight activities and be made available to the public via the Internet. Improvements to the Operator License Tracking System are planned for a user-friendly interface and better performance.

In FY 1999, OCIO provided ongoing technical support through the OCIO Business Area team and the ITID infrastructure staff; this support will continue through FY 2000 and FY 2001.

7.3 Nuclear Materials Program

The Office of Nuclear Materials Safety and Safeguards (NMSS) is sponsoring a new application to resolve Commission concern with agency regulation of general device licensees. Table 10, below, is a brief summary of the project.

Table 10. Application Projects, Nuclear Materials Arena (units = $K)

Active CPIC Projects, Nuclear Materials (000)				
Project	**Office**	**Due Date**	**Cost**	**Project Description**
GLTS - General License Tracking System	NMSS	6/30/00	$ 682.5	*User/device registration program containing specific information about 10 CFR general licensees, and the devices they possess*
Total			$ 682.5	

The new GLTS system will be a key tool in increasing regulatory oversight and accountability of generally licensed devices by improving our ability to maintain communications with our general device licensees.

In FY 1999, the OCIO Business Area team provided ongoing technical support; this support will continue through FY 2000 and FY 2001.

7.4 Management Support Program

Table 11, below, summarizes projects in the Management Support Program area.

Table 11. Application Projects, Management Support Area (units = $K)

Active CPIC Projects, Management Support				
Project	**Office**	**Due Date**	**Cost****	**Project Description**
ADM Space Planning System	ADM	10/31/99	$ 277.0	*Office space utilization and requirements, and scenario planning.*
STARFIRE*	OCFO/HR	FY04*	$ 9,200.0	*Core Accounting, Cost Accounting, Travel Management, Procurement, Payroll and Personnel systems.*
ADAMS-Agency Documents Access & Mgt System	OCIO	4/00	$13,700.0	Document creation, workflow, search/retrieval, records management, and electronic submission of regulatory documents.
ATS Training System	HR	11/30/99	$ 369.0	*Consolidate three existing systems having redundant data on employees training history*
Total			$23,546.0	

*STARFIRE schedule and cost estimates are being revised after termination of a contract to develop the core accounting system.

ADAMS Project: The OCIO is completing the implementation of the agency document management system. NRC will be one of the first Federal agencies to deploy an agencywide system for maintaining official agency records electronically. The new capability supports document creation, work flow, document search and retrieval, and records management. It is expected to have an impact on all agency procedures for managing official agency records. Research using agency documents will be improved and the probability of losing documents will be minimized. ADAMS supports public online access to agency documents and provides a powerful search engine as a research tool. Access to the agency will be improved for our licensees who will be able to submit official documents electronically to the NRC.

In FY 1999, the OCIO completed technical customization, integration, and installation activities; the OCIO tested the pilot system, which was working during the spring of FY 1999. The OCIO developed a training plan and carried it out throughout FY 1999. All NRC staff completed training and started using the new system during the fall of FY 1999. The OCIO has started activities to institutionalize and create a production environment for ADAMS. The OCIO developed draft policies and procedures that will evolve into a management directive once NRC has operational experience with ADAMS.

The OCIO started activities to redefine agency business practices with ADAMS capabilities. Other offices started analyzing and changing their business procedures.

In FY 2000, we plan to make additional progress in establishing a production environment, in re-engineering procedures to use electronic documents and implementing ADAMS as an official record keeping system. Cost savings have been incorporated into the OCIO's FY 2000 and FY 2001 budgets due to projected reductions in document distribution, reproduction, printing, and facilities costs. In addition, there is a cost savings in the Office of Administration's budget as a result of moving the Public Document Room to the White Flint complex. The move is a direct result of the changes in the public document room (PDR) program brought about by ADAMS. The PRC/EC recommended and the Commission approved a cut of 24 FTE from the FY 2001 budget to reflect projected ADAMS efficiencies. These cuts came from across the agency.

