Attachment 2

NUCLEAR REGULATORY COMMISSION

DRAFT
(June 2, 2000)

FY 2000 - 2005 STRATEGIC PLAN APPENDIX

VOLUME 2, PART 2

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TABLE OF CONTENTS

Nuclear Reactor Safety 1

Nuclear Materials Safety 17

Nuclear Waste Safety 35

International Nuclear Safety Support 53

Corporate Management Strategies 61

Links to other Planning Documents, Program Evaluations, and Management Challenges 72

Crosscutting Functions with Other Government Agencies 80

Strategic Plan Component Schematic 90

Listing of Referenced Documents 91

Endnotes 93

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NUCLEAR REACTOR SAFETY

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.

This strategic goal represents the focus of the Nuclear Reactor Safety arena. The goal is to achieve our statutory mission to ensure that civilian nuclear power reactors, as well as non-power reactors, are operating in a manner that adequately protects public health and safety and the environment and that safeguards special nuclear material used in reactors. The NRC regulates 103 civilian nuclear power reactors and 37 non-power reactors.

Under Atomic Energy Commission (AEC) and NRC case law, reasonable assurance of adequate protection of public health and safety is, as a general matter, defined by the Commission's health and safety regulations themselves. That is, unless otherwise provided, there is reasonable assurance of adequate protection of public health and safety when the applicant or licensee demonstrates compliance with the Commission's regulations. The regulations were established using defense-in-depth principles and conservative practices that provide a degree of margin to unsafe levels.

The collective efforts of the NRC and the nuclear industry are needed to maintain safety. The NRC licensees[1] have the responsibility to safely design, construct, and operate civilian nuclear reactors. Regulatory oversight of licensee safety is the responsibility of the NRC. Thus, safe performance reflects the results of the collective efforts of the NRC and the nuclear industry.

We will use the following **measures**[2] to assess results in achieving the Nuclear Reactor Safety Strategic Goal:

- *No nuclear reactor accidents.*[3]
- *No deaths resulting from acute radiation exposures from nuclear reactors.*
- *No events at nuclear reactors resulting in significant radiation exposures.*[4]
- *No radiological sabotages at nuclear reactors.*
- *No events that result in releases of radioactive material from nuclear reactors causing an adverse impact*[5] *on the environment.*

These measures represent abnormal occurrences that are reported to Congress and that are critical indicators of whether the strategic goal has been realized. Any occurrence would trigger a self-assessment of the NRC's Nuclear Reactor Safety activities to determine if changes are needed.

The Commission recognizes the risks to the public from nuclear power plant operation. Therefore, in 1986, it promulgated the Safety Goal Policy (51 FR 28044) which expresses an acceptable level of the risk from nuclear power plant operation by comparison with other societal risks. Notwithstanding that risk is inherent in reactor operations, the first three measures are being used as indications of whether we are achieving the strategic goal of preventing radiation-related deaths or illnesses. The fourth measure indicates whether radiological sabotages have occurred since such acts could result in core damage, radioactive releases, and significant radiation exposures. Lastly, we will measure how well the environment is protected by whether offsite releases have occurred that caused an adverse impact on the environment.

NUCLEAR REACTOR SAFETY

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

Maintaining safety, protection of the environment, and the common defense and security is the preeminent performance goal and takes precedence over all other performance goals. In working toward this goal, the NRC will apply its Principles of Good Regulation. Principles applicable to this goal are related to independence, openness, efficiency, regulatory clarity, and reliability.

The safety performance of the nuclear power industry has improved substantially over the past ten years, and nuclear reactors, collectively, are operating above acceptable safety levels consistent with the agency's Safety Goal Policy. The NRC believes this level will be maintained. If substantial safety improvements are identified, additional requirements should only be imposed consistent with the Commission's Backfit Rule (10 CFR 50.109). Allowing small-risk increases[6] may be acceptable when there is sufficient conservatism and reasonable assurance that sufficient defense-in-depth and safety margins are present. Small-risk changes that reduce unnecessary burden will allow more efficient use of licensee and the NRC resources as well as bring into focus those areas that are more critical to the safety of the public and environment. We will use the body of domestic and international knowledge, experience, and research to determine when small risk increases are acceptable.

The NRC licensees will continue to have the primary role in maintaining safety and are expected to identify, through mechanisms such as operating experience feedback and integrated risk assessments, the design and operational aspect of their plants that should be enhanced to maintain acceptable safety performance levels. For nuclear power plants to continue operating, safety performance must be at or above acceptable levels. The NRC will take action to improve safety performance before it falls below acceptable levels and will require the shutdown of plants when their safety performance is identified as unacceptable. This principle is inherent in the NRC's new oversight process.

The NRC will employ the following **strategies** to maintain safety, the protection of the environment, and promote the common defense and security:

- *We will sharpen our focus on safety to include a transition to a revised NRC reactor oversight program for our inspection, assessment, and enforcement activities.*

  We will increase the focus of inspections on those activities with the greatest potential impact on safety through the new reactor oversight program. Inspection results will be evaluated routinely to determine the risk importance of the findings. These inspection results will be used along with pre-defined performance indicators (e.g., safety system unavailability) to provide an assessment of a licensee's safety performance. This assessment process is expected to be more objective, predictable, and risk-informed than the method previously in place. Allegations regarding licensee performance will be appropriately and objectively addressed in a timely manner. Allegations of potential wrongdoing will be thoroughly and objectively investigated in a timely manner. Enforcement sanctions for violations of regulatory requirements will be commensurate with the safety significance. The enforcement program is also being changed to be better linked to the safety significance of inspection findings and to emphasize the importance of the licensee's corrective action program. The improved safety performance of the nuclear industry is reflected in this strategy as discussed in the first two Major External Factors. We will coordinate with DOL and DOJ regarding discrimination and civil enforcement actions as reflected in the section on Cross-cutting Functions With Other Government Agencies.

NUCLEAR REACTOR SAFETY

- *We will respond to operational events involving potential safety or safeguards consequences.*

  We will provide timely, accurate, and complete assessments of events by evaluating recommendations of the licensees for actions to protect the public and by coordinating with other federal agencies, state and local governments, and the licensee. We will maintain and operate a continuously staffed Incident Response Operations Center to support the agency in responding to operational events. We will conduct periodic exercises to ensure that response organizations are proficient and experienced and that staff are trained to respond to operational events according to their safety significance. We will also maintain incident investigation capabilities. We will work closely with FEMA, DOE, EPA, USDA, HHS, NOAA, and State Governments to maintain incident response capabilities and during actual incident response under the Federal Radiological Emergency Response Plan, and with FBI and CIA for response to a suspected terrorist or criminal initiated threat or incident, as reflected in the section on Cross-cutting Functions With Other Government Agencies.

- *We will evaluate operating experience and the results of risk assessments for safety implications.*

  We will evaluate the risk significance of operational events and trends in data in conjunction with risk assessments so that safety vulnerabilities can be identified, prioritized, communicated, and resolved on a timely basis. Operational experience will also be used by the staff to improve our regulatory activities including licensing, inspection, and risk assessments. We will also review operating experience of foreign plants for safety insights. We will monitor for potential adverse effects on nuclear safety from the economic deregulation and restructuring of the electric power industry.

- *We will identify, evaluate, and resolve safety issues, including age-related degradation, and ensure that an independent technical basis exists to review licensee submittals to ensure that safety is maintained.*

  We will conduct research to improve our knowledge in areas where uncertainties in our knowledge exist and may be significant to risk and where safety margins are not well characterized. Priorities for these activities will consider risk significance and cost/benefit analyses. For example, we will evaluate potential degradation of plant systems as they age and ensure that data and methods, including international lessons learned, are available to evaluate this degradation and the effectiveness of corrective strategies. We will continue our international efforts to collect and evaluate information that contributes to the efficient resolution of domestic safety issues. We will conduct research in cooperation with domestic and international entities to ensure that an adequate independent technical basis, as well as related codes, standards, and methods, exists to review and approve licensee or industry proposals. This will be especially important as new technologies are introduced. For complex technical issues, we will develop a better understanding of existing safety margins, resulting in more informed regulatory decisions. We will maintain our program for generic safety issue prioritization based on consideration of potential risk reduction and cost.

NUCLEAR REACTOR SAFETY

- W*e will ensure that changes to operating licenses and exemptions to regulations maintain safety and meet regulatory requirements.*

  We will issue license amendments and approve license transfers for nuclear reactors only after determining that there is reasonable assurance that the authorized activities can be conducted without endangering the health and safety of the public and the environment. This includes emergency planning, physical protection, quality assurance, training, financial assurance, and other requirements. We will give priority to those licensing actions and exemptions that provide the greatest safety benefit to the public. We will encourage applicants, vendors, and others to inform the NRC at the earliest opportunity of planned future reactor activities so that we will be prepared to respond.

- *We will ensure that safety is maintained as licenses are renewed by ensuring that aging effects will be adequately managed and that the licensing basis related to the present plant design and operation will be maintained.*

  We will authorize license renewal only after we have determined that aging effects have been and are being adequately managed. We will ensure that the licensing basis related to the present plant design and operation will be maintained throughout the period of extended operation. We will perform inspections to support the review of license renewal applications by verifying the acceptability of licensee aging management control processes.

- *We will maintain safety by ensuring that operator licenses are issued and renewed only to qualified individuals.*

  We will maintain an operator licensing program for the issuance and renewal of licenses to operators and senior operators of nuclear reactors. The NRC licenses will only be issued to individuals following a finding of adequate health and successful demonstration of their ability to operate a facility competently and safely, and additionally, in the case of senior operators, a demonstrated knowledge of directing the licensed activities of licensed operators competently and safely.

- *We will continue to develop and incrementally use risk-informed and, where appropriate, less prescriptive performance-based regulatory approaches to maintain safety*.

  Stated succinctly, risk-informed, performance-based regulation is an approach in which insights, engineering analysis and judgment, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based on risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decision-making.[7] As part of our agency-wide Risk-Informed Regulation Implementation Plan, we will implement an incremental approach to risk-informing the reactor oversight process and risk-informing the scope of 10 CFR Part 50. We will also assess the technical requirements associated with 10 CFR Part 50 and make changes to ensure that safety is maintained by sustaining our regulatory focus on plant equipment and technical requirements that contribute to nuclear reactor safety. We will consider and use international experience in developing approaches to risk-inform our regulations. Mindful of the limitations in risk assessment methods, we will improve these methods and tools in areas where there needs to be a better understanding

of contribution to plant risk through research and through cooperative programs with international partners.

The NRC will use the following **measures**[2] to assess results in our efforts to maintain safety, and protection of the environment, and promote the common defense and security:

- *No more than one event per year identified as a significant precursor of a nuclear accident.*[8]
- *No statistically significant adverse industry trends in safety performance.*[9]
- *No events resulting in radiation overexposures*[10] *from nuclear reactors that exceed applicable regulatory limits.*
- *No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.*[11]
- *No breakdowns of physical security that significantly weaken the protection against radiological sabotage or theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria.*

These measures represent lower thresholds than the strategic measures. Accidents that involve substantial core damage or a release of radio nuclides can be minimized by maintaining a low frequency of events that have the potential to lead to a nuclear reactor accident or large early release; therefore, we will measure such precursor events. To ensure that the nuclear industry as a whole is maintaining safety, we will monitor industry performance to identify any adverse trends. To prevent radiation-related deaths and illnesses, we will measure the number of radiation overexposures. We can measure our effectiveness in protecting the environment by monitoring radiological releases and by preventing radiological sabotage or theft or diversion of nuclear materials. If the metrics are not met, the agency will review its regulatory practices and licensee actions to determine whether corrective action is necessary to maintain safety.

PERFORMANCE GOAL: Increase public confidence.

The NRC views building and maintaining public trust and confidence that the NRC is carrying out its mission as an important performance goal for the agency. To reach this goal, the NRC must be viewed as an independent, open, efficient, clear and reliable regulator. This will be accomplished by providing our stakeholders with clear and accurate information about, and a meaningful role, in our regulatory programs. The NRC desires that diverse stakeholder groups (i.e., general public, Congress, NRC licensees, other Federal agencies, States, Indian Tribes, local governments, industry, industry workers, technical societies, the international community, and citizen groups) increasingly recognize that NRC actions assure that public health and safety, the common defense and security, and the environment are, and will remain, adequately protected from hazards resulting from the use of nuclear reactors.

Public concern about nuclear safety has at times been high, particularly for the public who live near nuclear facilities. The methods provided by the NRC for members of the public to express their views have been perceived by some members of the public to be insufficient in some circumstances. This goal reflects the NRC's desire to improve in this area, which would include explaining the NRC's roles and responsibilities and how public concerns are considered.

NUCLEAR REACTOR SAFETY

This performance goal stems from the recognition that the NRC must be candid with the public about reactor safety incidents and issues, provide opportunities for meaningful public participation, and demonstrate through our performance that we are capable, independent, and objective regulators. It also stems from recognition that while the public may not always agree with NRC actions, public confidence in the NRC is enhanced when the agency consistently carries out its mission in a thorough, disciplined, and timely manner.

The NRC will employ the following **strategies** to increase public confidence:

- *We will make public participation in the regulatory process more accessible. We will listen to the public's concerns and involve our stakeholders more fully in the regulatory process.*

  One of the attributes of strong, fair regulation of the nuclear industry involves consistent and timely public involvement. The agency recognizes the public interest and concern in the proper regulation of nuclear activities, and recognizes its responsibility to provide opportunities for meaningful public interaction and involvement. We will listen to, and be responsive to, requests, inquiries, and concerns from the public. We will consider public views in planning changes and making decisions relating to our practices, rules, and processes through holding open meetings in the vicinity of the nuclear facilities; providing adequate notice of meetings; developing communications plans for major regulatory activities; and holding workshops.

- *We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.*

  Public confidence in the NRC will be enhanced if information is presented in a manner that is easily understood and placed in its proper safety context. We will respond to the requests, inquiries, and concerns of our stakeholders in a timely, courteous, and professional manner. Whenever possible, we will use quick, personalized forms of contact with our stakeholders. Our communications with the public will be designed to foster greater understanding of the NRC's role in protecting public health and safety and thereby enhancing public confidence in our regulatory program. The information we disseminate, both domestic and international, will be clear, technically sound, accurate, reliable, objective, and timely. We will take full advantage of the Internet and new technology for information dissemination. We will protect the private, proprietary, and classified nature of information. All stakeholders should be able to rely on our statements and information.

- *We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.*

  The public's confidence that nuclear power is safe is influenced by the public's perception of the NRC as a well-managed, independent regulator. As part of implementing a Planning, Budgeting, and Performance Management (PBPM) process, we will prepare a Strategic Plan that focuses on desired outcomes and provides visibility to our goals and measures. We will manage to outcomes and establish goals to measure and report on our performance. We will use performance feedback in our planning process, and identify the work necessary to produce the desired outcomes. We will meet our commitments in a predictable and timely manner.

NUCLEAR REACTOR SAFETY

- *We will report on the performance of nuclear power facilities in an open and objective manner.*

  Public confidence is influenced by information about the operation of nuclear facilities. The NRC will collect information about the safety performance of nuclear reactors and report that information objectively to the public. Where licensee performance is outside established criteria, the appropriate remedial action will be communicated to the public. The NRC will communicate to the public the resolution of generic safety issues. The NRC will also report on significant international events and will clearly describe any safety implications applicable to U.S. reactors.

- *We will continue to foster an environment in which safety issues can be openly identified without fear of retribution*.

  Public confidence is enhanced in an environment where safety issues can be raised and addressed without fear of retribution. Examples of how this strategy will be implemented include conducting the 10 CFR 2.206 petition process, responding to allegations and safety conscious work environment concerns, investigating alleged wrongdoing, and implementing the NRC's programs for Differing Professional Opinions and Generic Safety Issues. We will conduct a pilot program to solicit feedback from individuals raising safety issues to assess the NRC's effectiveness of handling of allegations.

We will use the following **measures** to assess the results in our efforts to increase public confidence:

- *Complete the milestones in the annual Performance Plan relating to collecting, analyzing, and trending information for measuring public confidence.*

- *Complete all of the public outreaches as scheduled in the annual Performance Plan.*

- *Complete the milestones specific to the agency allegation program effectiveness assessment plan as identified in the annual Performance Plan.*

- *Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206*[12] *within an average of 120 days.*[13]

The staff is increasing the number, and improving the quality, of its interactions with external stakeholders. We intend to take advantage of these interactions by requesting feedback from the stakeholders that participate in them. The staff believes that the combination of (1) being more pro-active in interacting with external stakeholders, (2) improving our interactions with these stakeholders, (3) improving our responsiveness to stakeholder concerns, and (4) systematically monitoring feedback will allow the staff to assess changes and trends in public confidence.

Public outreach was chosen as a performance measure for public confidence based upon NRC experience from well conducted public outreaches. In response, the need for communication plans is recognized in this Strategic Plan. This measure relies on the annual Performance Plan to identify the specific metrics that will be used in assessing results.

The future focus of the outreach effort for significant regulatory issues will be on keeping the public in the vicinity of the facility informed. The NRC will monitor plant specific activities for issues that meet significant regulatory issue definition. The process will ensure that appropriate outreach activities are being effectively initiated.

NUCLEAR REACTOR SAFETY

The agency is currently developing an agency allegation program effectiveness plan and has not yet identified the specific milestones to be completed during the years covered by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

The assumption that the public and other stakeholders will continue to provide substantial feedback to and interact with the NRC to improve our programs and processes is inherent in the above strategies and measures (See **Major External Factors**).

PERFORMANCE GOAL: Make NRC activities and decisions more effective, efficient, and realistic.

By maintaining the quality of the technical base for our decisions and by optimizing our regulatory activities, while maintaining safety and increasing public confidence, the NRC will ensure adequate protection of public health and safety and the environment. In working toward this performance goal, the NRC will apply its Principles of Good Regulation, which include improved efficiency, clarity, and reliability.

The cost of most NRC activities and decisions contribute to our licensees' operating and maintenance costs and ultimately are borne by the public. As the electric utility industry is in transition from a rate-regulated to a market-based business environment, the NRC must keep its costs reasonable and predictable by being effective, efficient, and realistic in activities and decision-making while continuing to maintain safety. Effectiveness, efficiency and realism are supported by the analysis and use of domestic and international research results and operational experience.

Feedback from stakeholders, self-assessments, international experience, and research results suggest that we should capitalize on advances in technology, implement efficiencies to improve our internal processes, and improve the quality and bases for decision-making. Feedback and our own analyses suggest that we should improve the consistency and predictability of our regulatory decisions by evolving to a more risk-informed and performance-based approach.

