

U.S. Nuclear Regulatory Commission



Plan of Action Strategic Workforce Planning

January 19, 2001

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Content Overview

This plan of action outlines the proposed systematic approach for developing, testing and implementing a Nuclear Regulatory Commission (NRC) Strategic Workforce Planning (SWP) process. The process will facilitate a strategic assessment of NRC's scientific, engineering and technical competencies in line with the Chairman's direction to the Executive Director of Operations on October 24, 2000. The plan is divided into eight sections:

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This plan of action is designed to complement, and ensure consistency with the NRC Planning, Budgeting, and Performance Management (PBPM) process and human resource planning initiatives that are on going throughout the NRC. This includes recognition and use of workforce planning information available through initiatives currently underway within NRC's organizational units (e.g., skills and workload information available through NRR's work planning center concept).

1.0 Introduction

Overview. Implementation of a systematic SWP process will support the NRC in acquiring, developing, deploying, monitoring and retaining the core scientific, engineering and technical competencies needed to support its present and future strategic direction. The workforce planning process will reference documented NRC business outcomes and outputs over a five-year planning horizon, will identify the technical capacity¹ required to support the business requirements identified and will provide a baseline of employee capabilities relative to business requirements. The planning process will result in strategies to support the transition from the present to future state, and will provide the basis for strategic resource decisions on the most effective methods for maintaining NRC workforce capacity to achieve business results.

Key Drivers. As noted at the October 2000 National Energy Institute (NEI) Strategic Issues Advisory Committee Meeting by NRC Chairman Richard Meserve, there is a critical need to acquire, develop, maintain, deploy and retain the Commission's core scientific, engineering and technical competence. Faced with maximizing the use of available resources, including a relatively fixed number of full-time positions and an aging demographic workforce profile, the NRC must create and implement a SWP process. The aim of the process is to ensure that the "right number of people with the right competencies are in the right jobs at the right time".

Strategic workforce planning is crucial to the NRC's success in today's dynamic business environment, which demands both sophistication and agility of response. Major trends impacting the nature of the NRC's work and the characteristics of its workforce include:

- Shifts in mission requirements and changing environments
- Increasing stakeholder/customer demands and escalating expectations
- Introduction of emerging technologies into business operations
- Response to new or changing legislation and policies
- Limited budgetary resources to support resource acquisition/management
- Declining workforce numbers and institutional knowledge/critical skills
- Shifting workforce demographic trends (e.g., aging workforce)

¹ Technical capacity includes the knowledge, skills and other attributes employees need to successfully perform in various work roles.

- Increasing market competition for a shrinking labor pool
- Employee expectations for a more flexible workplace (i.e., changing values)

To be adept at responding to these trends, the NRC must assess how the nature of its work will change over time and how these changes will impact its human resource requirements. The NRC recognizes the growing need for clear alignment between its workforce capacity and organizational vision, mission, strategies, goals, culture and values. As such, the proposed NRC SWP process is aimed at determining the workforce capacity needed to achieve and sustain success, and creating specific workforce management strategies for maintaining the capacity of the NRC workforce.

Critical Success Factors. There are many factors that impact the success of strategic workforce planning efforts. Several consistently cited by industry and public sector entities that have conducted such initiatives are highlighted below:

- *Visible top management support and commitment* to workforce planning, coupled with mid-level management's facilitation of the planning process and implementation of results
- *A "Process Manager" who has substantive knowledge of workforce planning concepts*, including design and implementation of competency-based systems and alternative strategies for filling human resource requirements
- *Sufficient levels of technology support* for accurate, consistent and real-time storage, tracking, management and reporting of business needs, knowledge and skill requirements, workforce characteristics and staffing strategies
- *A comprehensive communications strategy* for informing the workforce about the planning process and its results so they understand its value and support the initiative
- *Recognition of the impact of workforce planning on employees*, particularly as it relates to shifts in the work performed or changes to the nature and composition of the workforce
- *Commitment to retaining competent and motivated employees* from the existing workforce, and providing training and development opportunities to those who need to enhance their skills sets

Each of these factors will be addressed in the proposed NRC SWP process to enhance the likelihood of a successful strategic workforce planning implementation.

