

PART I: CAPITAL ASSET PLAN AND BUSINESS CASE (All Assets)

Agency U.S. Nuclear Regulatory Commission
Bureau N/A
Account Title Salaries and Expenses
Account Identification Code 31-0200-0-1-276
Program Activity Reactor Program
Name of Project Reactor Program System
Unique Project Identifier: 429-00-01-03-01-1010-00
(IT only)(See section 53)
Project Initiation Date 1996
Project Planned Completion Date 2001
This Project is: Initial Concept ___ Planning ___ Full Acquisition ___ Steady State _X_
Mixed Life Cycle ___

Project/useful segment is funded: Incrementally X Fully ___

Was this project approved by OMB for previous Year Budget Cycle? Yes _X_ No ___

Did the Executive/Investment Review Committee approve funding for this project this year? Yes _X_ No ___

Did the CFO review the cost goal? Yes _X_ No ___

Did the Procurement Executive review the acquisition strategy? Yes _X_ No ___

Is this investment included in your agency's annual performance plan or multiple agency annual performance plans? Yes X No ___

Does the project support homeland security goals and objectives, i.e., 1) improve border and transportation security, 2) combat bio-terrorism, 3) enhance first responder programs; 4) improve information sharing to decrease response times for actions and improve the quality of decision making? Yes _X_ No ___

Is this project information technology? (See section 300.4 for definition) Yes _X_ No ___

For information technology projects only:

a. Is this Project a Financial Management System? (see section 53.3 for a definition) Yes ___ No _X_

If so, does this project address a FFMA compliance area?

If yes, which compliance area?

b. Does this project implement electronic transactions or record keeping that is covered by the Government Paperwork Elimination Act (GPEA)? Yes ___ No _X_

If so, is it included in your GPEA plan (and does not yet provide an electronic option)? Yes ___ No ___

Does the project already provide an electronic option? Yes ___ No ___

c. Was a privacy impact assessment performed for this project? Yes _X_ No ___

d. Was this project reviewed as part of the FY 2002 Government Information Security Reform Act review process? Yes _X_ No ___

information in this record was deleted in accordance with the Freedom of Information Act, exemptions 5 FOIA- 2003-241

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d.1 If yes, were any weaknesses found? Yes No

d.2. Have the weaknesses been incorporated into the agency's corrective action plans? Yes No

e. Has this project been identified as a national critical operation or asset by a Project Matrix review or other agency determination? Yes No

e.1 If no, is this an agency mission critical or essential service, system, operation, or asset (such as those documented in the agency's COOP Plan), other than those identified above as national critical infrastructures? Yes No

1 e. Preparations for NRC's Project Matrix Review are just underway. The review will not be completed until the first Quarter FY 2003, at the earliest.

SUMMARY OF SPENDING FOR PROJECT STAGES (In \$Millions) (BY+1 and Beyond estimates are for planning purposes only and do not represent budget decisions)				
	PY-1 and Earlier	PY 2002	CY 2003	BY 2004
Planning:				
Budgetary Resources	.035	0	0	0
Outlays	.035	0	0	0
Full Acquisition :				
Budgetary Resources	2.7	0	0	0
Outlays	2.7	0	0	0
Total, sum of stages:				
Budgetary Resources	2.735	0	0	0
Outlays	2.735	0	0	0
Maintenance:				
Budgetary Resources	1.5	1.058*	1.068	1.080
Outlays	1.5	1.058	1.068	1.080
Total, All Stages:				
Budgetary Resources	4.235	1.058*	1.068	1.080
Outlays	4.235	1.058	1.068	1.080
Funding Account(s):	PY-1 and Earlier	PY 2002	CY 2003	BY 2004
FeeBased	4.235	1.058*	1.068	1.080
Total, All Accounts	4.235	1.058*	1.068	1.080

I. A. Project Description

1. Provide a brief description of this project and its status through your capital planning and investment control (CPIC) or capital programming "control" review for the current cycle.

Project Description

The Reactor Program System (RPS) is in the Operational (Evaluate) stage of its life cycle. RPS is an NRC Business Essential System and is an NRC Privacy Act System of Records. It was certified and accredited in May 2002 and a Privacy Act system review was completed in August 2002. RPS is necessary for the NRC to meet its mission and strategic goals because it provides the capability for planning, scheduling, conducting, reporting, and analyzing inspection activities at the nuclear power reactor facilities in the United States. It is used as a tool for implementing the policy and inspection guidance for programs assigned to the NRC regional offices and assesses the effectiveness and uniformity of the region's implementation of those programs. It is used to plan and schedule licensing and other reactor regulatory activities. It is also a critical part of the NRC's license fee collection process. The RPS database includes inspection and licensing information, plant performance indicators, inspection follow-up items, safety issue data, NRC staff data, facility characteristics, security and other reactor regulatory data.