Effectiveness means performing the work necessary to support the NRC missions and goals in a thorough, disciplined, and timely manner. We must periodically challenge the value of NRC programs and activities based on how they contribute to the achievement of goals. Our business processes and regulatory decisions should reflect high standards of quality and be technically sound. Specific challenges in this regard involve (1) risk-informing the NRC's regulatory programs, (2) preparing to address evolving technologies and a changing regulatory environment including the deregulation of the electric utility industry, and (3) improving the predictability and consistency of agency decisions. We will also pursue international cooperative research in order to leverage our research resources, share research facilities whenever possible, and maintain our involvement in international committees and working groups that can best further our interests and minimize unnecessary duplication of effort.

Efficiency means conducting our work productively and on time. Efficiency can be enhanced by closely examining internal processes to learn from experience, reducing costs, and becoming more timely and predictable in delivery of services and decisions.

NUCLEAR REACTOR SAFETY

The NRC decisions can be made more realistic by eliminating excessive conservatism. Realism is supported by the analysis and use of risk information, domestic and international research results, and operational experience, and by improvements in the timeliness, consistency, and predictability of regulatory decisions and actions.

The NRC will employ the following **strategies** to make NRC activities and decisions more effective, efficient, and realistic:

- *We will use risk information to improve the effectiveness and efficiency of our activities and decisions.*

  As part of our agency-wide Risk-Informed Regulation Implementation Plan, we will conduct an integrated evaluation of risk information, inspection findings, operating experience, domestic and international research results, and cost data to identify ways to improve the effectiveness of NRC regulatory requirements, guidance, and processes. We will improve our ability to conduct effective plant safety assessments by employing risk-informed methods and data, including international experiences and approaches, which allow for early identification of changes in plant risk. We will develop the tools and information needed to support realistic (versus overly conservative) decision making. We will ensure that our regulatory focus is on those activities that pose the greatest risk to the public by using Probabilistic Risk Assessment (PRA) techniques and other approaches for differentiating between high- and low-risk activities. To improve efficiency in our use of risk information in our activities and decisions, we will leverage our knowledge of risk information through participation in international regulatory information exchanges and cooperative research programs. We will improve predictability and stability in our use of risk assessment methods through participation in national standards activities. Likewise, we will develop guidance to ensure that the application of risk assessment methods are suitable and that there is consistency in their use in our decision-making process.

- *We will make agency decisions based on technically sound and realistic information.*

  We will focus resources in those areas where important gaps in information still exist, where uncertainties exist about the significance to risk, and where the degree of conservatism in safety margins has not been quantified. Insights gained from the maturity of the nuclear industry will be recognized. We will maintain tools and methods used for decision-making that reflect recent scientific information and consider remaining uncertainties. We will ensure that our decisions on significant safety issues are supported by high-quality expertise, experiments, data, tools, and methods.

- *We will anticipate challenges posed by the introduction of new technologies and changing regulatory demands.*

  We will seek information, both domestic and international, about new technologies and will develop the knowledge and tools to evaluate the implications of these new technologies on the safety of nuclear reactors. In addition, we will participate in international regulatory information exchanges and cooperative research programs and will exchange information with universities to leverage resources and share research facilities. Mindful of our respective roles, we will seek opportunities to interact with and, where appropriate, initiate cooperative programs with industry

and the international community to minimize duplication. We will take these steps to ensure that our regulatory process does not impede the use of new technology to improve safety, increase productivity, or reduce costs.

- *We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.*

  We will explore opportunities to prioritize work. We also will systematically review key business processes and will document, standardize, measure, and track, and then analyze and improve the core processes that are critical to achieving our outcomes. We will seek opportunities for improvement and continue to apply lessons learned including that from the revised reactor oversight program and other risk-informed initiatives to improve the efficiency and effectiveness by bringing coherence among these programs. We will modify our regulatory processes to keep pace with the challenges associated with the economic deregulation of the electric power industry.

The NRC will use the following **measures** to assess results in our efforts to make NRC activities and decisions more effective, efficient, and realistic:

- *Complete those specific reactor milestones in the Risk-Informed Regulation Implementation Plan identified for completion in the annual Performance Plan.*

- *Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism.*

- *Complete all license renewal application reviews within 30 months.*

These measures are intended to help us assess our progress in improving the efficiency of the NRC's operations, increasing the effectiveness of our regulations, and improving realism in our regulatory decisions. Since risk-informed regulation will help improve both our efficiency and effectiveness, the first measure is intended to measure our success in moving toward risk-informed regulation in a timely and integrated manner. The agency is currently developing a Risk-Informed Regulation Implementation Plan and has not yet identified the specific milestones to be completed during the years cover by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis. The second measure addresses improvements that simplify, streamline, or improve the timeliness of regulatory processes. The measure of at least two key process improvements per year was selected in addition to the risk-informed measure to focus on other areas to seek improvement. The intent of the measure is to annually develop a list of key process improvements. The list will be prioritized based on the estimated effectiveness of the improvement and the completion of the two key process improvements would be tracked in the Performance Plan. The number of key processes, two, was chosen as a starting figure and as experience is gained, that metric may be revised.

The third measure addresses efficiency and effectiveness of our license renewal process which is a major agency initiative. The NRC will continue to gain experience and seek efficiencies where possible to

improve on future schedules. An understanding that there will be no major change in our understanding of issues affecting reactor safety and no unexpected significant increase in workload is inherent in these measures (See **Major External Factors**).

PERFORMANCE GOAL: Reduce unnecessary regulatory burden on stakeholders.

By reducing unnecessary regulatory burden, both the NRC and licensee resources may become available thus proving the opportunity to more effectively focus on safety issues. Unnecessary regulatory burden for NRC licensees may be defined as requirements that go beyond what is necessary and sufficient for providing reasonable assurance that public health and safety, the environment, and the common defense and security will be protected. For example, recent risk-informed initiatives for inspection and testing (ISI and IST) have allowed the licensees to more directly focus resources on the high risk significant systems and components, and reduce the attention on low risk-significant systems and components thereby contributing to safety and improving effectiveness. The costs associated with NRC activities can impact a variety of NRC stakeholders. This performance goal supports the NRC mission of ensuring adequate protection of public health and safety and the environment in the use of nuclear reactors. In working toward this goal, the NRC will apply its Principles of Good Regulation for being an independent, open, efficient, clear, and reliable regulator.

During the past 30 years, an ever-increasing body of technical knowledge and operational experience has been accumulated, both domestic and international, that allows for refinements and enhancements in NRC requirements and programs that can reduce unnecessary regulatory burden, while assuring maintenance of safety. The NRC believes that for some areas of NRC regulations and practices, the burden is not commensurate with the safety benefit. Not all of our requirements and programs have been updated to take into account these advancements, and thus they may not be as efficient and effective as possible. Reduction in unnecessary regulatory burden may contribute to the NRC effectiveness and efficiency by allowing more focus on safety and risk-significant issues. For example, the new reactor oversight process is allowing more effective staff focus on safety significant issues related to licensee performance.

Although regulation, by its nature, is a burden, we will impose on licensees only the necessary level of burden required to maintain safety. While our current performance goal is to reduce unnecessary regulatory burden, our long-range plans are to eliminate unnecessary regulatory burden to the extent feasible and cost-effective. We will pursue risk-informed and performance-based approaches, if justified, so that we can focus our attention on those areas of highest safety priority. We will make more realistic decisions through reducing excessive conservatism. The ever increasing body of domestic and international technical knowledge and operational experience will be used to refine and enhance NRC requirements and programs.

The NRC will employ the following **strategies** to reduce unnecessary regulatory burden on stakeholders:

- *We will utilize risk information and performance-based approaches to reduce unnecessary regulatory burden.*

  As part of our agency-wide Risk-Informed Regulation Implementation Plan, we will modify or delete regulations that provide little or no safety benefit. We will focus on less prescriptive and more risk-informed and performance-based regulatory approaches to provide licensees with flexibility in meeting regulatory requirements. The scope and priority of changes in our

regulatory processes will consider lessons learned from the revised reactor oversight program, stakeholder initiatives, international experience, and the cumulative effect on agency and licensee burden reduction.

- *We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.*

  As we execute our programs, we will make improvements to those aspects of our regulatory processes that have resulted in unnecessary regulatory burden to our stakeholders. In particular, we will evaluate the timeliness of actions and the necessity for multiple rounds of requests for additional information. As we make licensing decisions, conduct inspections, and take enforcement actions, we will consider the necessity of any additional burden imposed on licensees.

- *We will improve our reactor oversight program by redirecting resources from those areas less important to safety.*

  We are implementing a revised reactor oversight program that focuses NRC inspection resources on licensees with performance problems, reduces regulatory attention on licensees that perform well, evaluates violations of regulations in a predictable and consistent manner that reflects the safety impact of the violations, and provides the nuclear industry and public with timely, objective, and understandable assessments of plant performance.

- *We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.*

  We will encourage stakeholders to identify concerns with the NRC's regulatory programs, such as untimely, inadequate, or inappropriate staff actions, that have resulted in unnecessary cost. In addition, we will continue initiatives to interact with stakeholders to ensure a mutual understanding of existing regulatory requirements, guidance, or licensing decisions. Such interactions will provide opportunities for stakeholders and international regulatory bodies to identify problems and suggest improvements. The NRC will also be able to clarify or explain the basis for requirements, guidance, or licensing decisions, and why we believe they are necessary and sufficient. Where guidance is being developed or used for the first time, we will invite stakeholder feedback to identify aspects of the guidance that might be unclear, unnecessary, inflexible, or otherwise considered excessively burdensome. Where licensees are using new requirements or guidance for the first time, we will interact with them upon request to resolve implementation questions or technical issues.

We will use the following **measure** to assess our results in reducing unnecessary regulatory burden on stakeholders:

- *Complete those specific milestones to reduce unnecessary regulatory burden as identified in the annual Performance Plan.*

The objective of the forthcoming plan is to develop and implement a process for collecting data for identifying activities that have the greatest impact on reducing unnecessary regulatory burden while maintaining safety. The agency is currently developing milestones for reducing unnecessary burden

while maintaining safety and has not yet identified the specific milestones to be completed during the years covered by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. The NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

STATUTORY AUTHORITY

- Atomic Energy Act as amended
- Energy Reorganization Act as amended
- National Environmental Policy Act
- National Historic Preservation Act
- Endangered Species Act
- Clean Water Act
- Clean Air Act as amended
- Nuclear Non-Proliferation Act
- Energy Policy Act

MAJOR EXTERNAL FACTORS

We have identified several external factors that could significantly affect achievement of our Strategic or Performance Goals. However, as maintaining safety is our preeminent performance goal, we will devote and reprogram sufficient resources to maintain safety at the expense of the other performance goals. The following key assumptions have been made regarding the external factors:

- **There are no nuclear reactor accidents.** Based on the improved safety performance of the nuclear industry, we believe the probability of a nuclear reactor accident is very low and will remain at this level. Furthermore, we believe that the threat of terrorism has not changed and therefore the probability of sabotage initiating an accident at a nuclear power reactor will remain unchanged. The safe use of nuclear reactors is the responsibility of NRC licensees and regulatory oversight of licensees is the responsibility of the NRC. Therefore, we are not in direct control of this external factor. A nuclear reactor accident could affect our strategic goals through the potential for deaths, illnesses, or releases of radioactive material to the environment. In addition, an accident would impact our performance goals in that safety was not maintained and public confidence in the NRC pursuing its mission would wane. As a result, resources devoted to our other performance goals (e.g., increasing effectiveness, efficiency, and realism, and reducing unnecessary regulatory burden) would be redirected to evaluate NRC programs to determine the needed improvements in safety.

- **There are no significant adverse trends in the safety performance of nuclear reactors.** Over the past ten years, the safety performance of the collective nuclear industry has greatly improved. We believe this safety performance will remain stable, if not continue to improve. This, in part, has allowed the NRC to transition to a revised reactor oversight program for its inspection, assessment, and enforcement activities that is more risk-informed and performance-based. Beyond the baseline inspection program that all nuclear reactors will receive, additional NRC resources will be directed to those licensees with performance problems. Through the revised

reactor oversight program, we anticipate that adverse trends in the safety performance of nuclear reactors will be identified prior to becoming significant. Although not directly affecting our strategic goal, if significant adverse trends occur, our performance goals of maintaining safety and increasing public confidence may not be achieved. As a result, we would redirect resources to further assuring maintenance of safety, while continuing to develop and improve the revised reactor oversight program to meet our safety needs. This redirection would impact our ability to meet our other performance goals of increasing effectiveness, efficiency, and realism, and reducing unnecessary regulatory burden.

- **Economic deregulation and restructuring of the electric power industry will continue.** The pace of the deregulation of the electric power industry will increase and there is potential for considerable change in the nuclear power industry. Although we do not believe economic deregulation will affect our strategic goals, the effect of deregulation on maintaining nuclear safety is unclear. Deregulation could result in improvements to safety through standardization of best practices, maintenance of the status quo, or degradation of safety through excessive efforts to reduce costs. We will continue to rely upon our inspection, assessment, and enforcement programs as the primary tool for evaluating and ensuring safe operations at our licensed facilities. The potential impact of deregulation on our other performance goals of increasing public confidence, increasing effectiveness, efficiency, and realism, and reducing unnecessary regulatory burden is also unclear. The general public may have increased concerns about the safety of nuclear power plants in a more cost-competitive environment, thereby affecting our efforts to increase public confidence. On the other hand, to remain cost-competitive, licensees put pressure on the NRC to accelerate reform efforts to increase efficiency and effectiveness and reduce unnecessary regulatory burden. Large conglomerates may emerge from consolidation of the nuclear power industry and may necessitate changes in our management and organizational structure to effectively and efficiently regulate the industry.

- **The public and other stakeholders will continue to provide substantial feedback and interact with the NRC to improve our regulatory programs and processes.** Public and other stakeholder feedback and interaction are vital elements of the identification and implementation of needed improvements to our regulatory programs and processes. The NRC has historically focused its efforts and resulting regulations, programs, and processes with reactor safety as essentially the sole goal. However, over the past several years, we have aggressively pursued feedback from the public and other stakeholders on methods by which we can maintain safety, while increasing public confidence, reducing unnecessary regulatory burden, and making NRC activities and decisions more effective, efficient, and realistic. Without the public's and other stakeholders continued substantial participation in these efforts, we may not achieve our performance goals relating to public confidence, unnecessary burden reduction, and effectiveness, efficiency, and realism. Substantial interaction with the public and other stakeholders is vital to identifying those programs and processes that should be improved on a priority basis, providing recommendations on alternatives, and reporting results of these evaluations. Through continued public and other stakeholder interactions, we can leverage our efforts to meet our performance goals.

- **There is no major change in our understanding of issues affecting reactor safety, no major change in our understanding of the threat of terrorism, and no unexpected significant increase in workload from activities such as an application for a new nuclear power reactor or an early site permit.**

NUCLEAR REACTOR SAFETY

These factors reflect our view that we are sufficiently knowledgeable about nuclear reactor safety and safeguards issues. Although these factors would not affect our Strategic Goals, they could impact our ability to fully meet our performance goals relating to public confidence, unnecessary burden reduction, and effectiveness, efficiency, and realism. A change in our understanding of reactor safety issues could result in resources being reprogrammed to efforts to maintain safety.

- **While there will be sufficient nuclear energy-related skills, experimental facilities, or other resources to accomplish our goals in the near future, there is likely to be a longer term shortfall in these areas.**

  The lack of nuclear energy-related skills, experimental facilities, or other resources could affect our ability to achieve improvements in our regulations and supporting programs and processes needed to reduce unnecessary burden to increase effectiveness, efficiency, and realism, and to ensure the safety of new technologies. Recent studies indicate that the availability of expertise and facilities will lag demand. The expected increase in the pace of introduction of new technologies (i.e., introduction of digital instrumentation and controls system to replace the existing analog systems at nuclear power plants) will challenge our existing expertise and necessitate increased attention in this area.

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NUCLEAR MATERIALS SAFETY

STRATEGIC GOAL: 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.[14]

The Nuclear Materials Safety arena encompasses regulatory activities associated with nuclear fuel cycle facilities and nuclear materials users. It includes 10 major fuel cycle facilities and several other smaller licensed facilities, and more than 20,000 specific materials licensees regulated by either the NRC or Agreement States. In addition, there are estimated to be 100,000 general licensees within the arena. This diverse regulated community includes uranium conversion; uranium enrichment; nuclear fuel fabrication; fuel research and pilot facilities; and large and small users of nuclear material for industrial, medical, or academic purposes. The latter group includes radiographers, hospitals, private physicians, nuclear gauge users, large and small universities, and others.

This strategic goal represents the principal focus of the Nuclear Materials Safety arena. The goal is to achieve our mission and fulfill our statutory requirements as stated above. For fuel cycle activities, the NRC is the primary regulatory body. For materials activities, the NRC currently shares its regulatory authority with 31 Agreement States throughout the country. The NRC Regions play an important role in inspecting NRC licensees, reacting to events, and licensing material activities. Throughout the arena, it is recognized that licensees[15] and other stakeholders are key participants in the collective efforts that will be necessary to achieve program success. We will use domestic and international research, technical studies, operating experience, and risk information to ensure that the regulatory framework[16] is based on technically sound and realistic information.

We will use the following measures to assess results in achieving the Nuclear Materials Safety strategic goal. To the extent applicable, measures include the NRC and Agreement States licensee events. With respect to the second measure and metric, the NRC and Agreement States' licensees have reported a small number of such exposures nearly every year for which reporting was required. Each exposure is a cause of concern, prompting us to analyze its root cause and to determine appropriate follow-up actions. We will always strive to prevent such events from occurring, but it is possible that a few such events will occur. The NRC and Agreement States regulate more than 20,000 materials licensees who conduct millions of medical procedures annually and thousands of industrial processes for nuclear materials daily. Failure to meet this metric, or any of the others, would trigger a self-assessment of the NRC's materials arena activities to determine if changes are needed. The **measures[2]** are as follows:

- *No deaths resulting from acute radiation exposures from civilian uses of source, byproduct, or special nuclear materials, or deaths from other hazardous materials used or produced from licensed material.*

- *No more than six events per year resulting in significant radiation or hazardous material exposures[17] from the loss or use of source, byproduct, and special nuclear materials.*

- *No events resulting in releases of radioactive material resulting from civilian uses of source, byproduct, or special nuclear materials that cause an adverse impact on the environment.[18]*

- *No losses, thefts, or diversion of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC.[19]*

NUCLEAR MATERIALS SAFETY

- *No unauthorized disclosures or compromises of classified information causing damage to national security.*[20]

The Commission recognizes that activities associated with the use and disposal of nuclear materials pose risks to the public. Given the risk inherent in these activities, the first two measures are being used as indications of whether we are achieving the strategic goal of preventing radiation-related deaths or illnesses.