Realizing the Benefits. Strategic workforce planning is an integral tool that will frame the structure and composition of the NRC workforce to effectively support the NRC vision, mission, strategy and business requirements. Examples of tangible benefits from the workforce planning process include:

- T Allowing NRC managers to *strategically identify and plan for the most appropriate source* for filling resource needs (e.g., when is it suitable to “fill the skill” with an employee vice a contractor?)
- T *Identifying skills shortages and surpluses before they are realized*, decreasing the likelihood that such events will negatively impact mission achievement
- T Guiding leadership and managerial *decision-making on workforce investments* relative to budgetary resources, ensuring the ability to effectively support the mission
- T Enabling NRC managers to *rapidly respond as business requirements change*, migrating personnel across jobs or work roles as appropriate
- T Allowing NRC managers and supervisors to *plan for strategic staff utilization*, providing NRC employees with focused assignments based on the required skills
- T Assisting NRC managers and supervisors in *defining or refining expectations for the capabilities employees should develop or enhance* to successfully contribute to organizational outcomes

The proposed SWP process includes steps designed to attain the specific benefits NRC leadership and other key stakeholders hope to realize.

2.0 Objective and Scope

Objective. The intended objective of the proposed SWP process is to ensure that the “net scientific, engineering and technical capacity” of the NRC is maintained. The process, as proposed in this document, includes provisions for:

- *Gathering stakeholder “data requirements”* to support human resources decisions, processes or actions relative to business requirements
- *Identifying and examining available NRC data* that should be incorporated into the workforce planning process
- *Incorporating proven practices* as employed or developed in other government agencies, in the private sector and within the NRC, as appropriate
- *Identifying and testing multiple assessment approaches* for evaluating worker capacity relative to business requirements
- *Assessing workforce demographics* in relation to the scientific, engineering and technical capacity resident in the workforce
- *Scanning the external labor supply* to determine availability of skilled resources to complement the NRC’s internal workforce capacity
- *Identifying multiple sourcing strategies* for responding to capacity gaps and surpluses in the NRC workforce
- *Making recommendations on technology support tool(s)*, such as software packages, to enable workforce planning activities

Additional provisions can be addressed in the process as they are identified during the review of this plan of action.

Scope. The scope of the proposed SWP process will be driven by the types of human resources decisions to be made using workforce planning information. Identified stakeholder decision-making needs will provide guidance as to the specific data elements (e.g., knowledge and skill assessments/ratings, experience levels, certifications) that should be captured during the planning process. In turn, data required to support human resources decision-making will drive the specific activities to be performed during the data collection and analysis phases of the planning process.

3.0 Process Methodology

Specific processes for conducting strategic workforce planning vary based on an organization’s size and complexity and on the desired outcomes and outputs of the planning process. Although there are differences in process, all approaches to strategic workforce planning uniformly share four basic components:



Phase I - Describing the “Demand”

Involves documenting present and future mission and business requirements in the form of activities performed, products produced and services delivered to stakeholders and customers



Phase II - Defining Capacity Requirements

Involves identifying knowledge, skills and other attributes (e.g., work tools and technologies) needed for the organization to successfully achieve mission and business requirements



Phase III - Quantifying the Labor Supply

Involves determining availability of human resources to support present and future business requirements through an evaluation of the level of preparedness of the internal workforce and an examination of the external labor supply



Phase IV - Designing Workforce Strategies

Involves identifying human resources gaps and surpluses and developing sourcing strategies for bridging the gap between the baseline workforce capacity and that needed to fulfill present and future mission requirements

The four components described above will provide the framework upon which the NRC SWP process is implemented. A more detailed discussion of major activities comprising each phase is provided on the following pages.