RPS was developed to fulfill program requirements that evolved over several years starting in the mid 1990s. The initial problems to be fixed were highlighted in 1995 with both the staff's and GAO's findings relative to the lack of diagnostic capability displayed by the NRC relative to information contained in inspection program documents, primarily inspection reports. RPS was expected to satisfy increasing and critical requirements for improved information management and analytical capabilities associated with reactor regulatory activities and security. NRC needed a system that collects information once, at the source, and integrated information for both inspections and licensing in one location, which could be correlated and analyzed. RPS provides this capability along with an integrated methodology for planning, scheduling, conducting, reporting, and analyzing reactor inspection, licensing and other reactor regulatory activities. RPS incorporated and streamlined the functions which were performed by the Master Inspection Planning System (MIPS), Inspection Reports Tracking System (IRTS), Inspection Procedure Authority System (IPAS), the Facility (docket) file, Systematic Assessment of Licensee Performance (SALP), Workload Information and Scheduling System (WISP), Technical Assignment Control System (TACS), Regulatory Information Tracking System (RITS), Safety Issues Management System (SIMS), Inspection Follow-up System (IFS), Plant Issues Matrix (PIM) and to replace the Safety Information NETWORK (SINET). It added additional functions, which were not part of these systems and interfaces with Human Resources Management System (HRMS).

A basic premise of RPS is the central maintenance of common files, with a single point of data entry and sharing of information so that data can be entered once and used throughout any process where needed. Where possible, inherent data quality design was installed up-front to preclude the entry of invalid or inaccurate information and the resulting problems and inefficiencies. RPS provides information that is consistent, reliable, and readily accessible to approximately 1,000 staff in NRC headquarters and regional offices. RPS was designed to fit within NRC's information technology infrastructure and is accessible via agency-standard PC workstations using commercial-off-the-shelf (COTS) software for greater flexibility and ease of maintenance.

CPIC Status

RPS is in the evaluate stage. Phase I was put into production in March 1998, the final phase was completed in May 2000 and the entire system was fully deployed to all users in February 2001. An E-mail address RPSHELP has been used since 1997 to provide the vehicle for users to report problems, send suggestions, and request enhancements. This e-mail address has been successfully used as a feedback mechanism for the RPS project team to monitor the system. Each Region has an RPS counterpart who monitors the system. Monthly conference calls between headquarters and the regions are used to discuss the system. Annual face-to face counterpart meetings are held and the headquarters team makes visits to each region yearly to discuss the system.

The original CPIC business case for RPS was completed in 1997. All of the goals and expectations for RPS in the original CPIC business case have been met. In 1999, new CPIC business cases were

completed for two additional modules that were not included in the original RPS CPIC business case. Starting in FY 2004 the maintenance costs for these two modules will be included as part of RPS rather than as separate projects. One is the Performance Measures module that consists of a series of reports developed using the data in the RPS client server database to support the NRR and regions operating plans. A total of \$232K was spent on this module from FY99 through FY 2002. The second is a module that supports the Reactor Oversight (ROP) process instituted by the NRC in 1999. This project, which was approved in July 1999 and completed in 2000, stores and displays on the internet, the performance indicator data submitted by the part 50 operating plant licensees in accordance with the revised Reactor Oversight Project. Initial work was done in close coordination with NEI, and other interested stakeholders. The response to this internet site exceeded all expectations. More than 25,000 hits per week were recorded when it was initially deployed. It still is one of the most visited pages on the external web. The scope of RPS information posted on the NRC internal and external internet sites has increased substantially since that initial deployment. In addition to Performance indicator data, we are now posting Industry Trends, Plant Item Matrix (PIM), Inspection Activity/Plan Action Matrix, Inspection Reports, Assessment Letters, and Operator Licensing Exam Schedules. Most of this data is coming from the RPS client server database and supports the Agency's goal to increase public confidence. A total of \$452K was spent on this module from FY99 through FY 2002.

The NRC has established a System Development Lifecycle Methodology (SDLCM) that is used by RPS to document requirements and trace development through completion. RPS contractors are cleared via background checks and notified of their responsibilities for adhering to security policies in the performance of their duties. The System Test and Evaluation Plan, Security Plan and Risk Assessments are used to ensure compliance. These plans were revised and tested in November 2001. Additionally, RPS uses account and version control checks to ensure users cannot access the system with out-of-date software versions. Contractually, the OCIO provides the RPS Project Manager a list of who works on the project, how long they worked and what they did. Performance reviews are also performed on contract teams. The RPS project manager provides periodic briefings to the Information Technology Business Council (ITBC) and the Executive Director of Operations to communicate the status of major changes, costs, results, plans, risk assessments and lessons learned. These briefings are available to all NRC divisions to ensure all are aware of issues that affect them. An E-mail address RPSHELP has been used since 1997 to provide the vehicle for users to report problems, send suggestions, and request enhancements. This e-mail address has been successfully used as a feedback mechanism for the RPS project team to monitor the system. Each Region has an RPS counterpart who monitors the system in each of the four regions. Monthly conference call between headquarters and the regions are used to discuss the system. Annual face-to-face counterpart meetings are held and the headquarters team makes visits to each region yearly to discuss the system.