These measures identify events that would result in significant adverse impacts on public health and safety, the national security, or the environment. This includes events from the NRC and Agreement States. They relate to events associated with regulated activities that must be reported accurately by licensees to the NRC and Agreement States in accordance with NRC regulations. These could result from NRC licensee fuel cycle safety and safeguards program activities, or from activities of the NRC or Agreement State licensees related to the use of nuclear materials for medical, academic, or industrial purposes. Sometimes events are difficult to quantify because some events require medical estimates of the probability of functional damage to an organ developing in later years. Any occurrence would trigger a self-assessment of the NRC's Nuclear Materials Safety activities to determine if changes are needed.

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

The NRC will continue to protect the public, workers, and the environment and ensure that licensed and authorized activities will not be inimical to the common defense and security. This protection will be accomplished by ensuring that regulated materials[21] activities are undertaken consistent with applicable statutes and regulations. In so doing, the NRC will continue to provide reasonable assurance that adverse impacts from licensees' use of byproduct, source, and special nuclear material will be prevented. This protection also entails maintaining a high assurance against loss, theft, diversion, or unauthorized enrichment of nuclear material; sabotage of nuclear facilities; and disclosure of classified information.

This is the NRC's preeminent performance goal, which has a higher priority than the other Nuclear Material Safety performance goals. In working toward this goal, the NRC will apply its Principles of Good Regulation. Principles applicable to this goal are related to independence, openness, regulatory clarity, and reliability.

Although the goal is to maintain rather than to increase safety and safeguards, this represents a composite approach for the many categories of licensees represented in this arena. Because of the diversity within and among licensed activities in this arena, and the risks involved in the activities, additional safety improvements in certain areas may be warranted. Most nuclear material facilities and a large majority of materials licensees have operated safely and securely for many years. The industries, the NRC, and the Agreement States have recognized that certain elements of the fuel cycle and materials industries are mature, and practices and standards already in place have been tested over time and found to be acceptable in maintaining safety and security. Even in this climate, regulators must resist any tendency toward complacency. On the other hand, other elements of this arena involve newer technologies and practices. As new technologies and other advances are introduced by applicants or licensees, the NRC will determine, on a case-by-case basis, when early notification of the States is warranted. In both cases, regulators must pursue risk-informed and performance-based[5] approaches, where justified, to focus attention on those areas of highest safety and security priority. We will ensure that our decisions are scientifically-based; risk-informed; and, shaped by operational experience, new information, and research, from domestic and cooperative international activities.

NUCLEAR MATERIALS SAFETY

The arena also recognizes the NRC's shared regulatory responsibility with the 31 Agreement States. The NRC has to ensure that the State programs are adequate and compatible with its own regulatory programs to attain a uniform nuclear safety policy throughout the Nation. This uniformity will take on increased significance as more States assume regulatory authority for materials safety over the next several years. In recognition of the important contributions of the Agreement States toward maintaining safety, the NRC will encourage States to pursue a more active role in the implementation of strategies that contribute to the safety performance goal. The NRC and Agreement States will take decisive action to improve the safety performance of licensees identified as operating below acceptable levels for ensuring public health and protection from undue hazards.

Finally, this goal recognizes the NRC's mandate to promote the common defense and security. The NRC's safeguards, physical protection, and threat assessment activities all combine to provide high assurance that commercial activities involving special nuclear material (SNM) are not inimical to this purpose and do not constitute an unreasonable risk to public health and safety. The NRC's threat assessment function contributes to national and international programs designed to identify and limit the risk of proliferation of weapons of mass destruction and weapons-usable materials and threats posed by terrorists, criminals, and foreign regimes determined to commit hostile acts against NRC-regulated facilities and activities. Our safeguards system monitors and ensures that NRC licensees maintain nuclear material protection, control, and accountability, and our physical protection component represents the principal barrier for those who would attempt to sabotage, steal, or divert SNM. Such an important function has continued to be an effective deterrent against these threats, but our activities will take on increased priority as the availability of weapons-usable material and the information technology to build nuclear explosives continues to become more widespread, and the increasing vulnerabilities to cyber-terrorism continue as systems become more automated.

The NRC will employ the following **strategies** to maintain safety, protection of the environment and promote the common defense and security:

- *We will continue to improve the regulatory framework to increase our focus on safety and safeguards, including incremental use of risk-informed[7] and, where appropriate, less prescriptive performance-based[7] regulatory approaches to maintain safety.*

  In the materials arena programs, the regulatory framework continues to evolve, even though many parts of the fuel cycle and nuclear materials industries are in a mature state. The regulations contain some prescriptive requirements, where necessary, while other sections of the regulations are more performance-based. As appropriate for the individual Nuclear Materials arena programs, risk-informed and performance-based approaches will be incorporated incrementally to improve the focus on safety of the regulations and related guidance making up the regulatory framework. We will ensure, by using risk assessment techniques for differentiating between high- and low-risk activities, that our regulatory focus is on those activities that pose the greatest risk to the public. We are continuing to focus on those areas where important gaps in information are present and where uncertainties exist about the significance to risk. We are developing guidance to ensure that specific applications of risk assessment methods are suitable and that there is consistency in their use in our decision-making process. Because of the diversity of programs within the Nuclear Materials Safety arena, risk assessment techniques will be used only where the subject matter is amenable to the risk assessment strategy and where the greatest benefit could be derived.

NUCLEAR MATERIALS SAFETY

For programs where new technology is involved or where regulations or guidance are new or evolving, interactions with potential applicants will be important to discuss acceptable ways to comply with regulatory requirements. More prescriptive requirements may be appropriate for some new technologies.

Finally, we will evaluate potential new information from our domestic and cooperative international research programs as well as from our participation in international committees and workshops, new safety issues, changing external factors, and licensee operational experience so that improvements can be made to maintain an adequate regulatory framework. In this regard, we will be quick to share relevant generic safety information (e.g., Bulletins, Information Notices) with Agreement States and licensees so we can learn from each other's experiences. Related guidance will be updated periodically, taking into account risk information, whenever possible, and allowing flexibility for licensees to develop performance-based solutions, when these solutions are shown to be acceptable from a safety and safeguards perspective. For medical uses, the NRC and the Food and Drug Administration share information of mutual interest related to the approval of medical devices, radioactive drugs, and radioactive biologics when these products contain NRC-regulated material.

- *We will continue authorizing licensee activities only after determining that these proposed activities will be conducted consistent with the regulatory framework.*

In the Nuclear Materials Safety arena, the NRC issues several hundred new licenses each year and terminates about the same number. The NRC approves more than 3,000 amendment requests and makes decisions on license renewals as the licenses approach their expiration dates. Some of these actions are fairly routine in nature, and these decisions can be reached in a relatively short period of time. Conversely, some major materials licensees, including the fuel facilities, engage in more complex operations. Therefore, the decisions associated with these licenses require a more rigorous review of licensee personnel qualifications, safety and safeguards programs, systems, and facilities. On some occasions, these evaluations include safety, safeguards, or environmental reviews; issue resolution; and documentation of the technical bases and findings in publicly available safety and safeguards evaluation reports and either environmental assessments or environmental impact statements.

Licensing submittals and approvals are often made easier when licensees and reviewers use available guidance documents. These documents are not intended to supplant regulatory requirements. They are intended to serve as tools to assist licensees and license reviewers in their understanding of the license application and review process. Therefore, they will be updated on regular intervals to maintain currency. Regulations will be applied to independently evaluate the licensees' demonstrations that proposed activities comply with regulations. While conducting these evaluations, we will employ risk-informed methods and data, where appropriate. In addition, the adjudicatory hearing process will support final licensing decisions. Technical assistance will be provided to the Agreement States, when requested, in conducting their reviews.

- *We will confirm that licensees understand and carry out their primary responsibility for conducting activities consistent with the regulatory framework.*

For fuel cycle and materials licensees, investigations, inspections, or other independent approaches (e.g., third-party reviews) will continue to be important methods to verify that

licensees understand their responsibility for safety and that their activities remain in compliance with regulatory requirements. Inspections must identify any safety and safeguards issues and resolve them before they affect safe and secure operations. We will use the risk-informed regulatory framework to inspect licensees at varying frequencies and with varying techniques, depending on the relative risks of the activities. Increased attention will be given to licensees with marginal performance, by focusing inspection resources on the basis of licensee performance. Finally, we will share relevant generic safety information (e.g., Bulletins, Information Notices) with Agreement States and licensees so we can learn from each other's experiences. Allegations regarding licensee or Agreement State performance will be appropriately and objectively addressed in a timely, systematic manner. Allegations of potential wrongdoing will be appropriately and objectively investigated in a timely manner. Enforcement sanctions for violations of regulatory requirements will be commensurate with the safety significance.

- *We will respond to operational events involving potential safety or safeguards consequences.*

  We will provide timely, accurate, and complete assessments of safety and safeguard events by evaluating licensees' recommendations for actions to protect the public or national defense and security and by coordinating with other Federal agencies, State and local governments, international entities, and the licensee. In the event of an emergency involving an NRC-regulated entity, this would include working closely with one or more of the following agencies: FEMA, DOE, EPA, USDA, HHS, NOAA. The technical staff will have sufficient skills and knowledge to support the agency or State in responding to operational events. Additional support will be provided by the continuously staffed Incident Response Operations Center. Periodic exercises will be conducted to ensure that response organizations are proficient and experienced and that staff are trained to respond to operational events according to their safety or safeguards significance. Incident investigation capabilities also will be maintained.

- *We will maintain safety by continuing to evolve along with Agreement States materials program into a single "National Materials Program" by encouraging the States to continue to pursue a more active role in the regulatory process.*

  Safety is a shared responsibility among the NRC, the Agreement States, and licensees. A total of 31 States regulate more than 15,000 specific radioactive materials licenses, as compared to 5,300 regulated by the NRC. Several other States are working towards becoming Agreement States in the next few years. This trend will continue to shift more of the licensees from the NRC to the States, and will require more cooperation and coordination between the NRC and the States to assure safe licensee activities throughout the country. To this end, the Commission recently approved the formation of a working group to coordinate with the Conference of Radiation Control Program Directors to address the impacts of this trend and to provide advice to the Commission. Defining and implementing future NRC and State roles under a national strategy and infrastructure for regulating materials licenses in this new environment will help assure a more consistent and effective national focus on safe licensee performance for all of the 20,000 specific materials licensees throughout the country.

  We will continue to conduct Integrated Materials Performance Evaluation Program (IMPEP) reviews to verify the adequacy and compatibility of Agreement State materials programs and the technical quality and consistency of the NRC's materials program licensing and inspection activities. The process is also designed to identify performance strengths and weaknesses.

NUCLEAR MATERIALS SAFETY

Over the past several years, increased cooperation between the NRC and the Agreement States has helped identify solutions to common program issues. The NRC will encourage the States to continue to take on a larger share of program responsibilities in the future.

The NRC will use measures to assess results in our effort to maintain safety and protect the environment and to promote the common defense and security. These include events involving the NRC and Agreement States. Many of the events that are counted in these measures do not, on an individual basis, have a public health and safety impact. For example, most of the losses of control of licensed material are of shielded material, unlikely to result in overexposures or releases to the environment. Others are medical events that include underexposures (i.e., radiation treatments involving less radiation than the physician intended). These events are included because they may indicate program weaknesses, which, if ignored, could later trigger a more significant problem. The NRC will use the following **measures**[2]:

- *No more than 350 losses of control of licensed material per year.*[22]
- *No occurrences of accidental criticality.*
- *No more than 20 events per year resulting in radiation overexposures*[23] *from radioactive material that exceed applicable regulatory limits.*
- *No more than 45 medical events per year.*[24]
- *No more than 40 releases per year to the environment of radioactive material from operating facilities that exceeds the regulatory limits.*[25]
- *No more than five substantiated cases per year of attempted malevolent use of source, byproduct, or special nuclear material.*
- *No breakdowns of physical protection or material control and accounting systems resulting in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.*[26]

Maintaining nuclear materials safety and safeguards is the primary goal for the various activities in the Nuclear Materials Safety arena. The metrics for these measures would maintain safety performance at about the same level as prior years. The measures in the performance goal represent a more conservative threshold for measuring NRC and Agreement State performance than the strategic goal measures, to preclude violating those measures. Safety measures will include data from the NRC and Agreement State licensees, where appropriate.

This arena involves a range of activities that, during the course of normal day-to-day operations, places radioactive material in medical or industrial settings that provide more opportunities than other arenas for overexposures, medical events, and/or releases to occur. In the medical field alone, several million procedures take place each year that involve radioactive material used to diagnose or treat diseases. While the NRC and Agreement States continue to support a regulatory philosophy that places safety as the pre-eminent consideration, this plan acknowledges that the above numbers represent the most realistic set of metrics, based on available performance data. The metrics include some events of limited safety significance, such as a number of lost portable moisture density gauges, tracked under measure 1, even though few such events have resulted in overexposures. These events are included, since they could be

indicators of potential weaknesses that could later result in a failure to achieve the strategic goals in this arena.

PERFORMANCE GOAL: Increase public confidence.

The NRC views building and maintaining public trust and confidence that the NRC is carrying out its mission as an important performance goal for the agency. To reach this goal, the NRC must be viewed as an independent, open, efficient, clear and reliable regulator. This will be accomplished by providing our stakeholders with clear and accurate information about, and a meaningful role, in our regulatory programs. The NRC desires that diverse stakeholder groups (i.e., general public, Congress, NRC licensees, other Federal agencies, States, Indian Tribes, local governments, industry, industry workers, technical societies, the international community, and citizen groups) increasingly recognize that NRC actions assure that public health and safety, the common defense and security, and the environment are, and will remain, adequately protected from hazards resulting from the use of nuclear materials.

The NRC must continue to forthrightly inform the public about nuclear safety and safeguards incidents and issues and provide avenues for meaningful input and dialogue. However, discussing in a public forum issues involving nuclear security or related to national defense is not usually prudent. Because of the diversity of stakeholder and public interests within this arena, the goal includes recognition that the NRC may not always be able to obtain a consensus among its stakeholders. This goal also includes recognition that, although the public may not always agree with the NRC's actions, public confidence in the NRC is enhanced when the agency listens to all interested parties, provides appropriate feedback, and makes its decisions in a thorough, disciplined, and timely manner.

Although the NRC has conducted its regulatory oversight openly and has provided information to a variety of stakeholders, it recognizes the need for continued improvement, especially with respect to future regulatory changes and interactions with Agreement States. This means that continued dialogue between the NRC and the Agreement States is required to develop solutions to common problems. The NRC recently completed a variety of initiatives to better inform stakeholders and to obtain their input on significant issues. Based on the initial efforts, the NRC's goal is to expand efforts and achieve greater improvement in this area. This may include more public meetings and more workshops with important sectors of the regulated community. The NRC will increase its efforts for public outreach through an integrated communications plan to implement strategies to effectively communicate with and involve the diverse stakeholders early in regulatory activities.

The NRC will employ the following **strategies** to increase public confidence:

- *We will make public participation in the regulatory process more accessible. We will listen to their concerns and involve them more fully in the regulatory process.*

  One of the attributes of strong and fair regulation in the materials arena involves consistent and early public involvement. The agency recognizes the public interest and concern in the proper regulation of materials arena activities. The agency further recognizes its responsibility to provide opportunities for meaningful public interaction and involvement. The NRC will listen to, and be responsive to, requests, inquiries, and concerns from the public. We will provide opportunities for stakeholders to bring information and issues to the NRC by holding open meetings in the vicinity of those affected, providing adequate notice of meetings, developing and implementing communications plans for major regulatory activities, and holding workshops. We

will consistently consider this input in planning changes and making decisions relating to our practices, rules, and processes.

- *We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.*

  Public confidence in the NRC will be enhanced by avoiding raising stakeholder concerns unnecessarily. We can avoid concerns if the information is presented in a manner that is easily understood and placed in its proper safety context. Whenever possible, we will use quick, personalized forms of contact with stakeholders. Communications with the public will be designed to foster greater understanding of, and confidence in, our regulatory program. The information we disseminate will be clear, technically sound, accurate, reliable, objective, and timely. We will take full advantage of the Internet and new technology for information dissemination. We will protect the private, proprietary, and classified nature of information. All stakeholders should be able to rely on our statements and information as being objective and not promotional. The NRC will clearly communicate to and educate stakeholders about its precise role in the materials arena.

- *We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.*

  We will explore additional opportunities to convey our actions and activities, including achievements, to a broader audience. This may include expanding our reports to Congress, increasing our information exchange with the media outlets, and enhancing our external and internal home pages.

- *We will continue to foster an environment in which safety issues can be openly identified without fear of retribution.*

  Public confidence is enhanced in an environment where safety and security issues can be raised and addressed without fear of retribution. Examples of how this strategy will be implemented in this arena include conducting the NRC's 10 CFR 2.206 petition process, responding to allegations, addressing safety-conscious work environment concerns, and implementing the NRC's programs for differing professional views/opinions. We will also participate in the agency's pilot program to solicit feedback from individuals raising safety or security issues to assess the NRC's effectiveness in handling allegations. Finally, we will encourage licensees and applicants to be open and responsive to the public affected by their regulated actions.

The NRC will use the following **measures** to assess the results in our efforts to increase public confidence:

- *Complete the milestones in the annual Performance Plan relating to collecting, analyzing, and trending information for measuring public confidence.*

- *Complete all of the public outreaches as scheduled in the annual Performance Plan.*

NUCLEAR MATERIALS SAFETY

- *Complete the milestones specific to the agency allegation program effectiveness assessment plan as identified in the annual Performance Plan.*

- *Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206[12] within an average of 120 days.*[13]

The staff is increasing the number, and improving the quality, of its interactions with external stakeholders. We intend to take advantage of these interactions by requesting feedback from the stakeholders that participate in them. The staff believes that the combination of (1) being more pro-active in interacting with external stakeholders, (2) improving our interactions with these stakeholders, (3) improving our responsiveness to stakeholder concerns, and (4) systematically monitoring feedback will allow the staff to assess changes and trends in public confidence.

Public outreach was chosen as a performance measure for public confidence based upon NRC experience from well conducted public outreaches. In response, the need for communication plans is recognized in this Strategic Plan. This measure relies on the annual Performance Plan to identify the specific metrics that will be used in assessing results.

The agency is currently developing an agency allegation program effectiveness plan and has not yet identified the specific milestones to be completed during the years covered by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

The assumption that the public and other stakeholders will continue to provide substantial feedback to and interact with the NRC to improve our programs and processes is inherent in the above strategies and measures.