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Phase I – Describing the “Demand”

The most critical component to the success of workforce planning involves gaining a comprehensive understanding of the NRC vision, mission, values, strategic goals, business objectives and culture. This includes an awareness of potential external and internal impacts on NRC business requirements such as new legislation, policy changes, adjudicatory decisions, changes in licensing or inspection activities or changes in procedures and work processes. Moving down one level, workforce planning involves identifying primary work drivers such as planned outcomes and outputs to be achieved, products to be produced and services to be delivered now and throughout the planning horizon. In the NRC’s case, these drivers are routinely identified as part of the PBPM process and are defined in the NRC Strategic, Performance and operating plans (i.e., most of the information for Phase I analysis is reflected in the NRC Strategic, Performance and in office operating plans).

Key Activities:

- Survey/convene stakeholders representing each NRC strategic arena and/or key stakeholders within major NRC organizational units to:
 - Affirm/identify key NRC business outcomes and outputs with potential strategic workforce planning implications

Phase II – Defining Capacity Requirements

After verifying business requirements, the next step is to determine the workforce capacity required to effectively deliver on these requirements. Workforce capacity includes the knowledge, skills and other attributes employees need to successfully perform in various work roles. Capacity can also include proficiency with performance support tools and technologies. In addition, capacity can be linked to selected demographic characteristics such as the need for educational credentials or professional licenses and certifications.

Key Activities:

- Review available data on workforce capacity including existing knowledge, skills and competency information within the NRC organization and gathered from organizations with missions comparable to the NRC
 - Populate the proposed NRC workforce capacity model using:
 - Occupation & Position Information (e.g., Occupational Series Codes, Position Titles)
 - Employee Information (e.g., Knowledge, Skills & Other Attributes; Technology Proficiency; Level of Education, Certifications, Licenses)
- Conduct working session with major NRC organizational units to review preliminary NRC workforce capacity content

- Conduct working session with stakeholders representing each NRC strategic arena to review preliminary NRC workforce capacity content
- Finalize NRC workforce capacity content based on input from stakeholder sessions

Phase III – Quantifying the Labor Supply

Once NRC business and workforce capacity requirements are documented, the next step is to develop a profile of the current NRC workforce. This includes a comparative analysis between internal and external demographics trends (e.g., data regarding number of entrants, diversity statistics, turnover rates and retirement trends).

Key Activities – Internal Labor Supply

- Identify NRC personnel databases (e.g., in the Office of Human Resources; in NRC offices) that can provide demographic or skills information on the NRC workforce
- Conduct a data run on NRC personnel databases to formulate workforce demographic trends (e.g., retirement patterns)
- Develop and administer a survey instrument to gather capacity information (e.g., knowledge, skills and other attributes) not available via existing sources from NRC staff
- Validate employee-reported information via a supervisory review and make adjustments to the data as necessary
- Integrate employee-provided information with demographic data obtained from NRC-maintained systems
- Document trends on the structure, composition and stability of the NRC workforce (i.e., a workforce baseline)

Key Activities – External Labor Supply:

- Identify existing sources of external labor supply information (e.g., Bureau of Labor Statistics, universities, Oak Ridge, National Academy of Sciences, private sector)
- Identify trends in the external labor market relative to skills sets of interest to the NRC

Key Activities – Integrating Internal and External Labor Market Information:

- Meet with appropriate NRC stakeholders to review the NRC workforce baseline and discuss the interpretation of trends surrounding the external labor market

Phase IV – Designing Workforce Strategies

Once work and workforce requirements are documented and the existing NRC workforce profile developed, the next step is to compare the NRC’s business needs with its workforce capacity to identify existing and potential resource gaps and surpluses. A resource gap is identified when the volume of resources or types of skills sets in the current workforce is not sufficient to meet NRC business requirements (i.e., demand exceeds supply). A resource surplus is identified when resources or skills sets are no longer needed or needed in lesser quantity when compared to NRC business requirements (i.e., supply exceeds demand). Once resource gaps and surpluses are identified, the next step in the planning process involves reviewing and selecting sourcing strategies for closing the gaps and for minimizing or eliminating surpluses.