2. What assumptions are made about this project and why?

RPS is considered a Business Essential system. RPS is critical to the operation of the NRC. RPS is used to identify, plan and schedule the work assignments for the NRC staff. These assignments and schedules are passed electronically to Human Resources Management System (HRMS), where time and labor hours are reported by the NRC staff. This "actual hour" data is electronically retrieved by RPS and data is prepared for license fee processing. Data from the RPS data base is electronically passed to the agency license fee system where licensee bills are prepared. The RPS staff file contains the data needed by both HRMS and the license fees system. Without RPS, the NRC would be unable to collect fees from its licensees.

3. Provide any other supporting information derived from research, interviews, and other documentation.

RPS fulfilled the program requirements that evolved over several years starting in the mid 1990s. The initial problems to be fixed were highlighted in 1995 with both the staff's and GAO's findings relative to the

lack of diagnostic capability displayed by the NRC relative to information contained in inspection program documents, primarily inspection reports. RPS satisfied the increasing and critical requirements for improved information management and analytical capabilities associated with reactor regulatory activities.

RPS was designed to fit within NRC's information technology infrastructure and is accessible via agency-standard PC workstations using commercial-off-the-shelf (COTS) software for greater flexibility and ease of maintenance. It reduced the hardware and software maintenance cost for the 10 legacy systems that it replaced. It is saving more than \$800K per year by allowing the agency to end support of IDMS/R at NIH. IDMS/R was used to support SINET, which was operational until November 1999. RPS provides a seamless interface with other systems including HRMS. RPS provides HRMS with NRR and regional work assignments. Hours worked are charged against these assignments by NRC staff and license fee bills are generated from this data.

The response to the Revised Reactor Oversight internet site was beyond all expectations. More than 25,000 hits per week were recorded during the first week when it was initially deployed. The amount of RPS information posted on the NRC internal and external internet sites has been increased substantially during the last year which supports the Agency's goal to increase public confidence. In addition to Performance Indicator data, we are now posting Industry Trends, Plant Item Matrix (PIM), Inspection Activity/Plan Action Matrix, Inspection Reports, Assessment Letters, and Operator Licensing Exam Schedules. Most of this data is coming from the RPS client server database and supports the Agency's goal to increase public confidence.

I.B. Justification (All Assets)

1. How does this investment support your agency's mission and strategic goals and objectives?

NRC Mission: To regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of the public health and safety, to promote the common defense and security, and to protect the environment.

NRC's Strategic Goals	NRC Strategies	Supports	How Does Your Initiative Support this NRC Goal or Corporate Management Strategy?
1. Nuclear Reactor Safety: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors.	We will sharpen our focus on safety to include a transition to a revised NRC reactor oversight program for inspection assessment and enforcement activities.	X	RPS is used to plan, schedule and record the results of inspection activities at nuclear power plants and activities related to nuclear plant licenses.
2. Nuclear Materials Safety: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear material for medical, academic, and industrial purposes			

NRC's Strategic Goals	NRC Strategies	Supports	How Does Your Initiative Support this NRC Goal or Corporate Management Strategy?
3. Nuclear Waste Safety: Prevent adverse impacts from radioactive waste to the current and future public health and safety and the environment, and promote common defense and security			
4. International Nuclear Safety Support: Support U.S. interests in the safe and secure use of nuclear materials and in nuclear non-proliferation			
NRC Corporate Management Strategy 1: Employ innovative and sound business practices	We will create and maintain a planning, budgeting, and performance management process that is focused on outcomes and provides an effective tool for setting goals, allocating resources, tracking progress, measuring results and identifying areas for improvement.	X	RPS is a tool used for planning and performance management that is focused on outcomes and provides an effective tool for setting goals, allocating resources, tracking progress and measuring results.
NRC Corporate Management Strategy 2: Sustain a high-performing, diverse workforce.			
NRC Corporate Management Strategy 3: Provide proactive information management and information technology services.	We will report on the performance of nuclear power facilities in an open and objective manner.	X	RPS is used as a tool for implementing the policy and inspection guidance for programs assigned to the NRC regional offices and assesses the effectiveness and uniformity of the region's implementation of those programs. The information posted on the internet from RPS has proven to be an excellent communication mechanism.
NRC Corporate Management Strategy 4: Communicate strategic change.			

The RPS project supports the Reactor Arena Strategic Goal: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors. The RPS also supports the following Agency Performance Goals: 1) Maintain safety, protection of the environment, and the common defense and security, 2) Increase public confidence, 3) Make NRC activities and decisions more effective, efficient, and realistic, and 4) Reduce unnecessary regulatory burden on stakeholders. Efficiencies were realized through RPS by providing easy access to the necessary management information for the effective and efficient planning, scheduling, resource allocation, reporting and analysis of inspection and licensing programs, which is essential to their effective performance.