PERFORMANCE GOAL: Make NRC activities and decisions more effective, efficient, and realistic.

The NRC will continue to improve its regulatory processes so that they become more effective, efficient, and realistic. The NRC and the Organization of Agreement States will identify and focus on necessary and sufficient regulatory activities that are linked to its goals. In those regulatory activities, the NRC will strive to optimize regulatory programs and processes, where possible, while assuring safety and security and improving public confidence. In working toward this performance goal, the NRC will apply its Principles of Good Regulation, which include efficiency, clarity, and reliability.

The NRC will ensure its decisions are scientifically-based, risk-informed, and shaped by operational experience, new information, and research, including cooperative international activities. As a result, the NRC's decisions will be realistic, will be systematic, and will appropriately treat areas of uncertainty. The NRC will ensure that its procedures, processes, and expectations are better-defined, clearer, and more transparent. The NRC's regulatory actions will support more consistent, reliable, predictable, and timely decision-making. Furthermore, the NRC will seek to minimize duplication of efforts with stakeholders to achieve this goal, while relying on the technical and managerial competence of its staff to achieve success.

NUCLEAR MATERIALS SAFETY

By striving to become more effective, efficient, and realistic while continuing to assure adequate protection of the public health and safety and the common defense and security, the NRC intends to keep regulatory burden and related costs to licensees and applicants as low as practical. The NRC will capitalize on advances in technology and implement changes to improve internal processes related to regulatory actions. As part of this effort, the NRC will continue its efforts to develop and update licensing and inspection guidance in order to improve the consistent, effective, and efficient implementation of its policies in the field. Furthermore, the NRC will strive to be less prescriptive and will apply risk-informed, performance-based approaches where it is appropriate to do so.

Effectiveness means producing the necessary and sufficient work to achieve our goals. The NRC must periodically challenge the value of its programs and activities based on how they contribute to the achievement of goals. The NRC business processes and regulatory decisions will reflect high standards of quality and be technically sound. Specific challenges in this regard involve: (1) risk-informing the NRC's regulatory programs; (2) preparing to address evolving technologies and a changing regulatory environment; and, (3) improving the predictability and consistency of agency decisions. We will also pursue international cooperative research in order to leverage our research resources, share research facilities wherever possible, and maintain our involvement in international committees and working groups that can best further our interests and minimize unnecessary duplication of effort.

Efficiency means conducting work productively and on time. Efficiency will be enhanced by simplifying or streamlining our internal processes based on self-assessment and experience, using improved tools, and becoming more timely and predictable in delivery of services and decisions.

To become more effective and efficient, the NRC will plan and schedule its work activities and identify key milestones to monitor progress. When issues emerge, the NRC will readjust plans, schedules, and resource allocations, if necessary, to ensure that attention is focused on the highest priority activities so they are conducted efficiently. The NRC decisions will be made more realistic by eliminating excessive conservatism. Realism is supported by risk information, research results, and operational experience.

The NRC will employ the following **strategies** to make NRC activities and decisions more effective, efficient, and realistic:

- *We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.*

  We will make improvements to our regulatory framework or take other agency actions (e.g., seek legislative changes) to resolve circumstances that reduce our effectiveness or efficiency. For example, improvements would be needed for circumstances such as: (1) overlapping regulatory responsibility or dual regulation, (2) conflicting positions regarding regulatory jurisdiction, and (3) conflicting standards that impact finality of licensing decisions. Furthermore, we will incorporate risk-informed and performance-based approaches, as appropriate, into our regulatory framework when they can substantially improve our effectiveness, efficiency, and realism (i.e., reduce excessive conservatism). This will be accomplished, in part, by conducting an integrated evaluation of risk information, inspection findings, operating experience, research results, and cost data as part of the agency-wide Probabilistic Risk Assessment Implementation Plan. In addition, we will continue to incorporate, where applicable, existing consensus standards into our regulatory framework. We will also encourage stakeholders to develop and use new consensus standards.

  Furthermore, we will develop and revise appropriate licensing and inspection guidance so that

applicants and staff have a clear and consistent understanding to develop and review licensing applications, respectively. This guidance should minimize the staff's requests for additional information, subsequent license revisions, and additional rounds of staff review. It will also help the staff prepare for and conduct inspections.

Finally, we will anticipate, through research, participation in international committees and workshops, and technical studies, opportunities for regulatory improvements that may come from industry's introduction of new technologies. Similarly, we will use domestic and international research, technical studies, and risk information to reduce excessive conservatism and ensure that the regulatory framework is based on technically sound and realistic information. In addition, to improve decision-making, we will develop processes that will assess the skills and tools needed by the staff to allow the appropriate level of decision-making for specific types of decisions consistent with our statutory and regulatory authority. Staff will be authorized to take the appropriate and necessary action and make decisions that are within the scope of their assigned responsibilities and will be accountable for those actions and decisions.

- *We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.*

  We will continually improve and standardize our processes through a robust program of self-assessment and application of lessons learned. In particular, effectiveness reviews of program and program support areas will be conducted to determine what work needs to be added, maintained, reduced, or eliminated to deliver the desired outcomes. Efficiency reviews of key processes in program and program support areas will be conducted to determine the most efficient means of delivering the desired outcomes.

- *We will improve efficiency and effectiveness by continuing to evolve along with Agreement States materials programs into a single "National Materials Program" by encouraging the States to continue to pursue a more active role in the regulatory process.*

  Development of a more national strategy and infrastructure for regulating materials licenses consistently will take on increased emphasis and ultimately will make all parties more efficient and effective regulators, as several other States continue to work toward becoming Agreement States in the next few years.

  NRC Headquarters has traditionally led the activities that established and improved the regulatory framework, while the NRC's Regions and Agreement States implemented the programs within this common framework. Over the past several years, increased cooperation between the NRC and the Agreement States has helped identify solutions to common program issues. The NRC will encourage the States to continue to take on a larger share of program responsibilities in the future. Examples include Agreement State participation in the NRC/Agreement State working groups, Agreement State participation in IMPEP and in the Nuclear Materials Events Database, and the assumption of responsibility by the Organization of Agreement States for planning and hosting the annual All Agreement States meeting. This increased interaction will allow the NRC to gain additional insights from the comments and input of Agreement States, individually and collectively, especially when substantive program changes are being considered. The periodic IMPEP lessons learned and good practices reports provide examples so that one regulator can upgrade the effectiveness and efficiency of its program based on findings about another regulator. By expanding the States' participation in various work groups, the NRC and Agreement States can avoid

duplication of effort. Collectively, these activities reflect an evolution toward a more unified and cohesive national program.

The NRC will use the following **measures** to make NRC activities and decisions more effective, efficient, and realistic:

- *Complete those specific materials milestones in the Risk-Informed Regulation Implementation Plan identified for completion in the annual Performance Plan.*

- *Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism.*

These measures are not applicable to Agreement States, since it is not within the NRC's purview to evaluate States' efficiency, effectiveness, or realism, except when the activities are needed to demonstrate program adequacy and compatibility. Together, these measures were chosen to identify the conditions under which the NRC would make continuous progress to assure that its regulatory processes (i.e., rulemaking, licensing, inspections, and enforcement) are executed in a timely and business-like fashion and that its decisions are technically sound and based on realistic information.

The agency is currently developing a Risk-Informed Regulation Implementation Plan and has not yet identified the specific milestones to be completed during the years cover by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

The measure of at least two key process improvements per year was selected in addition to the risk-informed measure to focus on other areas to seek improvement. The intent of the measure is to annually develop a list of key process improvements. The list will be prioritized based on the estimated effectiveness of the improvement and the completion of the two key process improvements would be tracked in the Performance Plan. The number of key processes, two, was chosen as a starting figure and as experience is gained, that metric may be revised.

PERFORMANCE GOAL: Reduce unnecessary regulatory burden on stakeholders.

The NRC will strive to reduce unnecessary regulatory burden and associated costs if possible, while achieving the other three performance goals. Unnecessary regulatory burden for the NRC licensees may be defined as requirements that goes beyond what is necessary and sufficient for providing reasonable assurance that public health and safety, the environment, and the common defense and security will be protected. The costs associated with the NRC activities can impact a variety of the NRC stakeholders. For some stakeholders, such as States and the public, costs could potentially result from actions by States to augment the NRC regulatory program, clean up sites, or dispose of radioactive material that are paid for with public funds. For others, such as applicants and licensees (and ultimately the public), unnecessary burden may be imposed by an overly detailed technical review that could result in increased costs that are passed on to the consumer.

Although regulation, by its nature, is a burden, the NRC will ensure that only the level of burden necessary to maintain safety is imposed on licensees. This burden reduction can be achieved by using

risk-informed and performance-based approaches, if justified, to focus attention on those areas of highest safety priority and by making more realistic decisions without excessive conservatism. We will use domestic and international research and technical studies to evaluate new information in order to identify areas in our regulatory programs where unnecessary burden and duplication can be reduced.

Consideration will be given to making regulatory burden commensurate with the risk of the regulated activity and the enhanced benefit to the workers, the public, and the environment. Furthermore, regulatory burden associated with a safety enhancement will be considered in light of a cost/benefit analysis prior to the imposition of a new regulatory requirement. Regulatory oversight will be fair, consistent, effective, and timely in its application. Costs associated with the regulatory infrastructure must be fair, equitable, and shared by all users.

The NRC believes that some of the regulatory burden in the Nuclear Materials Safety arena associated with the regulations and practices in place over the years was not commensurate with the safety benefit. During these years, an ever-increasing body of technical knowledge, operational experience, and risk assessment tools has been accumulated both domestically and internationally. Within this arena, a risk review study is being conducted. Also, a risk review group has recently been established to implement a more risk-informed regulatory framework for these programs. These efforts are expected to provide the bases for reducing unnecessary regulatory burden in some areas, but perhaps increasing burden in others. The NRC will employ the following **strategies** to reduce unnecessary regulatory burden on stakeholders:

- *We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.*

  We will use risk-informed and performance-based approaches, where appropriate, to ensure that all elements of our regulatory programs (i.e., regulations, guidance, licensing, assessment, inspection, and enforcement) are conducted commensurate with the level of risk. This will provide licensees with flexibility in meeting regulatory requirements. The scope and priority of changes in our regulatory processes will consider stakeholder input, the effects of dual regulation with other Federal and State entities, and the cumulative effect each has on agency and licensee burden reduction. In addition, we will use domestic and international research and technical studies to evaluate new information in order to identify areas in our regulatory programs where unnecessary burden and duplication can be reduced. New information includes improvements in knowledge, advances in technology, and insights gained from operational and regulatory experience both domestically and internationally. Research will focus on identifying where excessive conservatism can be eliminated or reduced.

- *We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.*

  As we execute our programs, we will make improvements to those aspects of our regulatory processes that had resulted in unnecessary costs to our stakeholders. In particular, we will evaluate the timeliness of actions and the necessity for multiple rounds of requests for additional information. As we make licensing decisions, conduct inspections, and take enforcement actions, we will take into account the necessity of any additional burdens imposed on licensees and other stakeholders.

- *We will actively seek stakeholder input to identify opportunities for reducing unnecessary*

regulatory burden.

We will encourage licensees to identify for NRC consideration concerns with the NRC's regulatory programs, such as untimely, inadequate, or inappropriate staff actions, that have resulted in unnecessary cost. In addition, we will continue initiatives to interact with stakeholders to ensure a mutual understanding of existing regulatory requirements, guidance or licensing decisions. Such interactions will provide opportunities for stakeholders to identify problems or suggest improvements. The NRC will also be able to clarify or explain the basis for requirements, guidance, or licensing decisions, and why we believe they are necessary and sufficient. Where guidance is being developed or used for the first time, we will invite stakeholder feedback to identify aspects of the guidance that might be unclear, unnecessary, inflexible, or otherwise considered excessively burdensome by the licensee. Where licensees are using new requirements or guidance for the first time to prepare specific submittals, we will be available to interact with them upon request during the development of the submittals. We will be able to provide guidance concerning implementation questions or technical issues they identify relating to understanding NRC requirements that might help them prepare an acceptable application.

The NRC will use the following **measures** to assess results in reducing unnecessary regulatory burden:

- *No more than one substantiated case of unnecessary regulatory burden per year, resulting from modification or application of the materials arena regulatory framework as identified by a licensee or a non-licensee external stakeholder.*

- *Reduce paperwork and record keeping imposed by the NRC on its licensees by at least 25 percent over a period of 5 years.*

The NRC wants its regulatory programs to be protective at reasonable cost and without excessive conservatism. The NRC seeks opportunities to reduce existing unnecessary regulatory burden and will strive to ensure that any new actions by the NRC do not impose any new unnecessary regulatory burden. These performance goal measures are designed to assess how the agency is meeting these objectives and apply only to the NRC. They exclude Agreement States. The first measure tracks instances where the NRC may have overlooked a potential unnecessary regulatory burden associated with implementation of new or revised regulations or regulatory guidance that became effective during the reporting period. It includes instances of license review, inspection, or enforcement activities where new or existing regulations and regulatory guidance may have been inappropriately applied. Licensees or other external stakeholders may inform the NRC of a potential regulatory burden in writing, via E-mail, or may present a potential unnecessary regulatory burden issue to the Commission during transcribed meetings. Responsible management will be required to evaluate each item as a potential example of unnecessary regulatory burden and recommend an appropriate course of action within a defined time period. In addition, the first metric provides an indication of quality of work. Any NRC activity that imposes new unnecessary regulatory burden indicates that the work process failed to identify the new burden.

Because of the number and size of licensees in the Materials Arena, paperwork requirements impose a large burden making paperwork reduction a meaningful measure. Therefore, the second measure recognizes the specific burden represented by excessive paperwork and record keeping requirements.

No additional metric for reducing any current burden was used because the efforts for completing the milestones for risk-informing activities should, in addition to increasing effectiveness, efficiency, and

realism, reduce unnecessary burden. Further opportunities to identify unnecessary regulatory burdens will be sought through interactions with external stakeholders.

STATUTORY AUTHORITY

- Atomic Energy Act as amended
- Energy Reorganization Act as amended
- Energy Policy Act
- Clean Air Act as amended
- National Environmental Policy Act
- Nuclear Non-Proliferation Act
- Convention for the Physical Protection of Nuclear Material

MAJOR EXTERNAL FACTORS

Listed below are assumptions about major external factors and how they might affect achieving the goals of the Nuclear Materials Safety arena.

- There will be no change in the threat of terrorism in the use of source, byproduct, and special nuclear material. With that assumption, the current security and safeguards requirements are adequate.

- One important external factor is whether or not the NRC takes on the regulatory oversight responsibility of the Department of Energy (DOE) facilities. Currently, the NRC provides regulatory assistance to DOE under a Memorandum of Understanding (MOU) for the Hanford Tank Waste Remediation System privatization that may be transitioned to NRC regulation. Although this MOU allows the NRC to advise DOE on the appropriate regulatory framework necessary for the rigors of commercial licensing expectations, DOE is not obligated to adopt any of our recommendations.

  Thus, an early transition to the NRC would require a phased and graded implementation strategy or possibly a reassessment of measures and strategies. The NRC also participated jointly with DOE and the Occupational Safety and Health Administration (OSHA) to conduct pilot programs on the feasibility of external regulation of DOE facilities. Although no significant issues were found during the pilot phase that would impede NRC regulation of these facilities, the pilot sites selected were not representative of the entire DOE nuclear complex. In addition, the NRC raised concerns over the possible shared infrastructure, legacy materials disposition, site-specific regulatory aspects, and the necessary interfaces with OSHA and the Environmental Protection Agency (EPA). Although no decision has been reached at this date, all of these issues would impact the safety goal, and would likely require a phased and graded implementation schedule.

- In the Nuclear Materials Safety arena, 31 States have formal agreements with the NRC by which those States have assumed regulatory responsibility over byproduct, source, and small quantities of special nuclear material. There are more than 15,000 specific radioactive materials licenses regulated by these States, as compared to 5,300 regulated by the NRC. Several other States, including Oklahoma, Pennsylvania, and Wisconsin, continue to work toward becoming Agreement States in the next few years.

  Although the NRC has frequent contact with each of the Agreement States, and has developed

budget estimates based on these contacts, there are a number of uncertainties that can lead to schedule slippages over time. If these slips occur, the budget forecasts of the NRC licensing and inspection workloads could be affected. This could result in delays in licensing and inspection efforts, or force tradeoffs in other areas that would compromise our effectiveness and efficiency, or slow our implementation of the strategies.

- There will continue to be substantial public interest and involvement in the different elements of the Nuclear Materials Safety arena. Opposition may require specific attention to program or licensee-specific factors.

  Public confidence in the NRC and the regulated nuclear industry has varied over the years, and has varied across program arenas. This confidence is based on the public's perceptions regarding the regulator and the industry. Some of these perceptions are based on: (1) actual experience with the NRC and its performance; (2) external factors (e.g., media reports, political commentaries, special interest group efforts, and industry group statements) that may or may not be closely linked to our actual performance; and, (3), operational events such as accidents at Three Mile Island and Chernobyl, even though the impact on health and safety of the first accident was minimal and the facility involved in the second accident was outside the NRC's regulatory control. To many, confidence (or lack of confidence) in the regulator and in the regulated industry cannot be clearly separated. Therefore, we recognize the potential that our activities and the licensees' activities jointly contribute to, or erode, the public's confidence and may cause us to take additional measures to assure the public.

  To the extent that these factors influence public confidence, the NRC could be challenged to readjust its activities, or extend its current efforts to respond or react to these factors. The impacts of operational events are particularly difficult to predict. Depending upon their nature and consequence, the NRC and/or the Agreement States could be forced to immediately redirect resources away from public confidence, effectiveness, efficiency, and realism, or burden reduction strategies in order to evaluate the safety or safeguards impact, and appropriate action levels needed to address the incidents in a timely and thorough manner.

- There are several major external factors impacting the effectiveness, efficiency, and realism performance goal. Actions by Congress, Agreement States, or licensees as well as technology advances may impact our ability to improve in effectiveness, efficiency, and realism.
  If applicants submit significantly more requests for approvals than we forecast (new applications, amendments, or renewals) in the near term, this could cause backlogs that would impact the agency's ability to become more effective and efficient. Similarly, if new technologies arise that must be reviewed, approved, and inspected, it may be necessary for the NRC to first become knowledgeable in the new areas before we can meet this goal.

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NUCLEAR WASTE SAFETY

STRATEGIC GOAL: Prevent significant adverse impacts from radioactive waste to the current and future public health and safety and the environment, and promote the common defense and security.