Key Activities – Defining the Gaps:

- Develop a standardized approach for conducting workforce gap analysis. For example:
 - Assess the absence or limited supply of mission critical skills in present composition of NRC workforce
 - Assess the expected losses in NRC workforce around mission critical skills (e.g., anticipated retirements, voluntary/involuntary attrition)
 - Assess the impact of external labor market trends on resource supply (e.g., expected percentage of entrants into mission-critical occupations)
- Conduct a workforce gap analysis by NRC organizational unit or, as appropriate, enterprise-wide
- Share the gap analysis results with appropriate stakeholders

Key Activities – Identifying Sourcing Strategies:

- Develop alternative sourcing strategy recommendations for managing NRC workforce gaps and surpluses. For example:
 - Recruitment
 - Learning and Development
 - Outsourcing
 - Re-training
 - Alliances & Consortia Participation
 - Succession Planning
 - Re-deployment
 - Organizational Restructuring

- Meet with NRC stakeholders (e.g., management, employee representatives) to review recommended sourcing strategies and select those that are most appropriate for closing resource gaps
- Document sourcing strategies that align with existing NRC human resource initiatives (e.g., recruitment, training) and integrate additional sourcing strategies as required

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In summary, the proposed strategic workforce planning methodology would document the NRC mission, business and associated workforce capacity requirements over a five-year planning horizon. The methodology will profile the existing workforce relative to capacity requirements and target gaps and surpluses in the workforce's capacity to support business requirements. Most importantly, the methodology will document strategies appropriate for NRC use in moving toward its desired workforce profile for meeting today's and tomorrow's vision and mission.

4.0 Enabling Technology

Overview. The staff will evaluate Commercial-Off-The-Shelf (COTS) technologies for their applicability in supporting implementation and management of the SWP process. The evaluation will emphasize identifying a software package that meets stakeholder needs for workforce planning information and is compatible with NRC legacy systems and those planned for implementation (i.e., PeopleSoft).

The goal is to select a proven, commercially available technology solution that can be implemented with no or minimal customization. Alternatively, if commercially available solutions do not adequately meet requirements as defined by the stakeholders, we will consider other technology solutions. This may require changes in process design and/or stakeholder expectations.

5.0 Implementation Strategy and Time Frame

A phased implementation approach is planned to allow sufficient time to evaluate the success of the initial phases in meeting stakeholder needs and to make modifications and enhancements to the process based on lessons learned. The phased implementation is also intended to allow sufficient time for the selection and testing of an appropriate technology solution. The technology solution will synthesize available demographic information on the NRC workforce with data provided by employees and their supervisors on workforce knowledge, skills and other relevant attributes. This phased implementation affords the following:

1. The opportunity to **introduce the proposed process to NRC stakeholders**, to assess whether its design will effectively support workforce planning needs, and to ensure integration with related efforts presently under-way in NRC.
2. The opportunity to **test the proposed workforce planning process** on small segments of the NRC organization. This will enable NRC leadership, line managers and human resources staff to evaluate the success of the process, identify and share lessons learned and introduce refinements prior to follow-on phased implementation.
3. The opportunity to **align workforce planning activities with strategic and business planning** via the NRC PBPM process. Appropriate sequencing of activities will be critical to the utility of the information derived via the process.

Each of these factors will influence the proposed speed and pace of the SWP process rollout.

Introduce the Process. This plan of action is intended to introduce the proposed NRC SWP process, and the initial and follow-on implementation phases to key stakeholders for review and consideration. The workforce planning process is intended to be dynamic in nature. Although identification of business outcomes and associated workforce capacity requirements are events that will occur annually at a given point in the PBPM cycle, employees will be given the opportunity to regularly update their capacity profiles. These profiles will enable employees to report on their present level of knowledge, skills and other attributes relative to the current role they play in the NRC organization. Since capacity profiles are linked to or driven by the demands of the agency, as an employee's capacity (e.g., skills, proficiency with technology) changes over the course of the year, such changes can be reflected and compared to agency needs to support operational planning activities.

