CAPITAL ASSET PLAN AND JUSTIFICATION

Agency: Nuclear Regulatory Commission
Account Title: Salaries and Expenses
Identification Code: 31-0200-0-1-276
Program Activity: Reactor Program
Name of Project: REACTOR PROGRAM SYSTEM (RPS)
Unique Project Identifier: RPS
Check one: New Project ___ Ongoing project _X_
Was the project approved by an Executive Review Committee? Yes_X_ No___
Is this project information technology Yes _X_ No___
For information technology projects only:

a. Is this project a financial management system? Yes ___ No_X_
b. Does this project implement electronic transactions or recordkeeping covered by the Government Elimination Act (GPEA)? Yes_X_ No___

PART I: SUMMARY OF SPENDING FOR PROJECT STAGES

(Dollars in Millions)

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 & beyond	TOTAL
Planning:*							
Budget authority	0	0	0	0	0	0	0
Outlays	0	0	0	0	0		0
Full acquisition:							
Budget authority	1.1	0.7	0.4	0.4	0.1	0.0	2.7
Outlays	0.9	0.9	0.3	0.4	0.2		2.7
Total, sum of stages (excludes maintenance):							
Budget authority	1.1	0.7	0.4	0.4	0.1	0.0	2.7
Outlays	0.9	0.9	0.3	0.4	0.2		2.7
Maintenance:							
Budget authority	0.1	0.2	0.4	0.4	0.4	0.4	1.9
Outlays	0.0	0.3	0.4	0.4	0.4		1.5

*(Planning and some developmental activities took place prior to FY 1997. CPIC analysis conducted in FY 1997 cost approximately $35,000.)

PART II: JUSTIFICATION AND OTHER INFORMATION

A. Justification

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

The Reactor Program System (RPS) is being developed to fulfill program requirements that have evolved over the past several years. 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 is expected to satisfy increasing and critical requirements for improved information management and analytical capabilities associated with reactor oversight. NRC needs a system that collects information once, at the source, and integrates information for both inspections and licensing in one location which can be correlated and analyzed against facility characteristics. RPS will provide this capability along with an integrated methodology for planning, scheduling, conducting, reporting, and analyzing reactor inspection, licensing and regulatory activities. The system will also provide an analytical capability that will permit the linking, trending and analysis of plant performance information on an ongoing basis. This will include automating relationships and searches so that inspection findings, inspection follow-up, and cause codes can be correlated with facility characteristics and other program information to effectively compare plant performance with the norm, and to better identify early causes for concern.

The RPS data base includes inspection and licensing information, plant performance indicators, inspection follow-up items, safety issue data, allegation data and other reactor regulatory data. RPS will provide information that is consistent, reliable, and readily accessible to approximately 1,300 staff in NRC headquarters and regional offices. When completed, RPS will replace 10 legacy systems and will provide a seamless interface with other systems. RPS is designed to fit within the agency's current client/server and local area network infrastructure and be accessible via agency workstations using commercial-off-the-shelf software.

(2) Is this project is included in your agency's annual performance plan.

Yes.

(3) How does this investment support a core or priority function of your agency?

RPS supports a core/priority mission functions that need to be performed by the Federal government. RPS will provide for information management and analytical capabilities directly in support of core/primary mission functions dealing with reactor regulation. Functions supported include inspection and licensing activities for reactors, plant performance indicators, follow-up issues tracking, safety issues management, allegations management and other reactor regulatory areas.

(4) Are there any alternative sources, in the public or private sectors, that could perform this function?

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 will replace.

(5) How will this investment reduce cost or improve efficiencies?

RPS is automating 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 are being 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. RPS is being designed to fit within NRC's current information technology infrastructure and will be accessible via agency-standard PC workstations using commercial-off-the-shelf (COTS) software for greater flexibility and ease of maintenance in the future. It will reduce hardware and software maintenance cost for the 10 legacy systems that it will replace. It 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, which was operational until November 1999. It will improve 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.