2. How does it support the strategic goals from the President's Management Agenda?

Presidents Management Agenda (PMA)	Supports	How Does Your Initiative Support This PMA Item?
Human Capital	X	Improves utilization of NRC staff resources through better planning,

		<i>allocating, scheduling and monitoring of work performed.</i>
<i>Competitive Sourcing</i>		
<i>Financial Performance</i>		
<i>E-Government</i>	X	<i>Provides the public access to nuclear regulatory information posted on the NRC internet site.</i>
<i>Budget and Performance Integration</i>	X	<i>RPS provides an integrated methodology for planning, scheduling, conducting, reporting, and analyzing reactor inspection, licensing and other reactor regulatory activities.</i>

3. Are there any alternative sources in the public or private sectors that could perform this function?

No. The nature of reactor regulatory activities and their associated information management and analysis needs are such that no alternative private sector or governmental source can efficiently support the function that RPS is intended to perform. This conclusion was reached after carefully considering the functions of the 10 legacy systems that RPS replaced.

4. If so, explain why your agency did not select one of these alternatives.

N/A. No alternatives were appropriate.

5. Who are the customers for this project?

The customers of RPS are the staff in the Office of Nuclear Reactor Regulation (NRR) and four regional offices (over 1000 individuals). They use RPS for planning, scheduling, conducting, reporting, and analyzing inspection activities at the nuclear power reactor facilities. They also use it as a tool for implementing the policy and inspection guidance for programs assigned to the NRC regional offices and to assess the effectiveness and uniformity of the region's implementation of those programs. It is also used to plan and schedule licensing and other reactor regulatory activities.

6. Who are the stakeholders of this project?

Over 1000 NRC employees use RPS as part of their daily activities in planning, scheduling, conducting, reporting, and analyzing inspection activities. Stakeholders also include NEI, INPO and other energy related public interest groups as well as the general public who review RPS data, which is posted on the NRC internet site.

7. If this is a multi-agency initiative, identify the agencies and organizations affected by this initiative.

This is not a multi-agency initiative.

8. How will this investment reduce costs or improve efficiencies?

RPS is saving over \$800K per year by allowing the agency to end support of IDMS/R at NIH. IDMS/R was used to support SINET, a legacy system operational until November 1999. The elimination of operations and maintenance costs for the other legacy systems resulted in the savings of an additional \$200K per year. RPS is designed to fit within NRC's current information technology infrastructure and is accessible via agency-standard PC workstations using commercial-off-the-shelf (COTS) software for greater flexibility and ease of maintenance in the future. It improved efficiencies by providing easy access to the necessary management information for the effective and efficient planning, scheduling, resource allocation, reporting and analysis of these programs, which is essential to their effective performance. RPS automated areas which have undergone some form of business process redesign and where new policy has, or is being established. Processes to date which have undergone redesign and which were automated through RPS include the redesign and standardization in the inspection reporting process (as documented in Inspection Manual Chapter 0610), the tracking of inspection follow-up, the development and integration of the Plant

Issues Matrix (PIM), and the analysis and assessment of requirements associated with Plant Performance Review (PPR). Other areas which have undergone reassessment include job task analysis for inspectors, job task analysis for project managers and licensing commitment tracking.

9. List all other assets that interface with this asset _____. Have these assets been reengineered as part of this project? Yes____, No_____.

RPS provides a seamless electronic interface with HRMS. HRMS is the NRC's new time and labor application, which became operational in November 2001. RPS provides HRMS with NRR and regional work assignments. Hours worked are charged against these assignments by NRC staff. RPS provides the NRC fee billing system with data related to hours worked which are fee billable so that the fee billing system can bill licensees. Data in RPS tables are use by several other systems at the NRC including the Enforcement Action Tracking System (EATS) and the Allegations Management System (AMS).

RPS was reengineered as part of this project. EATS, AMS and HRMS were reengineered, but not as part of this project.

I.C. Performance Goals and Measures (All Assets)

All of the Performance Goals and Measures of RPS support the NRC Strategic Goal of Nuclear Reactor Safety: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactor; and the NRC Corporate Management Strategy to 1) Employ innovative and sound business practices and 2) Provide proactive information management and information technology services.

Fiscal Year	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
1998	Phase 1 not operational No one using the system	Have 30 % of staff and 40% of managers using the system by 9/30/98	Deploy RPS, train users, have them use RPS	Increase the number of users	By the end of the 4 th quarter FY98, 27% of the inspectors, technical reviewers and project managers and 53% of the managers were using the system.
1998	Phase 1 not operational No data integrated.	Have 50% of the data in RPS integrated into one database.	Deploy RPS, eliminate standalone legacy databases.	Increase the percent of integrated data to 50%	By the end of the 4 th quarter 55% of the data was integrated into the client server database
1998	Phase 1 not operational	Replace 5 legacy system by the end of the FY.	Deploy RPS, eliminate standalone legacy systems	Replace 5 legacy systems	7 legacy systems were replaced.
1999	27% of the inspectors, technical reviewers and project managers and 53% of the managers were using the system.	Increase the percentages to 35% of the staff and 60% of the managers	Deploy Phase 2 of RPS and increase the number of users	Increase the percentage of users.	By the end of the 1st st quarter FY99, 49% of the inspectors, technical reviewers and project managers and 66% of the managers were using the system.
2000	7 legacy systems replaced	Replace 1 legacy system	Provide the functionality of SINET in RPS	Replace SINET	SINET replaced in November 1999.
2000-2001	Limited reactor program	Provide updated information via the NRC internal	Put Performance Indicator data, Plant Item Matrix	Increase the reactor program data available to	Performance indicator data, Industry Trends,