The Initial Phase. In this phase, the proposed SWP process will be tested. The process will include surveying key managers in Nuclear Reactor Regulation (NRR), Nuclear Material Safety

and Safeguards (NMSS) and Nuclear Regulatory Research (RES) to identify potential strategic workforce planning and core competency issues to be considered in the FY 2004 PBPM process. The process will also include verifying business drivers for these offices, as documented in the NRC Strategic, Performance and operating plans, which may have strategic workforce planning implications (i.e., core competency gaps). The initial phase will also involve selection of an automated workforce planning tool that will capture workforce capacity information and perform gap analyses. The emphasis of the initial phase is to ensure that:

- T **Critical scientific, engineering and technical skills can be identified at the appropriate level and linked to agency needs, both current and future**
- T **Employees in participating units can self-evaluate or assess their capacity to perform relative to the knowledge, skills and other attributes identified**
- T **Manager and supervisors can confirm capacity results**
- T **Gaps can be accurately and consistently defined, and strategies identified for mitigating, eliminating or minimizing them**
- T **Appropriate stakeholders can evaluate the process to determine effectiveness in generating resource planning information that proves useful in making human resource decisions and during budget formulation**
- T **Based on the results of initial implementation, the process can be modified as necessary prior to use in the other NRC organizational units. The focus of this phase is to test the proposed planning approach(es) on a pre-defined segment of the NRC workforce**

Follow-on Phased Implementation. Full-scale implementation of the NRC SWP process will occur in phases over time. Each follow-on phase will add additional NRC organizational units to the process. Similar to the approach in the initial phase, supervisors, managers and human resource experts will identify or confirm the present and future mission and business requirements including key activities, products and services, as well as define the needed workforce capacity. This includes an available versus needed assessment (gap analysis) of knowledge, skills and/or competencies; proficiency with work related tools and technologies; and educational or professional credentials, licenses and certifications. Each follow-on phase will involve identifying human resources gaps and surpluses, and developing strategies for addressing identified human resources needs.

Time Frame. The time frame for the conduct of the initial phase is February 1, 2001 through September 30, 2001. The schedule for the follow-on phased implementation will be developed following an assessment of the effectiveness and efficiency of the process along the lines described below in Section 8, Performance Standards.

6.0 Resource Requirements

The staff resources required for process implementation, their proposed role and the estimated time commitment to carry out implementation activities are reflected in the following chart:

| Key Roles in SWP Process Implementation | | |
|---|---|---|
| Roles | Human Resources | Time Commitment ² |
| Workforce Planning Sponsor | <ul style="list-style-type: none"> Executive Director for Operations | <ul style="list-style-type: none"> Responsibilities throughout the year limited to leadership support and communications |
| Workforce Planning Process Owner | <ul style="list-style-type: none"> Director, Office of Human Resources | <ul style="list-style-type: none"> Focus on SWP as a top priority activity Ongoing leadership responsibility for SWP process (in addition to existing HR responsibilities) |
| Workforce Planning Process Manager | Potential Leads: <ul style="list-style-type: none"> TBD | Responsibility to: <ul style="list-style-type: none"> Design, implement, manager and coordinate SWP process Communicate/interface with stakeholders to assess process effectiveness |
| Workforce Planning and Program Subject Matter Experts & Operational Users | <ul style="list-style-type: none"> Executive Resources Board (ERB) Key NRC organizational units/functions and individual points of contact, such as Division Directors, Branch Chiefs and other Supervisors | <ul style="list-style-type: none"> SWP is an agenda item for discussion at 10 ERB meetings per year <i>Selected</i> NRC managers can expect to spend approximately 4-8 hours annually participating in focus groups to identify future workforce requirements and sourcing solutions for closing workforce gaps Participating NRC supervisors can expect to spend approximately 8-16 hours a year reviewing employee self-assessments for accuracy and consistency <u>and</u> using workforce planning data to project HR requirements |
| NRC Workforce | <ul style="list-style-type: none"> NRC Employees | <ul style="list-style-type: none"> NRC employees can expect to spend approximately one hour completing a self-assessment annually |
| Workforce Planning Staff | <ul style="list-style-type: none"> TBD | <ul style="list-style-type: none"> Staff can expect to spend about 75% of their time on development and maintenance of the SWP |

² The time commitments are an approximation based on limited research at other government agencies.