B. Program management

1. *Is there a program manager and contracting officer devoted to the project? If so, what are their names?*

Development of this system is being sponsored by and funded through the NRC's 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). Michael MacWilliams is the overall program manager, providing the business knowledge for this system. William Usilton, from OCIO, is the technical program manager. Charles E. Fitzgerald, Director, Comprehensive Information Systems Support Consolidation (CISSCO) program staff, is responsible for designing and achieving integrated systems development and life cycle management and for management of the agency's interagency agreement with GSA/FEDSIM. The contracting officer is Keith Sandridge, GSA/FEDSIM.

2. *How do you plan to use an Integrated Project Team to manage this project?*

An Integrated Project Team has been established to oversee progress and resolve questions and issues arising during RPS development. This team reports directly to NRR and OCIO management and has included a business and technical contact for each of the system's components. The team also includes a representative from each region to address regional deployment issues. Periodic Project Team and component meetings are held to review progress, and to identify and correct problems early on.

C. Acquisition strategy

Explain how your acquisition strategy will manage or mitigate projects risks by answering the following questions:

1. Will you use a single contract or several contracts to accomplish this project? If multiple contracts are planned, explain how they are related to each other, and how each supports the project performance goals.

The acquisition will be accomplished through a single contract.

The NRC managed the procurement risk by selecting GSA FEDSIM's multiple-award, indefinite quantity IT services contract, competing its work among the contractors qualified to work under the contract. Given the enterprise-wide standards and scope of the CISSCO contract, statements of work normally specify only functional requirements. In response, the contractor proposes optimal technical solutions, giving specific milestones and schedules and estimated costs. A rigorous project management system is used to track progress, deliverables,

and costs for each phase of the system life cycle. A robust quality assurance plan has been developed and is cooperatively managed by NRC, GSA, and contractor staff.

2. For each planned contract, describe:

a. What type of contract you will use (e.g., cost reimbursement, fixed-price, etc.).
b. The financial incentives you plan to use to motivate contractor performance (e.g., incentive fee, award fee, etc.).
c. The measurable contract performance objectives
d. How you will use competition to select suppliers.
e. The results of your market research
f. Whether you will use COTS products or custom-designed products.

NRC's CISSCO contract is the agency's mandatory-for-consideration and preferred contract for IT/IM support. CISSCO support services are provided by the Computer Sciences Corporation through a single major task order awarded in August 1996 following competition among the GSA/FEDSIM multiple-award, indefinite quantity IT services contractors. Through this single contract, designed and established for agencywide use, the NRC obtains an enterprise-wide perspective and integration of IT/IM projects, standardized tools and life-cycle management methodologies, and systems development, integration, maintenance, and operations services. The CISSCO contractor provides written responses to written NRC requests for each requirement, and proposes technical solutions with estimated schedules and costs.

The NRC managed the procurement risk by selecting GSA FEDSIM's multiple-award, indefinite quantity IT services contract, competing its work among the contractors qualified to work under the contract. The current CISSCO contract does not include any unique contractor incentives nor specify any measurable contract performance objectives. Given the enterprise-wide standards and scope of the CISSCO contract, statements of work normally specify only functional requirements. In response, the contractor proposes optimal technical solutions, giving specific milestones and schedules and estimated costs. Research indicated that the proposed RPS solution was reasonable, affordable and feasible. A rigorous project management system is used to track progress, deliverables, and costs for each phase of the system life cycle. A robust quality assurance plan has been developed and is cooperatively managed by NRC, GSA, and contractor staff.

RPS is designed to fit within the agency's current client/server and local area network infrastructure and be accessible via agency workstations using commercial-off-the-shelf software. Most of the applications software is written using PowerBuilder.

NRC has developed some custom code so that the system can cost-effectively support agency business processes. The objectives of RPS is to provide for the effective and efficient integration and analysis of information associated with NRR's programs conducted in headquarters and regions. The RPS data base includes inspection and licensing information, plant performance indicators, inspection follow-up items, safety issue data, allegation data and other reactor regulatory data. These specific activities are not supported by COTS.

D. Alternative analysis and risk management

1. *Did you perform a life-cycle cost analysis for this investment? If so, what were the results?*
2. *Describe what alternatives you considered and the underlying assumptions for each*
3. *Did you perform a benefits/costs analysis or return on investment analysis for each alternative considered? What were the results for each? (Describe any tangible returns that will benefit your agency even of they are difficult to quantify.)*
4. *For IT, explain replaced system savings and savings recovery schedule.*
5. *Describe your risk assessment and mitigation plan for this project.*

The following answers questions 1 through 5.