STARFIRE Project: The OCFO is sponsoring a new financial system for NRC to be able to support financial reporting required by the Government Performance and Results Act (GPRA). NRC's current financial management system is limited and doesn't support required cost accounting functionality. For example, the NRC cannot report the total cost of activities; although payroll data are available, they can't be linked to activities and the agency is unable to report percentage of payroll costs for specific activities (such as preparing a strategic assessment or acting on a licensing application). The new system, STARFIRE, will be able to link cost accounting and integrate source data. A first step for STARFIRE will be to capture time and attendance (T&A) data and assume payroll process functions.

In FY 1999, this multi-year project completed requirements definition. Due to default by a prime contractor, and accommodation of competing agency priorities, STARFIRE has been rebaselined.

In FY 2000, the project will continue with a phase 1, which includes using the existing accounting system and interfacing it with a human resources, time and labor, payroll, cost accounting, and travel modules. It is planned to have T&A and payroll operational by the end of FY 2000.

Automated Training System Application: The Office of Human Resources is planning to implement a new system to track training and integrate it with the new STARFIRE financial management system. The Automated Training System (ATS) would replace three older legacy systems and would track training.

In FY 1999, a business case was created and approved for the project. In FY 2000, this project is planning to implement the employee training and benefits modules.

Administrative Services Application: The Office of Administration is planning to implement an Administrative Services System to provide the staff with improved access to administrative services and improve the tracking of service delivery.

In FY 1999, work was started on the business case. In FY 2000, this project will present the business case for approval and, if approved, it will start its implementation.

7.5 Cross Cutting Programs

The OCIO sponsors cross-cutting projects that affect all applications in the agency; see Table 12, below.

Table 12. Cross Cutting Programs

Cross Cutting Programs	
Project	**Project Description**
Year 2000 Transition	Prevent system failures on January 1, 2000
Business Planning	Support PBPM process and goals of NRC offices

Year 2000 Transition: The NRC needed to evaluate all systems and prepare for potential failures resulting from date changeover on January 1, 2000.

In FY 1999, NRC completed assessment, system testing, and implementation of any needed changes. The NRC was the first federal agency to meet Year 2000 (Y2K) compliance with our mission-critical systems. The project was completed early and $2.6 million under budget ($8.3M actual vs. $10.9M budgeted).

Although our agency has completed testing, changes, and preparations for Y2K, we are only part of an interconnected web of systems and there is a statistical probability some outages or failures may occur. In FY 2000, the agency has a "Day One" plan in place and is prepared to handle any contingencies occurring on January 1, 2000.

Business Planning: The OCIO continues to work with NRC offices to support the Planning, Budgeting, and Performance Management (PBPM) process, and align OCIO projects to support NRC office goals and needs.

In FY 1999, OCIO formed business area teams to collaborate with NRC offices in planning their application portfolios and in providing consultative services. These teams will assist offices to use information technology to streamline their business activities, to improve use of IT capabilities, to develop effective business solutions and vision statements for IT. The OCIO assigned a team leader to participate in strategic planning for the Nuclear Materials arena. The OCIO has used the NRC Enterprise Model (which documents the key functions, processes, and applications within each business area) and the NRC Strategic Data Model (which documents the agency's high level entities) to encourage shared data and systems within each business area.

In FY 2000, these teams will focus on helping business areas realize the full potential of integrated commercial-off-the-shelf software. This includes consultation on and support of STARFIRE, ADAMS, HRIS, and RPS. We will also help develop a vision for an integrated system to address the unique needs of the materials business area.

8.0 INFRASTRUCTURE AND INFORMATION MANAGEMENT PROGRAMS

The OCIO sponsors Infrastructure and information management programs which are driven by business needs; see Table 13, below.