The scope of the Nuclear Waste Safety arena encompasses regulatory activities associated with uranium recovery, decommissioning of nuclear reactors and other facilities, storage of spent nuclear fuel, transportation of radioactive materials, and disposal of radioactive wastes. Nuclear waste is a byproduct of the use of radioactive materials. Such waste is produced by nuclear reactors that generate electric power, as well as fuel processing plants, uranium recovery operations, and institutions such as hospitals and research facilities. It also results from decommissioning nuclear reactors and other facilities that are permanently shut down. High-level radioactive waste results primarily from the fuel used by reactors to produce energy. Low-level radioactive waste results from reactor operations, from fuel processing, and from medical, academic, industrial, and other commercial uses, and generally contains relatively limited concentrations of radioactivity. The term radioactive waste includes byproduct, source, and special nuclear material.

This strategic goal represents the principal focus of the Nuclear Waste Safety arena. The goal is to achieve our mission and fulfill our statutory requirements. The NRC licensees[27] are responsible for safe transport, storage, and disposal of radioactive waste. The NRC licensees are also responsible for designing, constructing, operating, and remediating the wide variety of facilities or sites within the scope of this arena. Regulatory oversight of licensee activities is the responsibility of the NRC; however, the NRC has relinquished its regulatory authority for some activities in this arena to Agreement States. Thus, performance reflects the results of the collective efforts of the NRC, its licensees, and the Agreement States. We will use domestic and international research, technical studies, and risk information to ensure that the regulatory framework[16] is based on technically sound and realistic information.

The Commission recognizes that activities associated with the use and disposal of nuclear materials pose risks to the public. Given the risk inherent in these activities, the first two measures are being used as indications of whether we are achieving the strategic goal of preventing significant adverse impacts to the current and future public health and safety.

We will use the following **measures**[2] to assess results in achieving the Nuclear Waste Safety strategic goal:

- *No deaths resulting from acute radiation exposures from radioactive waste.*
- *No events resulting in significant radiation exposures*[28] *from radioactive waste.*
- *No releases of radioactive waste causing an adverse impact on the environment.*[29]
- *No losses, theft, diversions, or radiological sabotages*[30] *of special nuclear material or radioactive waste .*

These strategic measures represent events that could result in adverse impacts on public health and safety, the environment, and national security. The above four measures would identify occurrences from activities regulated in this strategic arena, including uranium recovery, decommissioning of nuclear reactors and other facilities, storage of spent nuclear fuel, transportation of radioactive materials, and disposal of radioactive wastes. Any occurrence would trigger a self-assessment of the NRC's nuclear

waste safety activities to determine if changes are needed.

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

The NRC will continue to protect the public, workers, and the environment and ensure that licensed and authorized activities will not be inimical to the common defense and security. This protection will be accomplished by ensuring that regulated waste arena activities are undertaken consistent with applicable statutes and regulations. In doing so, the NRC will continue to provide reasonable assurance that adverse impacts caused by radiological exposure[31] will be prevented for facilities and activities associated with uranium recovery, decommissioning, storage of spent nuclear fuel, transportation of radioactive materials, and disposal of nuclear waste. This also entails maintaining a high assurance against loss, theft, diversion, sabotage, and protection of classified matter to protect the common defense and security.

This is the NRC's primary performance goal, which has a higher priority than the other Nuclear Waste Safety performance goals. In working toward this goal, we will apply the NRC's Principles of Good Regulation. Principles applicable to this goal are related to independence, openness, regulatory clarity, and reliability.

The Nuclear Waste Safety arena consists of a diverse set of regulatory programs and activities for assuring safety and protecting the environment from the activities the NRC regulates. For this arena, the NRC will structure its activities to ensure that current levels of safety are maintained. The current levels of attention and activities vary because of the diversity of our programs, the type of oversight activities, and associated issues. For future disposal of **high-level waste**, the Department of Energy (DOE) continues to characterize the candidate geologic repository site at Yucca Mountain, Nevada, to support a potential site recommendation and submittal of a license application to the NRC for construction authorization. Consistent with DOE's schedule for the next few years, the NRC is applying a regulatory framework to prelicensing reviews and consultations with DOE to resolve issues most important to repository safety and preparing to address the licensing phase of this process if the Presidential and congressional decisions are made regarding site approval and a license application is submitted. For the **low-level waste** program, no new disposal facilities have been opened, and the three operating facilities are in Agreement States. As a result, the NRC's focus will be to maintain a consistent national program and provide support to the States, as requested, to resolve specific technical issues and to review requests for onsite disposal. In contrast to the low-level waste program, our program for **decommissioning** nuclear reactors and fuel cycle facilities will receive more attention as the NRC considers options, including (1) an integrated, risk-informed rulemaking for decommissioning nuclear reactors that addresses emergency planning, insurance, safeguards, operator staffing and training, and other potential areas, and (2) a potential rulemaking on the release of solids. In addition, decommissioning will be impacted as the NRC makes a transition to a more risk-informed and streamlined process through the preparation of implementing guidance for the recently finalized license termination rule. For our **uranium recovery** activities, most of the work supporting the safety oversight of DOE's remedial actions to clean up inactive mill sites is completed. Thus, the program's focus will be on controlling the radiological and non-radiological hazards of mill tailings sites and assuring the safe operation of uranium extraction facilities.

NUCLEAR WASTE SAFETY

Protecting future generations is a unique aspect of the Nuclear Waste Safety arena. This protection is accomplished through maintaining requirements for such protection in our regulations and authorizing licensee activities only after determining that proposed activities will protect both current and future generations. This approach is reflected in the first and second strategies for this arena.

For certain waste arena activities located in Agreement States (i.e., uranium recovery, low-level waste disposal, and non-reactor decommissioning), the NRC has relinquished regulatory authority to those States. The NRC has to ensure that these State programs are adequate and compatible with its own regulatory programs to attain a uniform nuclear safety policy throughout the Nation. Therefore, safety performance reflects the results of the collective efforts of the NRC, the Agreement States, and the regulated community.

The NRC will assure that **storage of spent nuclear fuel and transportation** of radioactive materials are maintained at the highest levels of safety commensurate with the risks associated with such activities. In this regard, as the amount of spent nuclear fuel increases and more licensees begin decommissioning, increased reliance on storage will become necessary for continued plant operation and for decommissioning of nuclear power plants. As a result, the NRC will continue to review and license independent spent fuel storage installations, and will continue to review and certify dry cask storage designs. Similarly, to meet the nation's transportation needs for nuclear commerce and for transportation of spent nuclear fuel and other radioactive materials, the NRC will review transportation package designs and approve shipment routing and related safeguards information.

Finally, the Nuclear Waste Safety arena programs and activities will continue to focus on protecting the environment now and in the future. Protecting the environment will continue to be accomplished by assuring that the NRC's actions comply with its statutory obligations.

The NRC will employ the following **strategies** to maintain safety and protection of the environment and to promote the common defense and security:

- *We will continue developing a regulatory framework to increase our focus on safety, including the incremental use of risk-informed[7] and, where appropriate, less prescriptive performance-based[7] regulatory approaches to maintain safety.*

  For the waste arena programs, the regulatory framework that defines adequate safety for current and future generations is in various stages of revision or development. For some programs, such as storage, transportation, and low-level waste, the regulations and guidance are relatively mature, but must be maintained. For other evolving programs, such as high-level waste and decommissioning reactors and other facilities, regulations are being revised or have been recently finalized to establish requirements and reflect risk-informed and performance-based[5] approaches as well as insights gained from our research programs. As appropriate for the individual Nuclear Waste Safety arena programs, risk-informed and performance-based approaches will be incorporated incrementally to improve the focus on safety of the regulations and related guidance making up the regulatory framework. We will ensure, by using risk assessment techniques for differentiating between high- and low-risk activities, that our regulatory focus is on those activities that pose the greatest risk to the public now and in the future. We will focus on those areas where important gaps in information exist and where uncertainties exist about the

significance to risk. We will develop guidance to ensure that specific applications of risk assessment methods are suitable and that there is consistency in their use in our decision-making process. Because of the diversity of programs within the Nuclear Waste Safety arena, risk assessment techniques will only be used where the subject matter is amenable to the risk assessment strategy and where the greatest benefit could be derived.

For these programs, it is also important to develop the technical basis to confirm the adequacy of our regulations and guidance. This is particularly important in areas of uncertainty such as groundwater flow and radio nuclide transport through the environment and the effectiveness of engineered barriers to prevent releases over long time periods. As a result, research programs to support guidance and review methods, such as numerical modeling that will be used for determining compliance with these regulations, also need continued development and revision to reduce uncertainties and incorporate new information. Finally, for programs where new technology is involved or where regulations or guidance are new or evolving, interactions with applicants will be important to discuss acceptable ways to comply with the regulatory requirements.

- *We will continue authorizing licensee activities only after determining that these proposed activities will be conducted consistent with the regulatory framework.*

Authorizations such as licenses, certificates of compliance, and amendments or renewals will be issued only after safety and environmental regulations have been addressed adequately and the licensee has demonstrated that the licensed or authorized activity can be carried out in a safe manner and, as appropriate, will protect future generations as required by regulations. This includes decommissioning, emergency planning, physical protection, quality assurance, training, financial assurance, and other requirements. The regulations and guidance making up the regulatory framework will be applied to independently evaluate the applicant's demonstration that the proposed activities comply with regulations and can be performed safely. These evaluations will include conducting safety analyses, environmental reviews, and the necessary and sufficient safety and safeguards inspections. This evaluation and verification process will facilitate early identification of any existing or potential safety- or safeguards-significant issues and allow for timely implementation of appropriate actions. In addition, the adjudicatory hearing process will support final licensing decisions. Furthermore, as the Agreement States conduct their licensing reviews, we will consider providing technical assistance when requested.

- *We will confirm that licensees understand and carry out their primary responsibility for conducting activities consistent with the regulatory framework.*

For licensees who have operating facilities or who are conducting decommissioning or reclamation activities, inspections or other independent approaches (e.g., third-party reviews) will continue to be important methods to verify that licensees understand their responsibility to safety and that their activities remain in compliance with regulatory requirements. Inspections help identify safety issues before they affect safe operations. We will use the risk-informed regulatory framework to inspect licensees at varying frequencies and with varying techniques, depending on the particular operation and its relative risk. Increased attention will be given to licensees with marginal performance by focusing inspection resources on the basis of licensee

performance. Allegations regarding licensee performance or potential wrongdoing will be appropriately and objectively addressed in a timely manner. Enforcement sanctions for violations of regulatory requirements will be used if appropriate.

- *We will respond to operational events involving potential safety or safeguards consequences .*

  We will provide timely, accurate, and complete assessments of safety and safeguards events by evaluating recommendations of the licensees for actions to protect the public or national defense and security and by coordinating with other Federal agencies, State and local governments, and the licensee. Depending on the nature of the event, we will share information with other countries and international organizations. The technical staff will have sufficient skills and knowledge to support the agency or State in responding to operational events. Additional support will be provided by the continuously staffed Incident Response Operations Center. Periodic exercises will be conducted to ensure that response organizations are proficient and experienced and that staff are trained to respond to operational events according to their safety or safeguards significance. Incident investigation capabilities also will be maintained.

- *We will evaluate potential new information from research, new safety issues, changing external factors, international programs, and licensee operational experience so that improvements can be made to maintain an adequate regulatory framework.*

  A wide variety of changes to the external environment are expected to have the potential for impacting future waste arena activities. We will evaluate this new information and make appropriate changes to the regulatory framework. Political and economic factors could redirect waste arena programs. For areas of technical uncertainty, improvements in knowledge or advances in technology that might identify or resolve safety issues are possible. In addition, the operational and regulatory experience that will be gained both domestically and internationally could raise new safety issues as well as suggest approaches to resolve them. As a result, research and technical studies can identify where improvements are necessary to maintain the adequacy of the regulatory framework and its technical basis. Finally, we will share relevant generic safety information (e.g., Bulletins, Information Notices, and pertinent international reports) with Agreement States and licensees, as well as the international community, so we can learn from each other's experiences.

- *We will keep pace with the national high-level waste management program. We will apply the regulatory framework to prelicensing reviews and consultations with DOE to resolve the issues most important to repository safety and prepare for addressing a licensing decision within the statutory time period.*

  Consultations with DOE and prelicensing reviews of DOE's program at the Yucca Mountain site will continue to focus on resolving the key technical issues most important to safety of the repository. These reviews will apply the regulatory framework and will be further risk-informed by results of the staff's independent safety assessments of both preclosure and postclosure repository performance. Feedback from our assessments and reviews will provide DOE with timely guidance regarding the sufficiency of its program for providing a complete license application for the geologic repository. This approach will support a licensing decision within

the three-year statutory time period. These reviews and consultations will prepare the Commission to comment on the sufficiency of DOE's site characterization and waste form which is required by the Nuclear Waste Policy Act (NWPA) to be included in the President's site recommendation to Congress.

The NRC will use the following **measures**[2] to assess results in maintaining safety, protecting the environment, and promoting common defense and security:

- *No events resulting in radiation overexposures*[32] *from radioactive waste that exceed applicable regulatory limits.*

- *No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.*[33]

- *No radiological releases*[34] *to the environment from operational activities that exceed the regulatory limits.*

- *No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future.*[35]

- *No non-radiological events that occur during the NRC-regulated operations that cause impacts on the environment that cannot be mitigated within applicable regulatory limits, using reasonably available methods.*[36]

These measures utilize regulatory limits and standards and represent more conservative thresholds to preclude violating the strategic goal measures data. They were chosen to identify processes or procedures that have led to events of limited significance but could be indicators of potential weaknesses. They were chosen to identify events where the NRC can monitor its success in assuring that all radioactive waste and materials under NRC responsibility can be handled, transported, stored, or disposed of safely; no events occur that result in public or worker overexposures or releases that exceed applicable regulatory limits; no losses of control of radioactive waste and regulated materials occur; and no events occur during NRC-regulated operations that cause an impact on the environment.

In particular, the fourth measure addresses two items. First, all waste and materials which the NRC is responsible for can be appropriately and safely addressed at the present time, i.e., no loss of control. Second, the NRC would not authorize activities related to waste and materials (e.g., reclamation, decommissioning, storage, or disposal) without reasonable assurance that public health and safety and the environment will be protected in the future as required by applicable regulations. This second item addresses protection of future generations for compliance time periods specified in the regulations (e.g., 10,000 years for high-level waste disposal).

PERFORMANCE GOAL: Increase public confidence.

The NRC views building and maintaining public trust and confidence that the NRC is carrying out its mission as an important performance goal for the agency. To reach this goal, the NRC must be viewed as

an independent, open, efficient, clear and reliable regulator. This will be accomplished by providing our stakeholders with clear and accurate information about, and a meaningful role, in our regulatory programs. The NRC desires that diverse stakeholder groups (i.e., general public, Congress, the NRC licensees, other Federal agencies, States, Indian Tribes, local governments, industry, industry workers, technical societies, the international community, and citizen groups) increasingly recognize that the NRC actions assure that public health and safety, the common defense and security, and the environment are, and will remain, adequately protected from hazards resulting from the activities in the Nuclear Waste Safety arena.

The NRC must forthrightly inform the public about nuclear safety incidents and issues and provide avenues for meaningful input and dialogue. Because of the diversity of stakeholder and public interests within this arena, the goal recognizes that there may not always be a consensus. This goal also recognizes that although the public may not always agree with the NRC's actions, public confidence in the NRC is enhanced when the agency listens to all interested parties and makes its decisions in a thorough, disciplined, and timely manner.

Public concern about the safety of nuclear waste arena activities is high, particularly for those who may live near these regulated activities. Although the NRC has conducted its regulatory oversight openly and has provided information to a variety of stakeholders, it recognizes the need for improvement through an integrated communications plan to implement the strategies.

The NRC will employ the following **strategies** to increase public confidence:

- *We will make public participation in the regulatory process more accessible. We will listen to their concerns and involve them more fully in the regulatory process.*

  One of the attributes of strong and fair regulation involves consistent and early public involvement. The agency recognizes the public interest and concern in the proper regulation of waste arena activities. The agency further recognizes its responsibility to provide opportunities for meaningful public interaction and involvement. The NRC will listen to and be responsive to requests, inquiries, and concerns from the public. We will provide opportunities for the public to bring information and issues to the NRC by holding open meetings in the vicinity of those affected, providing adequate notice of meetings, developing and implementing communications plans for major regulatory activities, and holding workshops. We will consistently consider this input in planning changes and making decisions relating to our practices, rules, and processes.

- *We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.*

  Public confidence in the NRC will be enhanced by avoiding raising stakeholder concerns unnecessarily. We can avoid concerns if the information is presented in a manner that is easily understood and placed in its proper safety context. Whenever possible, we will use quick, personalized forms of contact with our stakeholders. Our communications with the public will be designed to foster greater understanding of and confidence in our regulatory program. The information we disseminate will be clear, technically sound, accurate, reliable, objective, and timely. We will take full advantage of the Internet and new technology for information dissemination. We will protect the private, proprietary, and classified nature of information. All

stakeholders should be able to rely on our statements and information as being objective and not promotional. The NRC will clearly communicate to and educate stakeholders about its precise role in the waste arena.

- *We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.*

  The public's confidence in Nuclear Waste Safety arena activities is influenced by its perception of the NRC. We will candidly acknowledge our mistakes and our failures to meet our commitments. Finally, as part of implementing a Planning, Budgeting, and Performance Management (PBPM) process, we will provide visibility to our performance goals and measures. We will manage to that performance and will measure and report on achieving performance goals as they relate to public health and safety and the environment.

  We will explore additional opportunities to convey our actions and activities, including achievements, to a broader audience. This may include expanding our reports to Congress, increasing our information exchange with the media outlets, and enhancing our external and internal home pages.

- *We will continue to foster an environment where safety issues can be openly identified without fear of retribution.*

  Public confidence is enhanced in an environment where safety issues can be raised and addressed without fear of retribution. Examples of how this strategy will be implemented in this arena include conducting NRC's 10 CFR 2.206 petition process, responding to allegations, addressing safety-conscious work environment concerns, and implementing the NRC's programs for differing professional views/opinions. We will also participate in the agency's pilot program to solicit feedback from individuals raising safety issues to assess the NRC's effectiveness in handling allegations. Finally, we will encourage licensees and applicants to be open and responsive to the public affected by their regulated actions.

We will use the following **measures** to increase public confidence:

- *Complete the milestones in the annual Performance Plan relating to collecting, analyzing, and trending information for measuring public confidence.*

- *Complete all of the public outreaches as scheduled in the annual Performance Plan.*

- *Complete the milestones specific to the agency allegation program effectiveness assessment plan as identified in the annual Performance Plan.*

- *Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206*[12] *within an average of 120 days.*[13]

The staff is increasing the number, and improving the quality, of its interactions with external stakeholders. We intend to take advantage of these interactions by requesting feedback from the stakeholders that participate in them. The staff believes that the combination of (1) being more pro-

active in interacting with external stakeholders, (2) improving our interactions with these stakeholders, (3) improving our responsiveness to stakeholder concerns, and (4) systematically monitoring feedback will allow the staff to assess changes and trends in public confidence.