The financial basis for selecting the project was based on a Cost-Benefit-Risk Analysis completed for the RPS project in January 24, 1997 as part of the Capital Planning and Investment Control (CPIC) process. Four alternatives ranging from the "Status Quo" to various degrees of automation were considered as part of the analysis. Alternative 3 was selected and approved by NRC management in 1997 with an understanding that if goals of Alternative 3 were met, that the approval to incorporate the headquarters licensing function (Alternative 4) would be revisited. Alternative 4 was approved by NRC management in 1998 after RPS phase 1 was completed. Alternative 3 was determined to yield about $4.7 million in cost savings and the cost avoidance of additional FTE required to support analytical support requirements.

Assumptions for the analysis

The system development activities funded in FY 1997 will be completed.

Regardless of the RPS alternative implemented, the Safety Information Network (SINET) on the NIH mainframe will be used by other NRC organizations through the end of FY 2000. To realize the total estimated cost savings of an RPS alternative which allows NRR to discontinue the use of SINET, all other NRC use of SINET and the need to maintain it at NIH must be discontinued by the end of FY 2000. (NOTE: Use of SINET ended in November 1999.)

Alternatives

Alternative 1 - With the Status Quo alternative, NRR would implement only those parts of the system completed by the end of FY 1997, (i.e., RPS capability for inspection planning/reporting/analysis, inspection follow-up, and open item tracking would be implemented in the regions.)

Alternative 2 - Building upon the Status Quo, NRR would implement a PC-based (non client-server) workload scheduling/staff assignment capability in the regions and develop interfaces to the events and allegation tracking systems.

Alternative 3 - NRR would develop and deploy all functions provided in Alternative 2 in headquarters and the regions in a fully integrated client-server environment. The alternative would also incorporate safety issues tracking and full interface to the enforcement action tracking system.

Alternative 4 - NRR would implement the same capability as Alternative 3, plus fully integrate reactor licensing activities into the system.

Benefit comparison

Benefit categories and the alternatives' ratings (where A = High and C = Low) are shown in the table below:

SUMMARY TABLE FOR NON-QUANTIFIABLE BENEFITS

Description of Non-Quantifiable Benefits	Comparison of Alternatives (A is best result, C is least desirable, duplicate scores allowed)			
	Alt.1 Status Quo	Alt.2	Alt.3	Alt.4
1. More Consistent Data from Single-Source Entry	B	B	A	A
2. More Efficient Sharing of Information	C	C	A	A
3. Better Analysis Capabilities for Licensing	C	C	C	A
4. Better Analysis Capabilities for Inspections	B	B	A	A
5. Faster and more Efficient Reporting Capabilities	B	B	A	A
6. More Flexible Ad hoc Reporting	C	B	A	A
7. More Accurate and Timely Fee Data	C	C	A	A
8. Better Data Integrity	C	B	A	A
9. Better Integration of Licensing and Inspection Information	C	C	C	A
10. Better Information for Decision Making by Management	C	C	B	A
OVERALL BENEFIT SCORE	C	C+	A-	A

As summarized above, using Alternative 1 (Status Quo) as a baseline, the other Alternatives were rated as follows:

- Alternative 2 provides improvement (for regions only) in the two benefit categories, More Flexible Ad hoc Reporting and Better Data Integrity, due to the additional capabilities and integration of information previously provided through separate systems.

- Alternative 3, due to the full integration of previously separate information sources and access being provided to regions and headquarters, delivers a decision support system, e.g., providing the capability to access data and information in inspection and licensee performance reports and compare it with information available in facility characteristic and facility performance databases.

- Alternative 4, by integrating the licensing information, improves upon decision support system delivered by Alternative 3.

Cost comparison

A seven year life cycle (FY 1998 - FY 2004) was used to cost alternatives. Estimated undiscounted dollar costs and FTEs are shown in the table below. The last row in the table shows the estimated dollar cost and FTE savings for Alternatives 2, 3, and 4 when compared with Alternative 1 (Status Quo).