	<i>data available to stakeholders and general public</i>	<i>and external internet quarterly.</i>	<i>(PIM), Inspection Plans Inspection Reports, and Operator Licensing Exam Schedules</i>	<i>stakeholders and general public</i>	<i>Plant Item Matrix (PIM), Inspection Activity/Plan Action Matrix, Inspection Reports, Assessment Letters, and Operator Licensing Exam Schedules are being posted.</i>
<i>2001-2002</i>	<i>8 legacy systems replaced</i>	<i>Replace 2 legacy systems</i>	<i>Deploy phase 3 of RPS.</i>	<i>Replace 2 legacy systems</i>	<i>2 legacy systems replaced in 2002</i>
<i>2002-2007</i>	<i>It takes 15 working days from receipt to QA and post PI and inspection data on the external internet</i>	<i>Reduce the number of days required to process the data to 14 days to provide reactor program information to the staff, stakeholders and the general public.</i>	<i>Reduce the time required to 14 working days</i>	<i>Reduce the number of days to post information on the NRC external internet to 14 days</i>	
<i>2002-2007</i>	<i>RPS is available to users via the LAN and dial-in 95% of the time.</i>	<i>Provide NRC staff the ability to update work assignments and schedules (new assignments, changes and completions) on a daily basis 98% of the time.</i>	<i>RPS is available to users via the LAN and dial-in 97% of the time.</i>	<i>Provide access to NRC staff with 98% reliability</i>	

I.D. Program Management [All Assets]

The NRC has established a System Development Lifecycle Methodology (SDLCM) that is used by RPS to document requirements and trace development through completion. RPS contractors are cleared via background checks and notified of their responsibilities for adhering to security policies in the performance of their duties. The System Test and Evaluation Plan, Security Plan and Risk Assessments are used to ensure compliance. These plans were revised and tested in November 2001. Additionally, RPS uses account and version control checks to ensure users cannot access the system with out-of-date software versions. Contractually, the OCIO provides the RPS Project Manager a list of who works on the project, how long they worked and what they did. Performance reviews are also performed on contract teams. The RPS project manager provides periodic briefings to the Information Technology Business Council (ITBC) and the Executive Director of Operations to communicate the status of major changes, costs, results, plans, risk assessments and lessons learned. These briefings are available to all NRC divisions to ensure all are aware of issues that affect them. An E-mail address RPSHELP has been used since 1997 to provide the vehicle for users to report problems, send suggestions, and request enhancements which provides a feedback mechanism for the RPS project team to monitor the system. Each Region has an RPS counterpart who monitors the system in each of the four regions. Monthly conference call between headquarters and the regions are used to discuss the system. Annual face-to face counterpart meetings are held and the headquarters team makes visits to each region yearly to discuss the system.

1. Is there a program manager assigned to the project? If so, what is his/her name? Yes X No
 Yes. Michael MacWilliams, NRC/NRR 301-415-1877

2. Is there a contracting officer assigned to the project? If so, what is his/her name? Yes X No
 Yes. Sally Adams, NRC/OCFO 301-415-6588

3. Is there an Integrated Project Team? Yes X No
 Yes. NRR initiated the RPS development effort with a team of staff from NRR, OCIO and the regional offices to integrate ten antiquated mainframe systems, serving the reactor program in headquarters and regions, into one integrated system using modern client server technology supported by OCIO. Many of these older systems did not effectively interface or share information resulting in inefficiencies that impeded effective program management. Both OCIO and NRR are involved as project and technical managers on various task orders. Each Region provided members (Regional Counterparts) to the development team. RPS was designed using a modified rapid prototyping methodology. The project was developed in a modular fashion.

As needed, the NRR and OCIO system design team met with other office representatives in the Office Nuclear Materials Safety and Safeguards (NMSS) and the Office of the Chief Financial Officer (OCFO) to share design information and to ensure that data which these offices require were included in RPS.

3.A. If so, list the skill set represented.

There is an Integrated Project Team with members from the Office of Nuclear Reactor Regulation (NRR), working in partnership and close coordination with the NRC's four regional offices and with the Office of the Chief Information Officer (OCIO). William Usilton, from OCIO, is the technical program manager. Guy Wright Director, Comprehensive Information Systems Support Consolidation II (CISSCO II) program staff, is responsible for the Maintenance and Operations Task order. Sally Adams is the contracting officer. These members have an understanding of the business process, information technology, contracting and project management skills.