Public outreach was chosen as a performance measure for public confidence based upon NRC experience from well conducted public outreaches. In response, the need for communication plans is recognized in this Strategic Plan. This measure relies on the annual Performance Plan to identify the specific metrics that will be used in assessing results.

The agency is currently developing an agency allegation program effectiveness plan and has not yet identified the specific milestones to be completed during the years cover by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

The assumption that the public and other stakeholders will continue to provide substantial feedback to and interact with the NRC to improve our programs and processes is inherent in the above strategies and measures.

PERFORMANCE GOAL: Make NRC activities and decisions more effective, efficient, and realistic.

The NRC will continue to improve its regulatory processes so that they become more effective, efficient, and realistic. The NRC will identify and focus on necessary and sufficient regulatory activities that are linked to its goals. In those regulatory activities, the NRC will strive to optimize regulatory programs and processes, where possible, while assuring safety and improving public confidence. In working toward this performance goal, the NRC will apply its Principles of Good Regulation which include improved efficiency, clarity, and reliability.

The NRC will ensure that its decisions are scientifically-based; risk-informed; and shaped by operational experience, new information, and research, including cooperative international activities. As a result, the NRC's decisions will be realistic, will be systematic, and will appropriately treat areas of uncertainty. The NRC will ensure that its procedures, processes, and expectations are better-defined, clearer, and more transparent. The NRC regulatory actions will support more consistent, reliable, predictable, and timely decision-making. Furthermore, the NRC will seek to minimize duplication of efforts with stakeholders to achieve this goal, while relying on the technical and managerial competence of its staff to achieve success. To avoid duplication of research activities being performed by other countries, we will coordinate our research programs with other countries, thus leveraging our research funds.

By striving to become more effective, efficient, and realistic while continuing to assure adequate protection of the public health and safety, the environment, and the common defense and security, the NRC intends to keep regulatory burden and related costs to licensees, applicants, and ultimately the public, as low as practical. The NRC will capitalize on advances in technology and implement changes to improve internal processes related to regulatory actions. As part of this effort, the NRC will continue its efforts to develop and update licensing and inspection guidance in order to improve the consistent, effective, and efficient implementation of its policies in the field. Furthermore, the NRC will strive to be less prescriptive and will apply risk-informed, performance-based approaches as appropriate.

NUCLEAR WASTE SAFETY

Effectiveness means producing the necessary and sufficient work to achieve our goals. The NRC must periodically challenge the value of NRC programs and activities based on how they contribute to the achievement of goals. The NRC business processes and regulatory decisions will reflect high standards of quality and be technically sound. Specific challenges in this regard involve (1) risk-informing the NRC's regulatory programs; (2) preparing to address evolving technologies and a changing regulatory environment; and, (3) improving predictability and consistency of agency decisions. We will also pursue international cooperative research in order to leverage our resources, share research facilities wherever possible, and maintain an environment in international committees and working groups which can best further our interests and minimize unnecessary duplication of effort.

Efficiency means conducting our work productively and on time. Efficiency will be enhanced by simplifying or streamlining our internal processes based on self-assessment and experience, using improved tools, and becoming more timely and predictable in delivery of services and decisions.

To become more effective and efficient, the NRC will plan and schedule its work activities and identify key milestones to monitor progress. When issues emerge, the NRC will readjust plans and schedules, and resource allocations, if necessary, to ensure attention is focused on the highest priority activities and conducted efficiently.

NRC decisions will be made more realistic by eliminating excessive conservatism. Realism is supported by risk information, research results, and operational experience.

The NRC will employ the following **strategies** to make NRC activities and decisions more effective, efficient, and realistic:

- *We will continue to improve the regulatory framework to increase our effectiveness, efficiency and realism.*

  We will make improvements to our regulatory framework or take other agency actions (e.g., seek legislative changes) to resolve circumstances that reduce our effectiveness or efficiency. For example, improvements would be needed for circumstances such as: (1) overlapping regulatory responsibility or dual regulation; (2) conflicting positions regarding regulatory jurisdiction; and, (3) conflicting standards that impact finality of licensing decisions. Furthermore, we will incorporate risk-informed and performance-based approaches, as appropriate, into our regulatory framework where they can substantially improve our effectiveness, efficiency, and realism (i.e., reduce excessive conservatism). This will be accomplished, in part, by conducting an integrated evaluation of risk information, inspection findings, operating experience, research results, and cost data as part of the agency-wide Risk-Informed Regulation Implementation Plan. In addition, we will continue to incorporate, where applicable, existing consensus standards and international guidance into our regulatory framework. We will also encourage stakeholders to develop and use new consensus standards.

  Furthermore, we will develop and revise appropriate licensing and inspection guidance so that applicants and staff have a clear and consistent understanding of how to develop and review licensing applications, respectively. This guidance should minimize the staff's requests for additional information, subsequent license revisions, and additional rounds of staff review. It will also help the staff prepare for, and conduct, inspections.

Finally, through research and technical studies, and participation in international committees and workshops, we will anticipate opportunities for regulatory improvements that may come from industry's introduction of new technologies. Similarly, we will use domestic and international research, technical studies, and risk information to reduce excessive conservatism, and ensure that the regulatory framework is based on technically sound, and realistic information.

- *We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.*

  We will continually improve and standardize our processes through a robust program of self-assessment and application of lessons learned. In particular, effectiveness reviews of program and program support areas will be conducted to determine what work needs to be added, maintained, reduced, or eliminated to deliver the desired outcomes. Efficiency reviews of key processes in program and program support areas will be conducted to determine the most efficient means of delivering the desired outcomes. In addition, to improve decision-making, we will develop processes that will assess the skills and tools needed by the staff to allow the appropriate level of decision-making for specific types of decisions consistent with our statutory and regulatory authority. Staff will be authorized to take the appropriate and necessary action and make decisions that are within the scope of their assigned responsibilities and will be accountable for those actions and decisions.

The NRC will use the following **measures** to make NRC activities and decisions more effective, efficient, and realistic:

- *Complete those specific waste milestones in the Risk-Informed Regulation Implementation Plan identified for completion in the annual Performance Plan.*

- *Complete at least two key process improvements per year in selected program and support areas (considering internal and external input) which increase efficiency, effectiveness, and realism.*

- *Complete all major prelicensing milestones needed to prepare for a licensing review of the Yucca Mountain repository, consistent with DOE's schedules and before DOE submits its license application. The milestones are: (1) final regulation in 10 CFR Part 63, (2) Yucca Mountain Review Plan, (3) Site Characterization Sufficiency Comments, (4) comments on DOE's draft Environmental Impact Statement, and (5) resolution of key technical issues at the staff level.*[37]

Together, these measures were chosen to identify the conditions under which the NRC would make continuous progress to assure that its regulatory processes (i.e., rulemaking, licensing, inspections, and enforcement) have appropriate safety and environmental impacts in accordance with applicable statutes and regulatory requirements; its regulatory duties are executed in a business-like fashion; and its decisions are technically sound and based on realistic information. In addition, a separate measure for completing major high-level waste prelicensing milestones is included to measure our effectiveness in keeping pace with the national high-level waste repository program without diminishing our focus on safety in preparing for a licensing review.

The agency is currently developing an agency allegation program effectiveness plan and has not yet identified the specific milestones to be completed during the years covered by this Strategic Plan. Specific milestones will be identified each year in the NRC's Performance Plan. In this way, Congress

will be informed in a timely manner of the completion goals of the agency. NRC will be developing criteria for the choice of the specific milestones and for the monitoring processes. Milestones for the development and implementation of these criteria and the monitoring process will be included in the Performance Plan, so that progress on this activity will be reported to Congress on an annual basis.

The measure of at least two key process improvements per year was selected in addition to the risk-informed measure to focus on other areas to seek improvement. The intent of the measure is to annually develop a list of key process improvements. The list will be prioritized based on the estimated effectiveness of the improvement and the completion of the two key process improvements would be tracked in the Performance Plan. The number of key processes, two, was chosen as a starting figure and as experience is gained, that metric may be revised.

PERFORMANCE GOAL: Reduce unnecessary regulatory burden on stakeholders.

The NRC will strive to reduce unnecessary regulatory burden and associated costs if possible, while achieving the other three performance goals. Unnecessary regulatory burden for the NRC licensees may be defined as requirements that goes beyond what is necessary and sufficient for providing reasonable assurance that public health and safety, the environment, and the common defense and security will be protected. The costs associated with the NRC activities can impact a variety of the NRC stakeholders. For some stakeholders, such as States and the public, costs could potentially result from actions by States to augment the NRC regulatory program, clean up sites, or dispose of radioactive material that are paid for with public funds. For others, such as applicants and licensees (and ultimately the public), unnecessary burden may be imposed by an overly detailed technical review that could result in increased costs that are passed on to the consumer.

Although regulation, by its nature, is a burden, the NRC will ensure that only the level of burden necessary to maintain safety is imposed on licensees. This burden reduction can be achieved by using risk-informed and performance-based approaches, if justified, to focus attention on those areas of highest safety priority and by making more realistic decisions without excessive conservatism. We will use domestic and international research and technical studies to evaluate new information in order to identify areas in our regulatory programs where unnecessary burden and duplication can be reduced.

Consideration will be given to making regulatory burden commensurate with the risk of the regulated activity and the enhanced benefit to the workers, the public, and the environment. Furthermore, regulatory burden associated with a safety enhancement will be considered in light of a cost/benefit analysis prior to the imposition of a new regulatory requirement. Regulatory oversight will be fair, consistent, effective, and timely in its application. Costs associated with the regulatory infrastructure must be fair, equitable, and shared by all users.

The NRC believes that some of the regulatory burden in the Nuclear Waste Safety arena associated with the regulations and practices in place over the years was not commensurate with the safety benefit. During these years, an ever increasing body of domestic and international technical knowledge, operational experience, and development of risk assessment tools has been accumulated. This has allowed recent refinements and significant enhancements to NRC regulations, programs, and guidance. Continuing these ongoing efforts and increasing the attention to implementing the new rules are critical to implementing a more risk-informed regulatory framework for these programs. These efforts will provide the basis for further reducing unnecessary regulatory burden.

NUCLEAR WASTE SAFETY

The NRC will employ the following **strategies** to reduce unnecessary regulatory burden on stakeholders:

- *We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.*

  We will use risk-informed and performance-based approaches, where appropriate, to ensure that all elements of our regulatory programs (i.e., regulations, guidance, licensing, assessment, inspection, and enforcement) are conducted commensurate with the level of risk. This will provide licensees with flexibility in meeting regulatory requirements. The scope and priority of changes in our regulatory processes will consider stakeholder input, the effects of dual regulation with other Federal and State entities, and the cumulative effect each has on agency and licensee burden reduction. In addition, we will use domestic and international research and technical studies to evaluate new information in order to identify areas in our regulatory programs where unnecessary burden and duplication can be reduced. New information includes improvements in knowledge, advances in technology, and insights gained from operational and regulatory experience, both domestically and internationally. Research will focus on identifying where excessive conservatism can be eliminated or reduced.

- *We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.*

  As we execute our programs, we will make improvements to those aspects of our regulatory processes that had resulted in unnecessary costs to our stakeholders. In particular, we will evaluate the adequacy of guidance, the timeliness of actions, the necessity for multiple rounds of requests for additional information, and the necessity of dual regulation with other Federal and State entities.

  As we make licensing decisions, conduct inspections, and take enforcement actions, we will take into account the necessity of any additional burdens imposed on licensees and other stakeholders.

  We will evaluate the sufficiency of funding and sureties for remediation of sites. In addition, we will assure that NRC actions minimize the potential for future bankruptcies of companies resulting from remediation of uranium recovery facilities or decommissioning of facilities. For example, we will assure that NRC actions are timely and do not cause undue delays while waiting for an NRC decision or impose overly conservative solutions, both of which could result in higher costs from either maintaining or remediating a site.

- *We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.*

  We will encourage licensees to identify for NRC consideration concerns with the NRC's regulatory programs, such as untimely, inadequate, or inappropriate staff actions, that have resulted in unnecessary cost. In addition, we will continue initiatives to interact with stakeholders to ensure a mutual understanding of existing regulatory requirements, guidance, or licensing decisions. Such interactions will provide opportunities for stakeholders to identify problems or suggest improvements. The NRC will also be able to clarify or explain the basis for requirements, guidance, or licensing decisions and why we believe they are necessary and sufficient. Where guidance is being developed or used for the first time, we will invite

stakeholder feedback to identify aspects of the guidance that might be unclear, unnecessary, inflexible, or otherwise considered excessively burdensome by the licensee. Where licensees are using new requirements or guidance for the first time to prepare specific submittals, we will be available to interact with them upon request during the development of the submittals. We will be able to provide guidance concerning implementation questions or technical issues they identify relating to understanding NRC requirements that might help them prepare an acceptable application.

The NRC will use the following **measure** to reduce unnecessary regulatory burden on stakeholders:

- *No more than one substantiated case of unnecessary regulatory burden per year, resulting from modification or application of the waste arena regulatory framework as identified by a licensee or a non-licensee external stakeholder.*

The NRC wants its regulatory programs to be protective at reasonable cost and without excessive conservatism. The NRC seeks opportunities to reduce existing unnecessary regulatory burden and will strive to ensure that any new actions by the NRC do not impose any new unnecessary regulatory burden. These performance goal measures are designed to assess how the agency is meeting these objectives and apply only to the NRC. They exclude Agreement States. The first measure tracks instances where the NRC may have overlooked a potential unnecessary regulatory burden associated with implementation of new or revised regulations or regulatory guidance that became effective during the reporting period. It includes instances of license review, inspection, or enforcement activities where new or existing regulations and regulatory guidance may have been inappropriately applied. Licensees or other external stakeholders may inform the NRC of a potential regulatory burden in writing, via E-mail, or may present a potential unnecessary regulatory burden issue to the Commission during transcribed meetings. Responsible management will be required to evaluate each item as a potential example of unnecessary regulatory burden and recommend an appropriate course of action within a defined time period. In addition, the first metric provides an indication of quality of work. Any NRC activity that imposes new unnecessary regulatory burden indicates that the work process failed to identify the new burden.

No additional metric for reducing any current burden was used because the efforts for completing the milestones for risk-informing activities should, in addition to increasing effectiveness, efficiency, and realism, reduce unnecessary burden. Further opportunities to identify unnecessary regulatory burdens will be sought through interactions with external stakeholders as a matter of policy.

STATUTORY AUTHORITY

- Atomic Energy Act as amended
- Energy Reorganization Act as amended
- Energy Policy Act
- Hazardous Materials Transportation Uniform Safety Act
- Low-Level Radioactive Waste Policy Act
- Low-Level Radioactive Policy Amendments Act
- Nuclear Waste Policy Act
- Nuclear Waste Policy Amendments Act
- Uranium Mill Tailings Radiation Control Act as amended
- West Valley Demonstration Project Act
- Waste Isolation Pilot Plant Land Withdrawal Act

NUCLEAR WASTE SAFETY

- Endangered Species Act
- National Historic Preservation Act
- National Environmental Policy Act
- Nuclear Non-Proliferation Act

MAJOR EXTERNAL FACTORS

Listed below are assumptions about major external factors and how they might affect achieving the goals of the Nuclear Waste Safety arena:

- The strategic goal of promoting the common defense and security in the Nuclear Waste Safety arena assumes no change in the threat of terrorism. With that assumption, the current security and safeguard requirements are adequate to maintain the strategic goal.

- Permanent disposal of high-level waste will continue to be a goal of the national program, and the NWPA and the Energy Policy Act of 1992 (EnPA) statutory requirements will remain in effect. Furthermore, DOE will continue its plan to submit a site recommendation to the President in FY 2001 and a license application to the NRC in FY 2002 for a geologic repository at the Yucca Mountain site. However, uncertainty exists about whether and how Congress might change the national program in future legislation. Uncertainty also exists about DOE's schedule given recent congressional budgeting actions affecting DOE's program.

  Future legislation could define a high-level waste disposal standard and/or specify new agency responsibilities for standard development. Such changes would affect our regulation and Yucca Mountain Review Plan. Changes in DOE's schedule would affect the NRC's schedules for conducting its pre-licensing reviews, commenting on site characterization sufficiency, and making a licensing decision for the proposed geologic repository. Other significant legislative changes could affect our spent fuel storage and transportation activities as well such as: initiating an integrated spent fuel storage and transportation strategy that includes a national centralized interim spent fuel storage facility, mandating that DOE "take title" to the spent nuclear fuel at the commercial reactor sites, or designating spent nuclear fuel as a resource for use rather than as a waste product for disposal.

- Regardless of the actions that Congress may take, spent fuel at commercial reactor sites continues to mount, which will almost certainly require an increase in the use of dry cask storage technology and the licensing of independent spent fuel storage installations. However, uncertainties exist about specific actions and schedules.

  Commercial reactor licensees will need to increase spent fuel storage capacity over the next several years. Storage of spent fuel will continue at commercial independent spent fuel storage installations (either under a general license or a site-specific license), and a commercially sponsored away-from-reactor central storage facility is under review (i.e., Private Fuel Storage, L.L.C.). While progress has been made in the review of spent fuel storage facilities and dual-purpose (spent fuel storage and transportation) cask systems, anticipated licensing actions are expected to increase. Moreover, the NRC may receive an application for a second away-from-

reactor central independent spent fuel storage installation to store commercial reactor spent fuel. Also, licensees will need to prepare to transport spent fuel. Furthermore, depending upon the legislative action taken by Congress regarding DOE taking title to the spent fuel at each commercial reactor site, licensees may decide to begin storing fuel in dry cask storage at their site on an accelerated schedule. Moreover, DOE itself (or its contractor) may submit a license application for the storage of spent fuel at a DOE facility. The above uncertainties could cause changes to or conflict with work priorities and schedules that, in turn, would reduce staff efficiency and possibly delay licensee schedules.

Finally, if new spent fuel storage and transportation technologies are introduced, the NRC will need to become knowledgeable in the new areas in order to review, approve and inspect the new designs. Additionally, as DOE delays taking spent fuel from the licensees, dry cask storage certificates and independent spent fuel storage installation licenses will have to be renewed. This may present technical challenges that have not been considered and need to be addressed by revising the regulatory framework.