COST AND SAVINGS SUMMARY
(UNDISCOUNTED DOLLARS AND FTE FOR FISCAL YEARS 1998 - 2004)
(Dollars In Thousands)

	Alternative 1 Status Quo		Alternative 2		Alternative 3		Alternative 4	
Expense Category	$K	FTE	$K	FTE	$K	FTE	$K	FTE
1. Non-Recurring, One Time Cost	355	2.2	964	4.0	1,210	7.1	1,420	7.6
2. Recurring Cost (Client-Server Operations and Maintenance)	3,185	11.2	3,535	11.2	4,565	25.8	4,565	25.5
3. Recurring Cost (Non-Client-Server)	9,541	199.5	7,121	192.5	2,599	119.2	2,054	77
4. Total Cost (Sum of Rows 1, 2 & 3)	13,081	212.9	11,620	207.7	8,374	152.1	8,039	110.1
5. Cost Savings Over Alternate 1 (Status Quo)	0	0	1,461	5.2	4,707	60.8	5,042	102.8

- Estimated non-client-server recurring cost savings for Alternative 2 are divided equally between mainframe system-related and data entry/data quality-related activities.

- Estimated non-client-server recurring cost savings for Alternative 3 are primarily (about 67%) mainframe operations, maintenance and timesharing costs with another 20% being data entry/data quality-related. Over half the estimated FTEs saved ("costs avoided" rather than staff reductions) are associated with inspection analysis activities with 27% being associated with data entry/data quality activities.

- The reductions in estimated non-client-server recurring costs and FTE levels for Alternative 4 result from the same savings realized in Alternative 3 plus additional savings due to the reductions in manual licensing analysis activities.

Risk comparison

The table below shows the risk categories and the alternatives' rankings.

RISK RATINGS

Category of Risk	Score (1 = low, 5 = high)			
	Alternative 1 Status Quo	Alternative 2	Alternative 3	Alternative 4
Mission Impact	4	3	2	1
Volatility of Requirement	5	5	2	1
Scope of Project	2	2	3	3
Technical Risk	2	3	4	4
Management Consensus	2	2	3	3
Type of Procurement	4	3	2	2
Total Risk Scores	19	18	16	14

- **Alternative 1 (Status Quo)** was judged to have a high Mission Impact risk because it doesn't provide the integrated information environment necessary for NRR to support the agency mission. It was judged to have high risk in Volatility of Requirements since its capabilities will be "frozen" at the end of 1997. This alternative would continue to have a NRR manpower system maintained by a DOE National lab.

- **Alternative 2**, similar to Alternative 1, was judged to have a high risk in Volatility of Requirements due to its limited capabilities to respond to new, but currently undefined analysis requirements. Maintenance of the NRR manpower system for headquarters would be transferred in-house; however, the new, PC-based, separate manpower system would be maintained in the regions.

- **Alternatives 3 and 4** were judged to have roughly equivalent risk. Both push the envelope in terms of project scope and technical risk associated with client-server environment with which neither NRR nor OCIO has had much experience. Both alternatives received a rating of 3 because there is no management consensus that other offices will move their SINET applications from the mainframe after NRR does. Compared to Alternative 3, Alternative 4 was judged to be slightly less risky in the Mission Impact and Volatility of Requirements, due to the increased access and capability associated with having licensing information integrated into RPS in the latter alternative.

Given that possible scores or ratings for each alternative could have ranged from 6 to 30, differences in estimated risks between the four alternatives are not significant.

Sensitivity analysis

The one key assumption requiring analysis involved costs for mainframe support and usage FY 2001 - FY 2004. While NRR's discontinued use of SINET under Alternatives 3 and 4 will reduce the mainframe workload by approximately 60 to 70% during this period, the mainframe costs will only decrease by about 15% due to the high fixed costs ($635,000 per year) associated with processing and data storage if other offices continue to use SINET.

If SINET is not shut down after FY 2000, estimated (undiscounted) net life cycle cost savings for Alternatives 3 and 4 would decline (from the estimates shown in Row 3 in the COST AND SAVINGS SUMMARY table) to $2,167,000 and $2,502,000, respectively. (NOTE: Use of SINET ended in November 1999.)