Table 13. Infrastructure Initiative

IT and IM Projects, OCIO	
Project	**Project Description**
Communication With Public **Public Broadcast** **Agency External Web Page** **Public Electronic Reading Room**	Use Internet to improve public access to NRC
Agency Internal Web Site	Review "best practices" and improve agency Web site
Electronic Information Exchange	Use network to exchange electronic data with NRC
Computer Security Oversight	Protect agency resources
Telecommunications Upgrade	Long term service agreements
Resident Inspector Connectivity	Connect to NRC network, data, and systems
Mobile Remote Computing Study	Review agency needs and build business case
Infrastructure Services Support Study	Benchmark, establish strategy for acquiring service, and implement
Office Suite Study	Assess options
IT Training for NRC Executives	Provide IT training for all NRC executives and managers

8.1 Communication with the Public

The OCIO continues to use technology to improve NRC's communications with the public:

- **Public Broadcast Capability:** NRC is planning to broadcast all public meetings on the Internet and archive them for one year for public access. In FY 1999, the OCIO completed a technology assessment and piloted a public broadcast

capability. In FY 2000, the OCIO will complete a CPIC business case; if approved, this capability will be implemented for all public meetings.

- **Agency External Web Page:** The public site is increasing in strategic importance, but the current structure is not optimal and some information at the site varies in currency and accuracy. We are addressing these concerns. By January 2000, all offices have committed to review their information for currency and accuracy, to date pages and sites, and to provide an e-mail link for public comments. Most of these initiatives have been completed. In conjunction with these efforts to improve the external web site, the OCIO will review other major web sites as models for improvements to the NRC site; solicit the views of stakeholders who frequently use NRC's and other sites; actively consult with these users; work with the NRC communications manager to identify and implement goals for the public site to support NRC's Strategic Plan; and redesign the site for ease of navigating the site and locating information. The plan will be implemented in FY 2001. The site redesign, alignment with strategic goals, and stakeholder input focus on the goal of increasing public confidence.

- **Public Electronic Reading Room**

  As part of the ADAMS project, the OCIO is making all new publicly available documents created or received by NRC after October 30, 1999 accessible in full text through its' Public Electronic Reading Room, or PERR. The PERR will broaden and improve public access to agency documents. Further improvements will be implemented in FY 2000 in response to stakeholder comments.

8.2 Agency Internal Web Site

The OCIO is currently undertaking a "best practices" review of Intranet sites at other Federal agencies and at selected private sector firms. This review is focusing on ways of improving the content, navigability, functionality, and the look and feel of the NRC Intranet site. Although the existing site contains indispensable information of use to employees, it is not well organized or uniformly designed. The OCIO will collaborate on the implementation of the "best practices" findings of this review. This initiative will be implemented in FY 2000.

8.3 Electronic Information Exchange

The OCIO is implementing an Electronic Information Exchange (EIE) Program that will allow our business partners (licensees, vendors, stakeholders, etc.), to electronically send and receive information such as regulatory information, invoices, and license applications securely. This capability will be a powerful tool for improving business processes and reducing regulatory burden and cost.

In FY 1999, the Electronic Information Exchange Initiative defined requirements for exchanging information electronically, and selected a product for digital signaturing and authentication.

In FY 2000, digital signaturing capability will be implemented with ADAMS.

8.4 Computer Security Oversight

The OCIO continues to monitor and prepare for the threat of cyber attacks by working closely with other agencies and our own NRC offices (especially the Incident Response Operation). We are committed to protect basic functions of the agency and ensure continued operations. Our agency is bombarded routinely by hackers who would enter our network. For example during September 1999, of the 51 incidents recorded, 2 attempts to relay e-mail messages to other sites through NRC's network, and 1 was an attempt to break into a password file.

In FY 1999, the OCIO conducted an agencywide security briefing to raise the awareness of agency staff, conducted security assessments of regional equipment and facilities, and monitored and responded to virus alerts and firewall attacks. In FY 1999, NRC computer security operations won awards for excellence in computer security awareness education; we also passed an independent security review.