- Differences will continue among Federal agencies regarding an acceptable level of risk and groundwater protection. These differences contribute to uncertainty about completing the regulation and review plan for the high-level waste repository program and the finality of our license termination decisions for decommissioning.

  EPA's proposed standard for the Yucca Mountain high-level waste repository includes a separate groundwater protection requirement and details for implementing the standard, which the NRC has opposed in formal comments to EPA. If a final EPA standard retains some of these proposed requirements, particularly the separate groundwater protection requirement, additional NRC work may be needed that could impact schedules and costs. Additional work could include developing new requirements with supporting technical bases and associated review plans. Lack of finality for decommissioning decisions could cause additional work to be done by the licensee or impact the licensee's future plans for the use of a site. Agency differences will also unnecessarily complicate the public's understanding of the acceptable level of protection for the public. Furthermore, continued lack of resolution will diminish public confidence in the credibility of both NRC and EPA and would also give the appearance to the public that the NRC is less protective than EPA.

- There will continue to be substantial public interest and involvement in all nuclear waste arena activities. Opposition may require specific attention to program or licensee-specific factors.

  With respect to the performance goal of increasing public confidence, interactions with the public are important for generating understanding of and confidence in NRC decisions. This confidence is generally based on the public's perceptions regarding the regulator and the industry. Some of these perceptions are based on: (1) actual experience with the NRC and its performance; (2) external factors (e.g., media reports, political commentaries, special interest group efforts, and industry group statements) that may or may not be closely linked to our actual performance; and, (3) operational events such as accidents at Three Mile Island and Chernobyl even though the impact on health and safety of the first accident was minimal and the facility involved in the second accident was outside the NRC's regulatory control. To many, confidence

(or lack of confidence) in the regulator and in the regulated community cannot be clearly separated. Therefore, we recognize the potential that our activities, licensee's activities, and international events jointly contribute to, or erode, the public's confidence and may cause us to take additional measures to assure the public.

Responding to public interest and improving public involvement will result in additional resource costs to both the NRC and licensees. However, if additional resources are invested early in a project to obtain input from the public, a better quality product should result and costs could be reduced later in the project to address more entrenched opposition or to resolve conflicts. Recent experience with our public workshops for the control of solid materials illustrates another challenge. In some cases, public interest groups have boycotted our workshops because of their opposition, thereby precluding our initiatives to inform these stakeholders and obtain their input about this important issue. Such resistance will result in additional costs for our future efforts to inform and involve important stakeholders. In any case, our efforts may not be successful and could negatively affect our overall goal of improving public confidence in the NRC as a regulator.

- The cleanup and long-term institutional control of permanently shutdown nuclear materials facilities will be a challenge where responsible parties lack adequate resources.

  For some decommissioning sites, clean-up costs are projected to be very high (well over $100 million in some sites) and beyond the financial capability of licensees and responsible parties. In some cases, corporate pressure is strong to minimize remediation costs, especially when operations have ceased and the facility is no longer a source of corporate income. In other cases, the costs may bankrupt corporations, then be passed along to the public. We recognize the desire of responsible parties to minimize costs, and we will assure that unnecessary costs will not occur. However, we must take the necessary regulatory actions, including financial assurance, so that remediation can be completed consistent with our regulations to assure meeting the performance goal of maintaining safety and protection of the environment.

- Agreement States will continue to assume responsibility for decommissioning Site Decommissioning Management Plan (SDMP) sites. In FY 2002, 10 sites will be transferred to Pennsylvania and one will be transferred to Minnesota unless these States make a request similar to Oklahoma's request not to transfer the SDMP sites in their State.

  The 11 sites in Pennsylvania and Minnesota make-up nearly half of the 26 SDMP sites which NRC is currently responsible for. Therefore, final decisions regarding site transfer could result in major changes to our plans and schedules for the decommissioning program. Such changes could impede expeditious cleanup, raise public concern, and affect the efficiency of our work.

- The continued availability of low-level waste disposal capacity is uncertain and will be determined largely by external factors. For example, the continued availability of the low-level waste disposal facility at Barnwell, South Carolina, will be determined in the future by the governor and legislature of South Carolina after a task force explores options for the State to discontinue a national low-level waste disposal site.

Closure of or access restrictions on operating low-level waste disposal facilities could force dispersed storage of waste. Should this occur, we would need to complete the guidance for low-level waste storage that was begun in 1994, but suspended because of the reopening of the Barnwell facility in 1995. Other potential impacts include delays in decommissioning of large facilities and an increased interest by licensees in alternatives to conventional disposal, such as increased use of the Resource Conservation and Recovery Act of 1976 cells for slightly radioactive materials. There could also be license applications for new facilities from private companies, or for a new low-level waste management technique, assured isolation, both of which could require NRC resources to address.

- The number of uranium recovery licensees and licensing actions will decrease because the value of uranium will remain low and result in uranium mills remaining shut down or operating on a limited basis. However, there will be a significant increase in the number and complexity of petitions for hearings and litigation concerning cleanup of sites and long-term monitoring and maintenance. However, the number, complexity, and timing of such actions is uncertain. This change results from greater public opposition and increased involvement by environmental organizations.

The above external factors will cause a shift of resources from licensing reviews to support for hearings and litigation. Uncertainty in these types of changes could make planning and efficient execution of plans difficult.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

STRATEGIC GOAL: Support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation.

The International Nuclear Safety Support strategic arena[38] encompasses international nuclear policy formulation, export-import licensing for nuclear materials and equipment, treaty implementation, nuclear proliferation deterrence, international safety assistance, and safeguards support and assistance. The NRC also participates in international safety cooperation, information exchange, and cooperative safety research. These activities are addressed in the individual Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety strategic arenas because that is where most of the results of these international efforts are used. NRC international activities maintain support of the NRC's domestic mission, as well as of broad United States (U.S.) domestic and international interests. In this way, we help influence the incorporation of effective policies and practices into the nuclear programs of other countries and international organizations to improve safety and security and to reduce the potential for proliferation while gaining valuable knowledge, experience, and resources for our domestic regulatory and research programs. With every major problem in the international nuclear arena having repercussions for the NRC or the domestic program, and with our commitment to protect the global commons, it is in the direct interest of both the NRC and the United States to enhance the safe and secure operation of nuclear facilities worldwide.

The absence of the domestic implementation and impact from full discussion within this chapter is not meant to diminish their value. However, the focus of this chapter will be on international activities that are not otherwise captured - those of an external, outward-looking nature, where our national interests are the primary motivator and the NRC operates within the foreign policy framework of the U.S. as defined by the President (through the National Security Council and the Department of State) and Congress. This chapter will concentrate on the NRC's international activities in support of nonproliferation, safety and safeguards assistance, Executive Branch initiatives, and influence and partnership in the international nuclear community. We use "assistance" to denote outward-focused or humanitarian activities where the U.S. interests are the primary motivator and where the benefits are largely intangible. Cooperation activities, in contrast, provide direct benefits to the NRC domestic program.

As regulator of the largest and one of the oldest nuclear programs, and with a safety research program and policies of openness and international engagement to support us, the NRC has been a leader and retains a position of influence in the international nuclear community. We regulate about 25 percent of the world's operating power reactors. In addition, the U.S. is the world's largest exporter of nuclear fuel, equipment, and technology. When the Kahl Nuclear Power Station in Germany achieved criticality in 1961, it became the first civilian power reactor of U.S. design to be commissioned outside the U.S. Today, more than 40 percent of reactors operated outside the U.S. are of U.S. design, and new technologies developed in other countries are being used in our domestic program.

The NRC has carried out a program of international activities since its inception in January 1975, continuing the exchange of information and cooperation in nuclear safety and safety research matters as well as efforts to upgrade safeguards and encourage nonproliferation begun by its predecessor agency, the Atomic Energy Commission. The primary purposes of our international safety activities have been and remain:

INTERNATIONAL NUCLEAR SAFETY SUPPORT

- To gain access to non-U.S. safety information that can alert us to potential safety problems, help us identify possible accident precursors, and provide accident/incident analyses, including lessons learned, that could be directly applicable to the safety of U.S. nuclear power plants and other facilities;
- To assist other countries in their attempts to prevent accidents and to develop or improve their regulatory capabilities and nuclear safety cultures;
- To influence international nuclear regulatory standards, policies, and practices; and
- To leverage research dollars, exchange research results, share research facilities, coordinate analyses of important issues, and avoid duplication of efforts.

The primary purposes of our international safeguards and nonproliferation activities have been and remain:

- To implement or help meet U.S. statutory, treaty, and international agreement obligations;
- To strengthen domestic safeguards systems in other countries; and
- To support and strengthen the nonproliferation regime.

The U.S. policy is to pursue (a) assurances that any nuclear materials or equipment supplied will be used for peaceful purposes only, and (b) the establishment of more effective domestic and international controls over the transfer and use of nuclear materials, equipment, and technology for peaceful purposes, with the goal of helping to prevent or deter proliferation. Nuclear nonproliferation is implemented through a combination of treaties, agreements, procedures, understandings, and principles that support the established international system of proliferation control and deterrence. This system includes the Treaty on the Non-Proliferation of Nuclear Weapons (NPT); regional nuclear weapons-free zone treaties; bilateral and multilateral cooperation agreements; international and domestic safeguards; nuclear export controls; verification activities to monitor NPT and safeguards agreement compliance; diplomatic interventions; and international sanctions, when diplomacy has failed.

Although much progress has been made in the areas of international safety, safeguards, and nonproliferation, there is still much to be done, both bilaterally and with the two international organizations with which we work most closely, the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organization for Economic Cooperation and Development. By judiciously strengthening nuclear safety, safeguards, and nonproliferation cooperation internationally, as needs are identified, evaluated, and ranked, the NRC can better support the efforts of countries and international organizations to develop and implement more effective measures to reduce the potential for nuclear accidents, loss of control of nuclear materials, and spread of nuclear weapon technology. The NRC leadership/partnership role enables us to foster the development of consistent and defensible international nuclear policies and practices, as well as research activities, which enhance nuclear safety, safeguards, and nonproliferation interests.

The primary foundation for the NRC's international activities is the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; the Nuclear Non-Proliferation Act of 1978; other statutes; executive orders and directives; treaties and conventions; other international agreements; and Commission directives.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

The NRC will employ the following **strategies** to support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation:

- *We will continue to take a proactive role in strengthening safety, safeguards, and nonproliferation worldwide*.

  By working proactively to strengthen safety, safeguards, and nonproliferation, the NRC strives to prevent or minimize the occurrence and mitigate the severity of safety and safeguards events and proliferation incidents and to ensure that those that may occur do not result from a failure of the NRC to meet its obligations. We will continue to proactively support U.S. interests to help assure that international outcomes are consistent with U.S. goals. The NRC not only works collaboratively with other U.S. Government agencies to identify and frame the U.S. interests, but it also works in cooperation with entities from other countries addressing the same interests. On some issues, the NRC provides the international leadership to advance the issue; on others, we provide support to countries that have taken leadership in advancing the issue. In cases where we play a less proactive role, we will work to reduce the likelihood of adverse impacts to U.S. interests.

  The NRC will continue to represent the U.S. in international meetings, provide policy guidance and technical assistance to other countries and international organizations, exchange technical information, participate in bilateral and multilateral research programs, and comply with international obligations. We will continue to hold positions of influence and/or chair and participate on interagency and international committees and to detail personnel to other key domestic and international organizations. We will do this because such activities help us guide the direction and scope of important international safety, safeguards, and nonproliferation initiatives; share our expertise; and acquire new insights useful to the U.S. program.

- *We will focus appropriate agency activities and resources on significant international obligations and U.S. and the NRC international priorities.*

  By focusing agency activities and resources on significant international obligations and U.S. international priorities, the NRC seeks to ensure that we continue to meet our significant international commitments, while also demonstrating our full support of nuclear safety, safeguards, and nonproliferation worldwide. By significant obligations, we mean major NRC commitments under U.S. nuclear statutes, treaties, conventions, and Agreements for Cooperation.[39]

  We will carry out and track our significant obligations under this strategy. For example, we will conduct thorough and timely licensing reviews of proposed nuclear exports and imports, as required by statute. In this role, and in the Commission's related consultations with Executive

  Branch agencies, the NRC will take actions to confirm the reliability of the U.S. to meet its commitments to supply special nuclear material and/or fuel cycle equipment to nations that adhere to effective nonproliferation policies. We will consult with the Department of Energy on Part 810 technology transfers; develop independent recommendations on proposed Agreements

for Cooperation; implement IAEA safeguards at licensee facilities; and submit international safeguards data to the IAEA. To fulfill these obligations, we will conduct rulemaking proceedings, as necessary.

In addition to these significant obligations, the NRC will continue to engage in other activities that are required by agency-to-agency bilateral technical information exchange and cooperative research agreements (see other arenas), or directly support U.S. and NRC international policies. Examples of these activities are information exchange with our regulatory cooperation partners and their support organizations, safety and safeguards assistance to the countries of the Former Soviet Union (FSU), support and strengthening of the nonproliferation regime, and participation in important policy and technical activities of the IAEA and NEA.

We will identify significant obligations and other international related activities, set priorities for these obligations and activities, track required actions, and effectively manage the entire process. When issues emerge, we will adjust our plans, schedules, and resource allocations, as necessary, to assure that attention is focused on the highest priority activities and that they are conducted efficiently.

- *We will enhance integration of international activities in the NRC.*

The NRC will develop a more focused international program supported by all involved offices to promote a common approach to, and provide more timely information and guidance on, international issues and activities. We will establish an International Council to improve agency-wide coordination of international activities. Under this Council, senior managers will meet regularly to exchange information, address questions and resolve problems, identify and discuss international priorities (including changed emphases or new initiatives that should be brought to the Commission's attention), and secure participating offices' support, in principle, of planned activities. Individual managers will be responsible for conveying the results of these meetings to their staff. This ongoing dialogue will keep both managers and staff better informed while maximizing benefits to the agency, enhancing efficiency, and avoiding duplication of efforts. The International Council will also provide a forum for ensuring that the NRC's international activities result in a consistent program focused on the agency's strategic goals.

We will make more extensive use of information technology and the Internet to assure that the staff have access to the information they need (including trip reports by previous travelers) to participate most effectively in the international arena. We will look at steps to more effectively call to the technical staff's attention significant information gleaned from foreign interactions. Finally, we will clarify the NRC management's expectations for staff working on international arena activities to understand their role and responsibilities while representing the NRC and larger U.S. interests.

The NRC's international activities span the agency and are the province of no single office. Because of this, a critical element of our success is how well we are able to integrate or harmonize our international activities within the NRC. This integration strategy, because it is directed at the NRC's international activities overall, results in impacts to both our international and our domestic nuclear programs. Although the impact of international activities on the U.S.

nuclear program is addressed in the individual program mission chapters, the primary function of much of our international effort is to facilitate the achievement of the other three arenas' strategic and performance goals and, ultimately, of the NRC's mission.

The U.S. is only one of many countries forming the international nuclear community and the NRC is one of several Federal agencies and multiple national regulatory authorities involved in international nuclear activities. We can try to influence international nuclear safety, safeguards, and nonproliferation decisions and activities, when it is in our interest and identified as an agency priority to do so, but we do not and cannot control them. In addition, because of the diversity of this arena and the nature of diplomacy, the pace of progress is often incremental. Many of our international initiatives represent multi-year rather than annual efforts. It is steps toward their achievement that will be measured.

The NRC will use the following **measures** to assess the results of our efforts to support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation:

- *Fulfills 100 percent of the significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.*

- *No significant proliferation incidents attributable to some failure of the NRC.*

- *No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.*

- *Outcomes in international forums are consistent with U.S. Government objectives identified as pertinent to and actively supported by the NRC at least 60 percent of the time.*

The measures reflect the diversity of the NRC's international activities. Both the measures and metrics demonstrate our commitment to comply with significant international obligations; to exchange information with and provide assistance to other countries and international organizations to minimize safety and safeguards events and proliferation incidents; and to help accomplish U.S. Government objectives in the international nuclear community. Failure to achieve these targets would trigger a self-assessment.

The first measure addresses only the significant U.S. obligations for which the NRC has responsibility. These obligations are derived from nuclear statutes, treaties, conventions, and Agreements for Cooperation and must be of identified importance. Failure to meet these obligations can significantly impair the U.S. Government's ability to pursue its international interests as a trustworthy participant. These obligations will be tracked to ensure that they are met. Compliance with lesser NRC commitments, although not identified in the measure, remains an important component of our strategies.

The second measure addresses the importance the NRC places on nuclear nonproliferation. We will continue to exercise our responsibilities such as export control and safeguards assistance to help prevent significant proliferation incidents. Significant proliferation incidents are defined as actions initiated by a country that threaten the fundamental objectives/stability of the nuclear nonproliferation system and/or

violate NPT and Safeguards Agreement commitments. In practical terms, this could include a non-nuclear weapon state's detonation of a nuclear device, its decision to no longer accept international safeguards on all of its peaceful nuclear activities or to give specific assurances that it will not manufacture or otherwise acquire any nuclear explosive device, and/or its engagement in activities involving source or special nuclear material or equipment having a direct connection to the manufacture or acquisition of nuclear explosive devices.

The third measure addresses the importance the NRC places on the safe and secure use of nuclear materials. We will continue to exercise our responsibilities through information exchange, technical assistance, and research cooperation to help prevent significant safety or safeguards events. Significant safety events will be identified through use of the International Nuclear Event Scale (INES).[40] Events are classified on a scale of seven levels, with the lower three termed "incidents" and the upper four "accidents." The NRC will focus its evaluation on events that are categorized at INES Level 3 or above. Level 3 is the appropriate threshold because it captures the upper limit of facility "incidents" as well as significant radiation exposures that exceed regulatory limits. A significant safeguards event is considered to be the theft or diversion of a formula quantity of strategic special nuclear material.[41] This is of concern because of the possibility that terrorist groups or rogue nations could use the material to construct a nuclear explosive device. Additionally, the sabotage of nuclear material or components containing nuclear material could represent a significant threat to public health and safety through the release of radiation into the environment.

The NRC plays a leading or influential role in international forums that can best further U.S. Government nuclear safety, safeguards, and nonproliferation objectives. This role includes activities to improve the efficiency and effectiveness of international organizations and to raise the levels of safety consciousness and technical expertise of international regulatory authorities, as appropriate. The NRC chairs or has representatives on key international nuclear committees and working groups, and provides direction and recommendations on international initiatives either directly or through U.S. interagency coordination. The fourth measure addresses the NRC's success in using its leadership and other positions of influence in international nuclear forums to bring about outcomes that are consistent with U.S. Government objectives that have been identified and are actively being supported as significant to the NRC.