Cost estimates for "Year 2000 modifications" were not subjected to sensitivity analysis. These costs were estimated to be $180,000 for Alternatives 1 and 2 and $100,000 for Alternatives 3 and 4.

Sponsor recommendation

The sponsor (Office of Nuclear Reactor Regulation) recommended Alternative 4. This alternative would collect inspection and licensing information once, at the source, and would make it available in a single location accessible by all headquarters and regional management and staff.

As an example of RPS's value, it would provide commonality and linkage of inspection-related information now contained in separate, unconnected data bases and systems. RPS would provide the capability for inspection reports, Plant Issues Matrix (PIM), and Plant Performance Review (PPR), Inspection findings, inspection follow-ups, and cause codes to be correlated with facility characteristics and other program information allowing NRR to more effectively compare a specific plant's performance with the norm, and to better identify early causes for concern. Such an analytical capability will reduce the need for contractor support and additional manual FTE effort required to support this level of comprehensive analysis.

The risk assessment and mitigation plan for this project included a modular development approach, frequent contractor reporting, use of structured work breakdown approach, the assignment of a single project manager who was assigned responsibility for the whole project and direct involvement of the OCIO technical lead.

E. IT modernization and architecture (IT projects only)

1. *Does this project support your agency's current architecture or is it part of a modernization initiative?*

2. *Explain how this project conforms to:*
   a. *Your agency's information technology architecture (current or target, as applicable)*
   b. *your agency's technology infrastructure*
   c. *the Federal Enterprise Architecture Framework (FEAF), if used for this project. If the project does not follow the FEAF, explain the reason for the decision and discuss the framework used.*

The following answers questions 1 and 2.

RPS will be fully compliant with the NRC's 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 has been 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. 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 is compliant with the NRC's Technical Reference Manual (TRM) and the TRM is compliant with the FEAF.

F. IT Security (IT projects only)

Demonstrate that the security plan for this project:

1. *Includes security controls for components, applications, and systems that are consistent with your agency's IT architecture;*
2. *Is well-planned;*

3. *Manages risks;*
4. *Protects privacy and confidentiality; and*
5. *Explains any planned or actual variance from NIST security guidance.*

The NRC contracted with the General Services Administration who had Troy Systems developed a comprehensive Business Continuity and Security Plan for RPS. This 100+ page plan was completed and RPS was certified in September 1998. It should be noted that there is no classified data in RPS. There is a small amount of information which is not releasable to the public such as information on unannounced inspections of operating nuclear reactors. There are no variances from NIST security guidance.

G. Government Paperwork Elimination Act (GPEA) (IT projects only)

If this project supports electronic transactions or recordkeeping:

a. *Briefly describe the transaction or recordkeeping functions; and*
b. *Explain how this investment relates to your agency's GPEA plan.*

The following answers questions a and b.

The RPS data base includes inspection and licensing information, plant performance indicators, inspection follow-up items, safety issue data, allegation data and other reactor regulatory data. Data from the RPS data base is currently posted on the NRC external Web. The performance indicator data alone had over 25,000 visitors per week during the period from April to June 2000. This project will be compliant with GPEA by October 2003.

PART III: COST, SCHEDULE, AND PERFORMANCE GOALS

B. Description of performance-based management system (PBMS):

1. *Describe the performance-based management system that you will use to monitor contract or project performance.*

The RPS project team is utilizing Microsoft Project, Lotus and Visio as the management control tools for scheduling and tracking performance against plan. Another system is being used to track project budget for each individual task and component. Cost reports for these are accumulated and tracked against budget plans. Routine meetings are held with the project team, including the business and technical leads and the component contacts, to discuss costs,

deliverables and schedule performance and to identify potential problem areas. Management is briefed on an ongoing basis to resolve problem areas that may arise.

B. Original baseline (OMB-approval at project outset):

Using the format of your selected PBMS, provide the following:

1. *What are the cost and schedule goals for this segment or phase of the project? [What are the major project milestones or events? When will each occur? What is the estimated cost to accomplish each one?]*

2. *What are the measurable performance benefits or goals for this segment or phase of this project?*
   [What are the project performance objectives?]