In FY 2000, the OCIO will increase internal security activities to protect the agency from cyber attacks; we will complete a detailed plan for disaster recovery/business continuity of ADAMS and our network.

8.5 Telecommunications Upgrade

The agency's long-distance voice and data services contract, FTS2000, expires in December 2000. Since GSA did not award our current FTS2000 provider, AT&T, a new follow-on contract for government telecommunications, we will be required to change to a new carrier. Since 1998, the OCIO has been actively participating in transition planning activities. We have evaluated procurement alternatives and vendor alternatives for acquiring the needed telecommunications services for the agency.

In FY 2000, the OCIO will complete the contract and acquisition support activities so the service is available at the start of FY 2001.

8.6 Resident Inspector Connectivity

Until 1999, the resident inspectors had only low-speed, dial-up access to the agency network and a restricted set of agency applications. During FY 1999, the OCIO completed the Resident Inspector Site Expansion (RISE) project to expand the agency's network infrastructure and provide 70 resident sites with a desktop operating environment and a local area network (LAN) configuration, high-speed connectivity similar to that available at headquarters and the regional offices, and direct digital

network access to agency applications and network resources. This project was completed more than a year ahead of schedule and within the planned budget.

8.7 Mobile Remote Computing

The agency has supported remote users outside our office network facilities using the Citrix dialup access. As our workforce becomes more mobile, and technologies are more cost effective, the agency will need to expand mobile remote computing. A new OCIO project will assess the agency needs and build a business case.

8.8 Information Services Support Study

The current Next Generation Network (NGN) services and support contract expires in April 2001. An acceptable solution must be in place well in advance of the expiration date to maintain continuity of operations and provide transition time. The OCIO plans to contract for support services for continuation of maintenance and operation of its business-critical information technology infrastructure systems. The goal of the Infrastructure Services and Support Contract (ISSC) project is to identify and categorize the services, support, and development efforts required to meet the NRC's expanding IT business requirements and to develop a solution to continue infrastructure support and operation.

During FY 1999, the OCIO established goals and objectives and started a new program to identify, validate, and analyze requirements that will form the foundation for acquiring contractor support. This project work will continue through FY 2000 on a schedule that will permit the award and implementation of the Infrastructure Services and Support Contract (ISSC) in a time frame permitting an orderly transition in services in the third quarter of 2001. The study will include benchmarking our current services and assessing best practices such as performance-based contracting.

8.9 Office Suite Study

The OCIO has noted some risk and cost burden related to continuing to use the Corel Office Suite at NRC.

In FY 1999, the OCIO monitored trends and risks and defined an assessment study project. In FY 2000, the Office Suite Study will evaluate alternative office suites for future NRC-wide expansion, upgrade, or replacement of the existing word processor, spreadsheet, graphics functions, and standard office automation software. The study will complete a phased assessment of alternative options for office suite support considering vendor health, commercial software packages, cost, and organizational impact.

8.10 IT Training for NRC Executives

The OCIO has noted a need to train NRC executives in how to successfully apply IT to an organization's business. Industrywide, as many as 75 percent of IT projects overrun

their budgets, fail to deliver planned benefits, or simply fail completely. NRC's success rate has been significantly higher than this industry average. The agency's CPIC process has also contributed to managing projects more successfully. For example, projects have been stopped at an early stage as the business case is explored and projects are monitored more closely as schedules or costs do not track to project plans.

In FY 1999, the OCIO offered IT training to all NRC executives and managers on applying IT to the business, roles of the business offices and OCIO, and successful project management strategies. The OCIO observed a substantial improvement in systems justifications and plans prepared by graduates of the class; for example, the business cases for GLTS and RPS/PI were of good quality.

9.0 OCIO INTERNAL EFFICIENCY AND EFFECTIVENESS PROGRAMS

The OCIO internal efficiency and effectiveness programs are summarized in Table 14, below.