Michael MacWilliams, NRR 301-415-1877 - Business Rules, Project Manager

Conchita See, NRR 301-415-1306 - Business Rules, System Security Officer, Data Administrator

Carl Konzman, NRR 301-414-2433 - IT

Bill Usilton, OCIO 301-415-5798 - IT, Technical Program Manager

Tu Tran, OCIO 301-415-7119 - Data Base Administrator

Guy Wright, OCIO 301-415-7201-Maintenance and Operations Task Order

Paul Bonnett, Region 1 830-829-9866 - Regional Counterpart

Son Ninh, Region 2 404-562-4532 - Regional Counterpart

Tom Kozak, Region 3 630-829-9866 - Regional Counterpart

Phil Harell, Region 4 817-860-8250 - Regional Counterpart

OAO, contractor support 240-753-0100

4. Is there a sponsor/owner?

Michael MacWilliams NRR 301-415-1877

Yes No

Part II: Additional Business Case Criteria for Information Technology**II. A. Enterprise Architecture****II.A.1 Business**

A. Is this project identified in your agency's enterprise architecture? If not, why?

Yes, RPS has been identified in NRC's enterprise architecture (EA).

B. Explain how this project conforms to your departmental (entire agency) enterprise architecture.

RPS falls within the scope of NRC's baseline EA. As such, this system supports the performance of the business functions identified in the agency enterprise business model, documented in the NRC publication, "NRC Enterprise Model," provides the data required by NRC's Regulated Activities Approvals for licensing issuing and control, and utilizes products and components that are aligned with NRC's current application and technology standards and future direction as specified in NRC's existing technology planning documents. Although the NRC's existing technology planning documents are being updated, the current documents identify some core technology needs. These core technology needs are in the process of being updated and expanded through an evolving organizational EA governance process that will ensure that all current and future technology needs are vetted by NRC business managers to validate links to NRC business drivers for the identified technologies. When fully functional, NRC's integrated EA and CPIC processes will enable NRC to apply the same sound risk management strategies to its IT investments that have long characterized NRC's core business operations. NRC has also provided the Federal Enterprise Business Reference Model (FEBRM) with high level business functions and subfunctions derived from the NRC Enterprise Model. NRC is working to uncover additional internal cross-cutting initiatives and has begun to look at other-agency business processes and State business processes to identify potential areas for collaborative efforts.

RPS conforms to the NRC's current technology infrastructure and to the NRC Technology Architecture framework and as RPS has been modified or enhanced, each iteration has moved toward fuller compliance with the evolving NRC enterprise information architecture. RPS software is installed on employee desktops, agency application and database servers. It is integrated with the agency internet browser. It is scalable and interoperates with the agency network and is supported by the agency systems management functions. This is accomplished by satisfying NRC mission and business functions and being consistent with NRC's software, hardware, and communications standards. To ensure the former objective, NRC Management Directive 2.2, Capital Planning and Investment Control, requires that all major systems be reviewed by the Information Technology Business Council (ITBC). The ITBC brings an agency wide business and programmatic perspective to IT investment justification. The ITBC review of the business case also focuses on minimizing duplication, maximizing integration, and promoting benchmarking and process redesign before automation. Consistency with technical standards is ensured by Office of the Chief Information Officer (OCIO) review of the technical solution proposed in the business case. RPS was approved by the ITBC and OCIO in December 1997.

RPS is a modernization initiative to provide a modern architecture replacement for 10 legacy systems. It has been implemented using the NRC's client server infrastructure. The NRC client server architecture is a computing model that provides IT services to employee desktops, designated contractors, external organizations, such as other government agencies, domestic and foreign, nuclear power plants and other clients, laboratories and the general public. Access and connectivity to Computer Center systems (such as RPS) are supported using Wide Area Network (WAN) Architecture and Local Area Network (LAN) Architecture. Access to RPS is limited to NRC employees. Data from RPS is posted on the NRC external internet site in a read only format for access by the public and other stakeholders.

RPS is fully compliant with the NRC's evolving Enterprise Information Technology Architecture, the agency's Data Naming Standards and Conventions, and the agency's Consolidated Data Model. RPS was designed to fit within the agency's client-server and LAN infrastructure and accessible via agency-standard microcomputer. RPS and its associated components are designed using client-server technology and agency's approved COTS products.

RPS and its associated components were designed from a geographically indifferent perspective with a uniform user interface focused on the job to be done. A basic premise of the system is that there will be central maintenance of common files, with a single point of data entry and sharing of information so that data can be entered once and used throughout any process where needed. Thus, RPS has already achieved significant cost-saving through shared data and can serve as a agency example of the gains to be realized through careful analysis of the data layer of EA. Where possible, inherent data quality design is being installed up-front to preclude the entry of invalid or inaccurate information and the resulting problems and inefficiencies.

RPS conforms to the NRC Information Technology Architecture framework and is compliant with the NRC's Technical Reference Manual (TRM).

Business Architecture:

RPS supports Reactor Program arena business processes as defined in the NRC Enterprise Model (EM). The NRC EM is a model of NRC business functions and processes with information technology systems mapped to the business functions they support. The NRC Enterprise Model is a core component of the NRC EA that is to be updated.