Original cost goals:

(Dollars in Millions)

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002 & beyond	TOTAL
Planning:*							
Budget authority	0	0	0	0	0	0	0
Outlays	0	0	0	0	0		0
Full acquisition:							
Budget authority	1.1	0.7	0.4	0.4	0.1	0.0	2.7
Outlays	0.9	0.9	0.3	0.4	0.2		2.7
Total, sum of stages (excludes maintenance):							
Budget authority	1.1	0.7	0.4	0.4	0.1	0.0	2.7
Outlays	0.9	0.9	0.3	0.4	0.2		2.7
Maintenance:							
Budget authority	0.1	0.2	0.4	0.4	0.4	0.4	1.9
Outlays	0.0	0.3	0.4	0.4	0.4		1.5

*(Planning and some developmental activities took place prior to FY 1997. CPIC analysis conducted in FY 1997 cost approximately $35,000.)

RPS is being designed and developed in a modular approach tailored to fit the regulatory programs it will support. At the same time, an enterprise approach has been taken with a global view of the entire RPS system so that the overall design, process model, data model and associated tables and naming conventions are in place and fit within the overall agency enterprise design. The overall goal of the project is to met the development schedule at or below the budget authority outlined in the above table. As shown in the outlays row, RPS is within budget. In November 1999, RPS and other client-server applications replaced the functionality provided to agency by the SINET system which was deployed at NIH using IDMS software.

Original schedule goals

	Planned	Completed
Overall system conceptualization and design.	FY 1997	FY 1997
Requirements determination, design and engineering for Inspection Planning and Reporting.	FY 1997	FY 1997
CPIC analysis.	FY 1997	FY 1997
Development of Inspection Planning module.	Q1/1998	Q1/1998
Deployment of Inspection Planning module.	Q2/1998	Q2/1998
Integration of Inspection Planning and Item Reporting modules.	Q1/1998	Q4/1998
Development of Item Reporting module.	Q1/1998	Q4/1998
Deployment of Item Reporting module.	Q2/1998	Q4/1998
Requirements determination, design and engineering for Licensing and Other Planning.	Q3/1999	Q4/1999
Complete development of Licensing and Other Planning components.	Q1/2000	Q3/2001
Deployment of Licensing and Other Planning modules.	Q2/2000	Q4/2001
Complete development and deployment of any remaining parts including interfaces with other agency systems.	Q4/2001	Q4/2001

Although there has been some schedule deviation for the completion and deployment of two of the RPS components, these schedule changes did not impact performance goals or the overall milestones projected. The Licensing and Other Planning module has been rescheduled to incorporate best practices, additional benchmarking, a new workload management approach and integration with STARFIRE, the agency's new time and labor reporting system. The schedule deviations did not impact the budget or effect the agency's Year 2000 efforts.

FY 1998 Performance goals

RPS is expected to satisfy increasing and critical requirements for improving information management and analytical capabilities associated with reactor oversight. The system is expected to support a number of agency program business areas to include: Compliance Management, Licensing, and the Identification and Assessment of Safety Concerns. There are three project goals for this system. The primary project goal of RPS supports the Nuclear Reactor Safety mission by providing a comprehensive, timely and accurate integration of inspection, licensing and other reactor regulation information, and the associated analytical capability to more effectively evaluate plant performance. The secondary project goal is to

provide for information management services for the reactor program which yield higher levels of efficiency and reduced longer-term costs. A third project goal has been added to ensure there are no significant deviations from cost, schedule and performance goals. The specific output measures used to measure these project goals are described below:

RPS Project Goal 1: Support the Nuclear Reactor Safety mission by providing a comprehensive, timely and accurate integration of inspection, licensing and other reactor regulation information and the associated analytical capability to more effectively evaluate plant performance.

FY 1998 Output Measures:

- Percent of inspectors, technical reviewers and project managers in Nuclear Reactor Regulation programs (headquarters and regions) who access RPS or use RPS information routinely in performing their responsibilities. This number should increase progressively and should be measured against the population affected by the various RPS components being implemented in accordance with the baseline schedule.

  Target: Percentage should increase progressively and measured against the population affected by the various RPS components being implemented, 30 percent for FY 1998.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1998 Milestones	0%	10%	20%	30%
FY 1998 Actuals	0%	14%	18%	27%

- Percent of managers in Nuclear Reactor Regulation programs (headquarters and regions) who access RPS or use RPS information for the purposes of performing management functions pertaining to programs within their purview.