7.0 Communications Strategy

A clear communications strategy will be developed to articulate the business case for strategic workforce planning to NRC stakeholders, leaders, managers, supervisors and employees. The objective of a communications plan for strategic workforce planning will be to build awareness throughout the NRC by encouraging collective ownership of the workforce planning process and its outcomes, and by reliably and consistently communicating progress throughout process implementation.

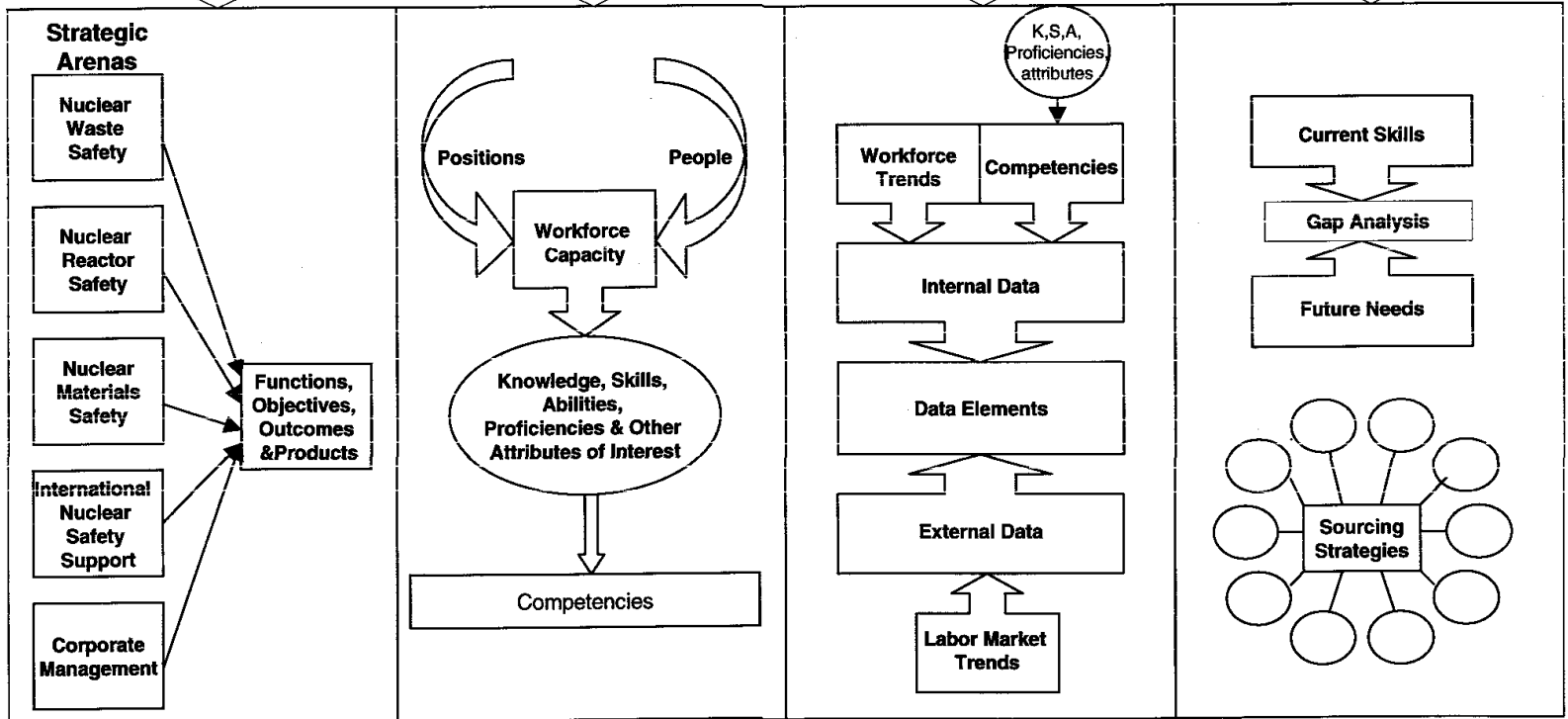
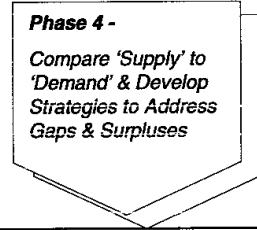
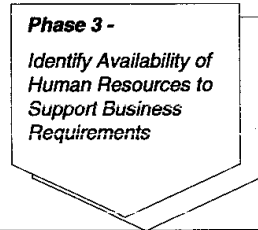
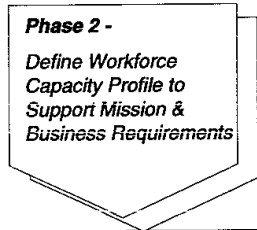
8.0 Performance Standards