Because RPS is used in both Headquarters and the Regions a detailed business model was developed for it. A working group of NRC managers and users developed a functional model of required and desired capabilities and requirements. RPS has consistently incorporated the ties to business practices, intra-agency teamwork, and the sound program management practices stipulated within the Clinger-Cohen Act. This high level functional model was de-composed into separate modules and detailed process models were developed for each of these modules. In addition, workflow processes, security, and access controls were developed. These defined the business architecture for RPS.

Data Architecture:

RPS was designed using data administration and modeling techniques as supported in the NRC Systems Development Life Cycle Management (SDLCM) Methodology and the NRC Data Administration Reference Manual. The fields and identifiers for RPS are standard and conform to the NRC Data Architecture Naming Standards and Conventions. These were developed and coordinated through an agency Data Administration (DA) function. The agency DA function maintains the NRC Strategic Data Model (SDM) and NRC Consolidated Data Model (CDM). The NRC SDM is a model of NRC data entities with entities mapped to the business functions and application systems they support. The NRC CDM is a detailed inventory of standard data entities and attributes.

C. Identify the Lines of Business and Sub-Functions within the Federal Enterprise Architecture Business Reference Model that will be supported by this initiative.

Since the FEA BRM is undergoing continual changes, our responses are based on the latest data available.

FEA BRM Lines of Business	FEA BRM Subfunctions Supported
Regulated Activity Approvals (Services to Citizens)	License Issuing and Control
Public Health (Services to Citizens)	Illness Prevention

<i>Controls and Oversight (Support Delivery of Services)</i>	<i>Internal and External Monitoring and Oversight</i>
<i>Planning and Resource Allocation</i>	<i>Project Planning Resource allocation</i>

D. Briefly describe how this initiative supports the identified Lines of Business and Sub-Functions of the Federal Business Architecture.

RPS provides the capability for planning and scheduling licensing actions and other reactor regulatory activities related to the issuance, modification and renewal of the operating licenses for nuclear power plants. To ensure the safety and health of citizens it provides the ability to plan, schedule, conduct, report, and analyze inspection activities at the nuclear power reactor facilities in the United States. It supports internal and external monitoring and oversight and is used as a tool for implementing the policy and inspection guidance for programs assigned to the NRC regional offices and assesses the effectiveness and uniformity of the region's implementation of those programs. RPS is the planning tool for the assignment and allocation of NRC inspectors at nuclear power plants.

E. Was this project approved through the EA Review committee at your agency?

Yes, RPS was approved through the NRC EA Review committee.

F. What are the major process simplification/reengineering/design projects that are required as part of this initiative?

RPS automated areas which underwent some form of business process redesign and where new policy has, or was being established. Processes which undergone redesign and which were automated through RPS include the redesign and standardization in the inspection reporting process (as documented in Inspection Manual Chapter 0610), the tracking of inspection follow-up, the development and integration of the Plant Issues Matrix (PIM), and the analysis and assessment of requirements associated with the revised Reactor Oversight Process (ROP).

G. What are the major organization restructuring, training, and change management projects that are required?

There was no organizational restructuring required for the implementation of RPS. Training was conducted at headquarters and at the regional offices when each phase was deployed. Training is available at the NRC training facility for new employees. Management of RPS, including change management, is controlled centrally by the RPS project team using the agency's SDLCM methodology.

H. What are the Agency lines of business involved in this project?

RPS provides the capability for planning, scheduling, conducting, reporting, and analyzing inspection activities at the nuclear power reactor facilities in the United States. It is used as a tool for implementing the policy and inspection guidance for programs assigned to the NRC regional offices and assesses the effectiveness and uniformity of the region's implementation of those programs. It is used to plan and schedule licensing and other reactor regulatory activities. It is also a critical part of the NRC's license fee collection process.

I. What are the implications for the agency business architecture?

The lines of business supported by RPS are integral to the NRC's mission. RPS is included in the agency's business architecture and documented in the NRC Enterprise Model. Although the NRC Enterprise Model is currently being updated, substantial changes to RPS are not anticipated since the business functions of the agency have not changed substantially over time.

II.A.2 Data

A. What types of data will be used in this project?

RPS contains data related to operating nuclear power reactors, inspection plans, inspection procedures, inspection findings, licensing actions, NRC staff and staff assignments.

B. Does the data needed for this project already exist at the Federal, State, or Local level? If so, what are your plans to gain access to that data?

No.

C. Are there legal reasons why this data cannot be transferred? If so, what are they and did you address them in the barriers and risk sections above?

N/A Data not available from another source.

D. If this initiative processes spatial data, identify planned investments for spatial data and demonstrate how the agency ensures compliance with the Federal Geographic Data Committee standards required by OMB Circular A-16.

There is no spatial data in RPS. The spatial data related to the exact location (latitude and longitude) of nuclear power plants was removed after 9/11/01.

II.A.3 Application and Technology

A. Discuss this initiative/project in relationship to the application and technology layers of the EA. Include a discussion of hardware, applications, infrastructure, etc.