  Target: Percentage should increase progressively and measured against the population affected by the various RPS components being implemented, 40 percent for FY 1998.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1998 Milestones	0%	10%	25%	40%
FY 1998 Actuals	0%	21%	28%	53%

- The integration of information supporting inspection, licensing and other reactor regulatory programs as measured by the percent of data entities used in the management and operation of Nuclear Reactor Regulation programs which are maintained and accessible in RPS in an "open architecture" environment.

  Target: Percentage of data entities used in the management and operation of NRR programs which are maintained and accessible in RPS in an "open architecture" environment, 50 percent for FY 1998.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1998 Milestones	0%	40%	40%	50%
FY 1998 Actuals	0%	45%	45%	60%

FY 1999 Output Measures

RPS Project Goal 1: Support the Nuclear Reactor Safety mission by providing a comprehensive, timely and accurate integration of inspection, licensing and other reactor regulation information and the associated analytical capability to more effectively evaluate plant performance.

NOTE: The usage of RPS modules increased from 221 users in the fourth quarter of FY98 to 414 users during the first quarter of FY99. First quarter actuals exceed the projected fourth quarter milestone goals. Neither of the following two measures was reported on after the first quarter in FY 1999.

Output Measures:

- Percent of inspectors, technical reviewers and project managers in Nuclear Reactor Regulation programs (headquarters and regions) who access RPS or use RPS information routinely in performing their responsibilities. This number should increase progressively and should be measured against the population affected by the various RPS components being implemented in accordance with the baseline schedule.

Target: Percentage should increase progressively and measured against the population affected by the various RPS components being implemented, 35 percent for FY 1999.

FY 1999 milestones:

1st Quarter 30 percent

2nd Quarter	30 percent
3rd Quarter	35 percent
4th Quarter	35 percent

FY 1999 actuals

1st Quarter	49 percent	(See note above)

- Percent of managers in Nuclear Reactor Regulation programs (headquarters and regions) who access RPS or use RPS information for the purposes of performing management functions pertaining to programs within their purview.

  Target: Percentage should increase progressively and measured against the population affected by the various RPS components being implemented, 60 percent for FY 1999.

FY 1999 milestones

1st Quarter	50 percent
2nd Quarter	50 percent
3rd Quarter	55 percent
4th Quarter	60 percent

FY 1999 actuals

1st Quarter	66 percent	(See note above)

- **(New FY 1999 Measure)** The Inspection Reporting (IR) and Analysis Module (AM) of RPS were deployed on September 28, 1998. Actual usage of RPS increased from 221 users through September 30, 1998 to 414 users by December 31, 1998. Since the FY 99 percentage goals listed above have already been exceeded, and no new RPS modules are planned for deployment in FY 99, the actual number of users by category will be reported. The fourth quarter FY98 is shown as a baseline.

  Target: Usage should increase by about 15 individuals per quarter during FY99.

RPS users	FY98 QTR 4	FY99 QTR 1	FY99 QTR 2	FY99 QTR 3	FY99 QTR 4
Admin personnel	77	139	106	117	128
Inspectors	79	176	214	228	256

Managers	42	66	70	72	85
Other	23	33	37	47	54
Total	221	414	427	464	523

RPS Project Goal 2: Provide for information management services for the reactor program which yield higher levels of efficiency and reduced longer-term costs.

FY 1998 Output Measures:

- Number of current older systems replaced by RPS and associated savings and other benefits. The current goal is the replacement of 10 older legacy systems. Progress on their replacement should be commensurate with the implementation schedule of the various RPS components.

  Target: Replacement of 10 legacy systems with RPS components.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1998 Milestones	0	4	4	5
FY 1998 Actuals	0	5	5	7

- Levels of "single entry" and sharing of information, and commensurate reductions in the maintenance of duplicative data. This measure will be based on the percent of data elements entered once and shared throughout the entire RPS spectrum, compared to all data elements in the database.