The NRC SWP process will incorporate the use of performance standards that can be tracked to indicate whether the process is achieving the desired results, to determine how well each of the process components is performing and to pinpoint, where possible, adjustments that may be needed.

It is important that input is gathered on the factors that NRC leadership considers critical in measuring the success of the SWP process. During the initial phase of the workforce planning process, NRC leadership will develop critical success factors and performance standards to be used during subsequent phases of implementation.

APPENDIX A

Strategic Workforce Planning Process Diagram



APPENDIX B

Estimated Costs

Overview. The estimated costs for the design and execution of the NRC SWP process will be based on incremental process implementation. The scale of the specific activities to be conducted will directly impact estimated costs. Estimated costs are provided for an initial-phase (FY01) and full-scale implementation of the SWP process through FY05.

NRC Labor Costs. The estimated time commitment for the NRC is based on the level of effort necessary for the successful implementation of strategic workforce planning. The following table describes estimated staff time commitments over the five-year rollout of strategic workforce planning at NRC. These time commitment estimates are approximations only and may vary during actual implementation.

| Fiscal Year | NRC FTE Staffyears | |
|----------------------|--------------------|-----------|
| | HR | Other |
| Initial Phase FY2001 | 1.5 | 1.0 |
| FY2002 | 2.5 | 2.0 – 3.0 |
| FY2003 | 2.5 | 3.0 – 4.0 |
| FY2004 | 2.5 | 3.0 – 4.0 |
| FY2005 | 2.5 | 3.0 – 4.0 |

NRC Technology Costs. The estimated costs associated with evaluating the technologies of the various vendor candidates and of integrating the technology(ies) selected will be estimated during the initial phase of SWP process implementation. The initial software acquisitions costs have been included in the estimates on the following page.

Costs of Contracting Support. Contractors will provide consulting and implementation services to the NRC to develop, test, and implement the NRC SWP process. The estimated costs for contracted support for the initial phase of development and implementation are based on GSA HR Schedule rates for Year One and Year Two of the contract.

The follow-on phased implementation consists of using the same approach as the initial phase, but implementing it on a wider-scale

basis. Therefore, contractor support can be expected to decrease over the five-year implementation, as the SWP process becomes more sophisticated per fiscal year implementation.

The following table describes **estimated** contractor costs over the five-year rollout of strategic workforce planning at NRC. The estimates are based on assumptions about client needs and contractor support. These cost estimates are approximations only and may vary during actual implementation.

| Fiscal Year | Contractor Total |
|-----------------------------|-------------------------|
| Initial Phase FY2001 | \$650,000 |
| FY2002 | \$540,000 |
| FY2003 | \$480,000 |
| FY2004 | \$320,000 |
| FY2005 | \$320,000 |
| Total | \$2,360,000 |