Applications Architecture:

RPS was implemented using client-server infrastructure to replace 10 separate systems that the NRC had been using. These legacy applications were identified in the applications layer of the NRC EA through an inventory of systems and databases. The RPS modules were implemented using client-server technology and agency-approved COTS products that were in the NRC Applications Development Toolkit. The majority of RPS was developed with PowerBuilder. The database is Sybase.

Technology Architecture:

RPS conforms to the agency's technology architecture, as documented in the NRC's Technical Reference Model. This is a framework of technical standards used to plan platforms and infrastructure for new systems. It documents the technology and network architecture for the agency. RPS was implemented within the agency's standard client-server and LAN infrastructure and is accessible via agency-standard microcomputers.

B. Are all of the hardware, applications, and infrastructure requirements for this project included in the EA Technical Reference Model? If not, please explain.

Yes.

II. B. Security and Privacy

NOTE: Each category below must be addressed at the project (system/application) level, not at a program or agency level. Referring to security plans or other documents is not an acceptable response.

II.B.1. How is security provided and funded for this project (e.g., by program office or by the CIO through the general support system/network)?

Security is funded by NRR. RPS contains a Security Access Module (SAM) that is used to provide user access to each of the modules of RPS.

A. What is the total dollar amount allocated to security for this project in FY 2004?

The total amount allocated is \$147K. This includes the NRR costs for security of \$75K and the agency's allocation of security costs of \$72K. The cost of NRC FTE is not included in the \$147K.

II.B.2 Does the project (system/application) meet the following security requirements of the Government Information Security Reform Act, OMB policy, and NIST guidance?

Yes.

System Test and Evaluation Plan – Jan 15, 2002

Risk Assessment – Nov 13, 2001

Security Plan – Nov 13, 2001

Certification Report – Dec 7, 2001

Certification and Accreditation signed May 2002

A mission/business impact analysis was conducted (NIST SP 800-30). The Certification and Accreditation was granted in May 2002. Formal GISRA methods including Risk Assessments, the System Test and Evaluation Plan, and the Security Plan were used to determine the level of risk associated with the system. The systems certification testing revealed four weaknesses. Each of these weaknesses was reviewed by the certification test team and none were considered to be significant enough to prevent the accreditor from granting an approval to operate. The system is accredited, however, a remediation plan of action was also developed by the OCIO team and the weaknesses are scheduled to be resolved during a scheduled future enhancement to the NRC LAN network infrastructure.

A. Does the project (system/application) have an up-to-date security plan that meets the requirements of OMB policy and NIST guidance? What is the date of the plan?

Yes. *Dated November 13, 2001*

B. Has the project undergone an approved certification and accreditation process? Specify the C&A methodology used (e.g., NIST guidance) and the date of the last review.

Yes. *NIST Guidance December 7, 2001*

C. Have the management, operational, and technical security controls been tested for effectiveness? When were most recent tests performed?

Yes. *November 2001*

D. Have all system users been appropriately trained in the past year, including rules of behavior and consequences for violating the rules?

Yes.

E. How has incident handling capability been incorporated into the system, including intrusion detection monitoring and audit log reviews? Are incidents reported to GSA's FedCIRC?

The system only accessible by badged NRC employees and badged maintenance support contractors. All badged employees hold security clearances. Audit logs are incorporated on each table and are reviewed. No incidents have occurred since the initial deployment in 1998.

F. Is the system operated by contractors either on-site or at a contractor facility? If yes, does any such contract include specific security requirements required by law and policy? How are contractor security procedures monitored, verified, and validated by the agency?"

Contractors receive the same clearance and badging process as NRC employees.

II.B.3 How does the agency ensure the effective use of security controls and authentication tools to protect privacy for those systems that promote or permit public access?

There is no public access to RPS.

II.B.4 How does the agency ensure that the handling of personal information is consistent with relevant government-wide and agency policies.

RPS uses a system-generated staff ID that is assigned to each individual who uses the system. There is one table, which has this staff ID, and the individuals SSN. Access to this table is restricted to a very small number of individuals at the NRC. The SSN does not print on any reports and is used to interface RPS data electronically with the HR and license fee systems. RPS is one of the NRC's Privacy Act Systems of Records. The system notice was reviewed and updated in August 2002.

II.B.5 If a Privacy Impact Assessment was conducted, please provide a copy to OMB.

RPS contains personal information about individuals. A Privacy Impact Assessment is attached to this Exhibit 300.

II. C. Government Paperwork Elimination Act (GPEA)

II.C.1 If this project supports electronic transactions or record-keeping that is covered by GPEA, briefly describe the transaction or record-keeping functions and how this investment relates to your agency's GPEA plan.

RPS does not support electronic transitions from outside the NRC.

II.C.2 What is the date of your GPEA plan?

N/A. RPS does not support electronic transitions from outside the NRC.

II.C.3 Identify any OMB Paperwork Reduction Act (PRA) control numbers from information collections that are tied to this investment.

N/A. RPS does not support electronic transitions from outside the NRC.