  Target: Percent of data elements entered once and shared throughout the entire RPS spectrum, compared to all data elements in the database, 50 percent for FY 1998.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1998 Milestones	0%	40%	40%	50%
FY 1998 Actuals	0%	45%	45%	55%

FY 1999 - 2001 Output Measure:

- Number of current older systems replaced by RPS and associated savings and other benefits. The current goal is the replacement of 10 older legacy systems. Progress on their

replacement should be commensurate with the implementation schedule of the various RPS components, 7 in FY 1999 and 10 in 2001.

Target: Replacement of 10 legacy systems with RPS components.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 1999 Milestones	7	7	7	7
FY 1999 Actuals	7	7	7	7

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 2000 Milestones	7	7	7	7
FY 2000 Actuals	7	7	7	7

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
FY 2001 Milestones	7	10	10	10
FY 2001 Actuals	7	7	7	10

The rescheduling of Licensing and Other Planning will delay the replacement of the final legacy systems until FY 2001.

RPS Project Goal 3: Demonstrate a return on investment to the agency from the RPS project.

FY 1998 - 2002 Output Measure:

- Develop demonstrable returns on investment to the agency.

  Target:
  No significant deviations in the cost, schedule and performance goals for the RPS project (as defined by the Clinger-Cohen Act of 1996).

Output Measure:

- Develop demonstrable returns on investment to the agency.

Target: No significant deviations in the cost, schedule and performance goals for the RPS project (as defined by the Clinger-Cohen Act of 1996).

FY 1999 milestone	No deviations	
FY 1999 actual	1st Quarter	No deviations
	2nd Quarter	No deviations
	3rd Quarter	No deviations
	4th Quarter	No deviations
FY 2000 milestone	No deviations	
FY 2000 actual	1st Quarter	No deviations
	2nd Quarter	No deviations
	3rd Quarter	No deviations
	4th Quarter	No deviations
FY 2001 milestone	No deviations	
FY 2001 actual	1st Quarter	No deviations
	2nd Quarter	No deviations
	3rd Quarter	No deviations
	4th Quarter	No deviations
FY 2002 milestone	No deviations	
FY 2002 actual	1st Quarter	
	2nd Quarter	
	3rd Quarter	
	4th Quarter	

B. Current baseline (applicable only if OMB approved the changes)

Using the format of your selected PBMS, provide the following:

3. *What are the cost and schedule goals for this segment or phase of the project? [What are the major project milestone events and the estimated costs to accomplish each one?]*

4. *What are the measurable performance benefits or goals for this segment or phase of this project? [What are the project performance objectives?]*

No changes to the baseline have been requested or approved by OMB.

D. Actual Performance and Variance from OMB-approved baseline (Original or Current):

1. *Actual cost and schedule performance. Using the information from your PBMS explain:*

   a. *What work you planned (scheduled) to accomplish and how much you budgeted to complete the work.*
   b. *What work you actually accomplished and how much you actually spent.*

2. *Cost and schedule variance. If either the actual work accomplished or costs incurred vary from your baseline goals by 10 percent or more, explain:*

   a. *The variance between planned and actual costs or planned and actual schedule. Expressed as a percentage of the baseline goal.*
   b. *The reason for the variance.*

3. *Performance variance. Explain whether, based on work accomplished to date, you still expect to achieve your performance goals. IF not, explain the reasons for the variance.*

The following answers questions 1 through 3.

All work will be completed within the original budget. As noted above, the Licensing and Other Planning module has been rescheduled to incorporate best practices, additional benchmarking, a new workload management approach and to interface with the agency's new time and labor system STARFIRE. RPS software development was completed in Q3 2001, and RPS/LOP will be deployed in September 2001. Full implementation of RPS which includes an interface with STARFIRE cannot occur until STARFIRE is deployed. If the deployment of STARFIRE is delayed beyond October 2001, either PCRITS or WISP will be used to collect actual hours until STARFIRE is deployed. The schedule deviations will not impact the budget and did not effect the agency's Year 2000 efforts. All performance goals will be met.

E. Corrective actions:

If actual work accomplished or costs incurred to date vary from the planned baseline goals by 10 percent or more, explain:

a. What you plan to do, if anything, to correct project performance.
b. What effect your action will have on overall project cost, schedule and performance benefits.

All work will be completed within the schedule and budget No corrective actions are needed or expected.