Table 14. OCIO Internal Efficiency and Effectiveness Programs

OCIO Internal Efficiency and Effectiveness Programs	
Project	**Project Description**
Best Practices	Provide improvements to internal OCIO practices
OCIO Service Level Agreements	Provide OCIO internal improvement to customer service
OCIO Morale	Provide improvements to internal OCIO

9.1 Best Practices

The OCIO continues to make internal improvements in OCIO operating practices and to introduce "best practices" from the private sector. The Clinger-Cohen Act directed agencies to adopt modern information technology (IT) management practices, including (1) assigning a Chief Information Officer; (2) implementing a capital planning process; (3) building IT skills throughout the staff; (4) formulating an IT Architecture and a framework of standards; and (5) creating a business stewardship for the function. In FY 1999, NRC was one of only two Federal agencies to have fully complied with the Clinger-Cohen Act. Five projects are defined:

- **Data Stewardship:** The OCIO is implementing procedures for managing shared data within agency systems. In FY 1999, the Data Stewardship Charter was reviewed and approved by offices and the IT Business Council, Data Stewards were assigned for financial and human resource data entities. In FY 2000,

additional Data Stewards will be assigned and software tools for Data Administration will be selected.

- **Standardizing Products and Tools:** The OCIO continues to reduce agency support costs and consistency across systems by encouraging agency standards for products and tools. The OCIO maintains a document of agency standards, supports a control board for review and approval of products used in the agency, and monitors vendors and products used by the agency.

  In FY 1999, the agency's Technical Reference Model (TRM) document was updated, a product control board was established, three product reviews were handled by the control board and approved, and four issues of the Vendor Watch Report were issued. In FY 2000, the OCIO is planning an update of the TRM document, additional control board reviews, as needed, and is continuing to issue the quarterly Vendor Watch Report.

- **Configuration Management practices**: The OCIO has noted the need for a formal system to manage version control and major software releases within the agency. A configuration management (CM) system is expected to improve quality and reduce software maintenance costs.

  In FY 1999, the project was scoped and funded. In FY 2000, the staff is planning to introduce CM practices, complete a CM tool assessment, and establish internal procedures.

- **Capacity Planning practices:** The OCIO has noted the need for a state-of-the-art network and server capacity planning capability. In FY 1999, the project was scoped and funded. In FY 2000, staff will complete an assessment, acquire management monitoring and reporting tools, and define internal procedures for capacity planning.

- **Technical Skills Upgrade:** As a result of a 1998 skills assessment by Booz, Allen and Hamilton Co., the OCIO has noted a technical skills gap in OCIO staff that may affect ability to effectively plan projects and oversee contractors.

  In FY 1999, the OCIO worked with the Office of Human Resources' (OHR's) training division to define skill gap areas, approve individual training plans, and increase funding for staff technical training. In FY 2000, this initiative for improving in-house IT skill sets will continue to monitor skill upgrades and report to management on progress on closing the skills gap.

9.2 Service Level Agreements

The OCIO continues to build closer ties with its customers and look for ways to improve OCIO customer services. The OCIO is planning to work with customers to formulate internal targets for timeliness, quality, and cost of OCIO services. These metrics will be

included in "Service Level Agreements". This project also includes identifying and eliminating services with little demand or benefit.

In FY 1999, the OCIO defined this new project. In FY 2000, OCIO will collaborate with customers and define a set of Service Level Agreement metrics.

9.3 OCIO Morale Initiative

The OCIO has noted a need to improve its office morale. This need is documented in a 1999 report prepared by the Inspector General which surveyed safety climate and culture at the NRC.

In FY 1999, the OCIO conducted more frequent all-hands meetings to emphasize the importance of OCIO staff work to the agency, improved communication to staff through distribution of Chairman's Daily Reports, created technical training opportunities, improved recognition of professional achievements through awards programs and performance appraisals. In FY 2000, the OCIO will continue to focus on improvements. Each OCIO manager will have an element and standard in the manager's FY 2000 performance plan to improve morale in the manner most appropriate for the manager's organization.