STATUTORY AUTHORITY

- Atomic Energy Act as amended
- Energy Reorganization Act as amended
- Nuclear Non-Proliferation Act
- Convention on the Physical Protection of Nuclear Material
- Convention on Nuclear Safety
- Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America

INTERNATIONAL NUCLEAR SAFETY SUPPORT

MAJOR EXTERNAL FACTORS

Listed below are assumptions about major external factors and how they might affect achieving the goals of the International Nuclear Safety Support arena:

- High-level U.S. Government international nuclear safety, safeguards, and nonproliferation policy initiatives will continue to require our participation and assistance.

  Although it is recognized that, because of the changing world picture, the focus or intensity of individual efforts may be altered at any time, the total NRC support of U.S. Government safety, safeguards, and nonproliferation initiatives is expected to remain at or near the current level. We will continue to meet the critical elements of our significant international obligations as well as other important international activities. These premises constitute the foundation of the NRC's International Nuclear Safety Support arena. The strategic goal and associated strategies and measures are driven by these factors.

- Advanced countries and international organizations (e.g., IAEA, NEA, and the International Nuclear Regulators Association) will continue to seek our cooperation in safety, safeguards, and nonproliferation.

  Through cooperation with key advanced country and international organization partners, the NRC will enhance regulatory and research information exchange, help develop needed safety guidelines, coordinate approaches on international nuclear safety issues, and strengthen the nonproliferation regime. The number of critical research facilities and the levels of research funding and technical capabilities will continue to decline worldwide, so the NRC will leverage its available resources and undertake collaborative research projects to optimize expenditures and investigative results. These factors will continue to drive international activities addressed in the first two strategies.

- Continuing safety and safeguards needs in a number of countries will lead to continued requests for NRC assistance from foreign regulatory bodies, particularly in the Former Soviet Union, Central and Eastern Europe, and Pacific Rim countries as they focus on developing or enhancing their regulatory programs.

  The NRC will not be able to accommodate all incoming requests for assistance, since its total support of assistance activities is expected to remain near the current level or experience very modest growth at best. We will have to establish assistance priorities and adhere to them as closely as possible, acknowledging that the focus or intensity of individual efforts may be altered by changing circumstances at any time. Factors considered in setting priorities for these assistance requests include the severity of the identified problem or need, the origin of the involved technology, the state of U.S. relations with the country, and whether the assistance to be rendered is part of a larger U.S. or other international initiative. Our assistance activities are an integral part of the first two strategies.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

- One of the U.S. interests encompassed in the International Nuclear Safety strategic goal is to maintain adequate protection, control and accounting over nuclear materials outside the U.S. This strategic goal assumes no change in the threat of terrorism. With that assumption, current export licensing, international physical security, safeguards, and transportation requirements and information exchange and technical assistance activities are adequate to maintain the strategic goal.

CORPORATE MANAGEMENT STRATEGIES

To help accomplish our strategic and performance goals, we have established the following **corporate management strategies:**

- *Employ innovative and sound business practices.*
- *Sustain a high-performing, diverse workforce.*
- *Provide proactive information management and information technology services.*
- *Communicate strategic change.*

These corporate management strategies help us work together more effectively, both within and across strategic arenas. These strategies also help the support offices better serve their customers within the agency to help them achieve the agency's goals. Our strategic and performance goals focus on the mission or business of the NRC. Our corporate management strategies describe the means by which the NRC will conduct its business to ensure success in implementing the Strategic Plan and accomplishing the agency's mission.

Employ Innovative and Sound Business Practices

We are ultimately accountable to the taxpayer for our performance. Implicit in this responsibility is the obligation to foster innovative and sound business practices, ensure integrity, and accomplish our mission in an effective and efficient manner. Improving processes and exercising good business judgment is critical for improving effectiveness and efficiency throughout the agency.

The NRC will employ the following **strategies** to foster innovative and sound business practices:

- *We will strengthen collaborative processes for conducting business among support offices and between support and program offices.*

  As part of the planning process, support offices will collaborate with each other and with program offices to identify the strategies and activities that will contribute the most to achieving success. For example, collaboration is essential for integrating information technology initiatives with programmatic initiatives and for integrating training and development with programmatic initiatives to improve performance.

- *We will improve customer service, balancing internal customer needs with overall agency priorities and available resources.*

  We will increase understanding of NRC business areas to improve the customer service provided, and we will involve internal customers in establishing goals, strategies, and performance measures for support programs and services. We will identify and work with internal customers to agree on service levels that are measurable and reflect an appropriate cost-

value trade-off. When considering ways of improving customer service, we will evaluate whether the cost of proposed changes is merited by the benefit in terms of improved efficiency or effectiveness. We will develop service performance measures, such as standard response times, processing times, and customer satisfaction indices.

- *We will find new and better ways of doing business to increase effectiveness and efficiency of operations.*

We will search out best practices and innovative approaches applicable to agency functions; review existing practices and procedures for the purpose of eliminating, modifying, or simplifying requirements; and evaluate proposed new initiatives by determining the potential value or benefit to be gained compared to the cost of investment. Where possible, we will benchmark our processes and compare our practices and costs to similar organizations.

We will improve decision-making processes in implementing programs. Cognizant offices will develop processes to determine the appropriate level of decision-making for specific types of decisions consistent with our statutory and regulatory authority. Staff will be authorized to take appropriate and necessary actions and make decisions that are within the scope of their assigned responsibilities and will be held accountable.

- *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*.

We will ensure that goals, measures, strategies, and the work to be accomplished for the agency are aligned and logically linked, and that expectations are clearly understood. We will obtain, allocate, and distribute resources consistent with strategic goals and priorities. We will ensure that employees understand their roles and responsibilities under the NRC's planning, budgeting, and performance management (PBPM) process.

We will prioritize our work, then plan and schedule activities accordingly to achieve desired outcomes. We will fully implement a disciplined, integrated planning framework -- the PBPM process -- and will transition to a more outcome- focused organization. Through this process, agency programs and activities will be chosen and prioritized based on the significance of the work to the achievement of our performance goals. The chosen programs will be planned, scheduled, managed, monitored, and assessed through this process. When issues emerge, we will adjust our plans, schedules, and resource allocations, if necessary, to ensure attention is focused on the highest priority activities.

- *We will strengthen our financial systems and processes to ensure that the our financial assets are adequately protected consistent with risk and that our financial information is better integrated with decision-making*.

We will continue to implement new and existing financial accounting standards to maintain an unqualified financial opinion and to improve the effectiveness of our internal controls. We will

provide reliable, timely financial information to managers for use in decision-making. We will increase managers' accountability/responsibility for their decisions by placing more agency funds under their controls. We will increase awareness of using financial information through training. We will use information technology to streamline our financial management processes.

- *We will acquire goods and services in an efficient manner that helps to accomplish our mission, ensures fair and equitable treatment for all parties wishing to do business with the NRC, and results in the best value to the NRC.*

  We will make acquisition decisions that will result in maintaining essential in-house resources and employing outside resources where necessary and cost-effective. We will employ innovative methods to streamline and simplify the acquisition process, reducing the administrative burden for internal clients and those wishing to do business with the NRC. We will develop acquisition strategies that are consistent with agency goals for reducing our exposure to contract fraud and awarding contracts to small, disadvantaged, and woman-owned businesses. Procedures for full and open competition will ensure fair and equitable treatment for all parties. We will employ sound acquisition planning to obtain the goods and services needed to achieve our goals.

  We will use past performance as a key criterion for contractor selections to ensure the greatest likelihood that contract performance will be high quality and cost-effective. We will use performance based contracts to the fullest extent possible and employ performance monitoring techniques to ensure that contracts are fulfilled.

  We will maintain an acquisition culture that rewards innovation and responsible risk-taking.

- *We will modify our management and organizational structure, as appropriate, to meet the changing demands of internal and external factors, such as the economic deregulation of the electric utility industry and any resulting consolidation of the nuclear industry.*

  We will continue to make certain that the agency's management and organizational structure permits us to effectively and efficiently accomplish our mission and achieve our performance goals. Where appropriate, we will consolidate activities performed by overlapping organizations and better define their purpose and intended outcome. As regulatory reforms are implemented, the NRC will examine the need for management and organizational structure changes. We will monitor changes in the electric utility industry that could affect our ability to provide effective and efficient oversight and prepare our organization for change.

Sustain a high-performing, diverse workforce

A high-performance organization demands a dynamic, results-oriented workforce with the knowledge, skills, abilities, and competencies to achieve its mission and goals. Because mission requirements, stakeholder demands, technologies, and other environmental influences are constantly changing, the NRC, as a performance-based organization, must continually assess its capacity to achieve its strategic and performance goals. At the NRC, workforce planning, deployment, and development strategies will produce the right mix of skills and abilities in the appropriate organizations to contribute to maintaining

safety and protecting the environment; increasing public confidence; working effectively and efficiently; and improving programs and processes that reduce unnecessary regulatory burden.

We will employ the following **strategies** to sustain a high-performing, diverse workforce:

- *We will recruit, hire, and retain a high-quality, diverse workforce with the skills needed to achieve our mission and goals.*

  Working with program and support offices, we will use a human resources planning process to identify current and future human capital needs. We will identify specific skills and competencies with the assistance of program and support partners. Based on information gathered in this process, we will develop recruiting and hiring strategies to fill identified gaps. We will seek active involvement of line managers in our recruitment program and will solicit feedback from managers about the quality of our applicants and the timeliness of our hiring process.

  We will use effective human resource management tools to retain outstanding achievers. We will recognize and reward them. We will provide interesting and challenging work assignments. All employees will benefit from the family-friendly policies and programs that enhance the quality of work life. We will continue to provide training and professional growth opportunities in support of our strategic and performance goals.

  We will monitor recruiting and hiring programs to ensure fair and unbiased hiring. We will continually assess demographic statistics on the agency's diversity profile to check our progress against comparable labor market demographics.

- *We will foster a work environment that is free of discrimination and provides opportunities for all employees to optimally use their diverse talents in support of our mission and goals.*

  We will maintain a healthy, safe, secure, and accessible physical work environment. We will provide the equipment, facilities, and administrative support services that employees need to work better, deliver products and services on time, and accomplish the agency's mission more efficiently.

  We will provide policies and programs that enhance the quality of work life and help employees meet the competing demands of work and family. These activities will support healthier, more productive employees who can focus their talents and energies on accomplishing the mission of the agency.

  We will support the goals and objectives of labor-management partnerships and help resolve labor and employee relations issues so that staff can focus its efforts on accomplishing the agency's strategic and performance goals.

CORPORATE MANAGEMENT STRATEGIES

We will provide equal employment opportunity and strive to eliminate artificial barriers to advancement, such as discrimination and sexual harassment, so that all employees may realize their potential and contribute optimally to mission accomplishment.

- *We will base our human resource decisions on sound workforce planning and analysis.*

We will align workforce planning, deployment, and development strategies with our strategic, program, and performance plans. Working with program and support offices, we will use a human resources planning process to identify current and future human capital needs. Based on information gained through this process, we will be better able to determine the appropriate knowledge, skills, and abilities needed by our program and support partners. With input from program and support partners, we will develop an agency skills inventory to assist in identifying current and future skills needs and gaps. Information gained from the human resources planning process will also help determine whether the workforce is deployed appropriately -- both geographically and organizationally -- to support efficient and effective accomplishment of strategic and performance goals.

Through development and implementation of a human resources information system, we will provide accurate, timely, and useful human resources information to managers so they can make informed decisions about hiring, utilizing, training, promoting, appraising, and rewarding staff. We will provide accurate, timely, and useful human resource information to employees so they can make informed employment and benefits decisions.

- *We will improve the capability of our workforce through training, development, and continuous learning.*

We will provide training and development to improve individual and organizational performance in those areas necessary to support the agency's mission, goals, and strategies. We will provide reactor and materials technical training to improve the capability of NRC technical staff to achieve Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support goals and strategies. We will provide professional development opportunities in management, communication, business processes, and computer skills to increase the efficiency and effectiveness of agency staff in implementing our programs and processes. We will provide organizational development services, including team building, change management, and facilitation services, to help our staff adapt to the dynamic environment demanded by an outcome-oriented learning organization.

- *We will select and develop strong managers who can provide vision and strategic leadership.*

We will use executive succession planning and executive development to select and develop agency leaders committed to achieving the agency's mission, goals, and strategies. We will identify the professional/technical and managerial competencies needed for success in Senior Executive Service (SES) positions. We will also identify high-potential leaders from among the SES for succession to these positions. After assessing these high-potential leaders against the competencies identified for these positions, we will plan appropriate learning and developmental

activities for them. In addition, we will offer the SES Candidate Development Program, as needed, to develop and maintain a pool of high-potential candidates who are ready for selection to SES positions.

- *We will focus on results by linking rewards and recognition to outcomes and organizational effectiveness.*

  We will provide compensation, performance management, and rewards and recognition policies and programs that link to program outcomes, organizational effectiveness, and accomplishment of the agency's strategic and performance goals. Working with program and support office line managers, we will assist in developing performance plans that link individual performance with agency strategic and performance plans. With this approach, performance expectations for employees will be aligned with the agency's strategic and performance plans, and personal accountability for performance will be reinforced by both rewards and consequences. This will provide incentives for employees to focus their efforts and energies on producing the outcomes and results we have outlined in our strategic and performance plans.

Provide proactive information management and information technology services

The ability of the NRC staff and stakeholders to prepare, access, communicate, disseminate, and apply information is essential to achieving the NRC's efficiency goal. By focusing the agency's information management and information technology services on enabling staff and stakeholders to better access and use needed information, significant efficiency gains are possible for all participants in the regulatory process.

Information technology is a key enabler for effective access to and use of information through the NRC agency networks, the World Wide Web, desktop technology, the Agency Documents Access and Management System (ADAMS), and other business applications. In addition, information technology is an important tool for the process improvements needed to achieve the NRC's effectiveness and efficiency goal. Outside the agency, licensees and other stakeholders who recognize the opportunities for efficiency gains through use of Web-based processes are coming to expect the capability to do business with the NRC electronically.

In addition to supporting the effectiveness and efficiency goal, information management and information technology services directly support the agency's goals to maintain safety, reduce unnecessary regulatory burden, and increase public confidence. The NRC staff need information and corporate knowledge concerning our regulatory framework and licensee performance to ensure the continued safety of nuclear power and the safe use of nuclear materials and disposal of nuclear waste. Unnecessary burden on licensees can be reduced by providing information technology tools for electronic submittal of licensing information. The public and other stakeholders need NRC information to participate in the regulatory process, and effective access to information about the NRC's activities and performance through such tools as the Web and ADAMS is critical for increasing public confidence.

The NRC's information management and information technology services can be optimally planned and delivered only though a partnership between service providers and customers so that information

management and information technology resources can be applied in a manner that achieves the greatest overall gains in agency effectiveness and efficiency. The NRC's information management and information technology staff must take a proactive, leadership role to understand the NRC's business goals and work in partnership with customers to more effectively use information management and information technology resources to achieve them. At the same time, our stakeholders must take a proactive and leadership role in pursuing the effectiveness and efficiency gains that can be achieved through information management and information technology initiatives.

In partnership with our customers, the information management and information technology staff will employ the **strategies** set forth below to use information and information technology to achieve the NRC's effectiveness and efficiency goal:

- *We will work jointly with program and support offices to integrate information technology and business planning as a means of achieving agency goals and strategies.*

  We will use the strategic planning process as a first step in working with our program and support partners to develop 3-5 year plans to address program goals through information technology applications and to plan for the infrastructure needed to support those applications. We will work with customers to assess the effectiveness and efficiency of their current applications portfolio, assess best practices used by others with similar or analogous business processes, and assess IT opportunities from current and emerging technology with the potential to improve agency performance. We will continue to improve our Capital Planning and Investment Control Process to ensure that future IT investments contribute to agency outcome goals, provide a demonstrable return on investment, and are evaluated in the context of long-range plans for the broader arena and agency-level applications portfolio. We will focus on being business solution providers -- providing leadership to assist our customers in identifying and applying technology to support business goals.

- *We will make it easier for the staff to acquire, access, and use the information they need to perform their work.*

  The effective use of both information and corporate knowledge is critical in nearly all NRC processes and will be essential in becoming more efficient over the next 3 to 5 years. The NRC will pursue programs to improve staff access to both knowledge and information to increase productivity and enhance informed decision-making. We will partner with customers to optimize the use of existing information access tools such as ADAMS and the NRC intranet for information and knowledge transfer. We will help the staff acquire the information they need from external sources. As part of applications and infrastructure planning, we will develop strategies for providing easier access to data in NRC business applications, promote data architecture and data sharing, and provide the staff with effective information analysis and reporting capabilities. We will work with customers to investigate and pilot knowledge management approaches to improve analysis and support informed decision-making, particularly in programmatic arenas. We will focus on making the NRC's desktop interface and applications more coherent and user-friendly so that finding and using needed information becomes easier.

CORPORATE MANAGEMENT STRATEGIES

- *We will assume a leadership role in improving the agency staff's capability to use current and planned information technology to enhance performance.*

  The NRC's staff will play a leadership role in evaluating and upgrading the staff's capabilities to apply information technology to their jobs. We will partner with customers and the agency's human resources staff to define needed information technology skills and develop strategies to develop those skills, promote fuller and more effective use of existing applications, and encourage creative application of information technology knowledge and skills to enhance performance and improve business processes. We will continue to work on improving the staff's ability to successfully sponsor and manage information technology projects. We will promote and place emphasis on change management techniques to ready staff to receive new technologies and applications.

- *We will provide and maintain a robust, reliable, cost-effective, and "user-friendly" information technology infrastructure that is driven by the agency business needs.*

  A robust, reliable infrastructure, including effective support services, is the foundation of all business applications. By robust, we mean an infrastructure that is adaptable, scalable, and secure and one that can meet current and future business application needs, that supports productive use of information, and that promotes effective internal and external communication. To improve the staff's efficiency, we will strive for an infrastructure that is more intuitive and simpler to use. We will provide a customer support staff that have technical expertise and working knowledge of the agency's information technology infrastructure to provide prompt, accurate, and reliable responses to employees' requests for service. To ensure cost-effectiveness, we will partner with customers to reach consensus on levels of infrastructure technology and support services that effectively balance internal stakeholder needs with overall agency priorities and available resources. We will use our information technology Capital Planning process to ensure that infrastructure upgrades provide a good return on investment.

- *We will work jointly with stakeholders to optimize the delivery of information technology and management service.*

  We will involve customers in establishing goals, strategies and performance measures for information management and information technology programs and services. We will work with customers to agree on service levels that are both measurable and reflect an appropriate cost-value tradeoff. We will improve our staff's understanding of NRC business processes and grow their customer service orientation.

- *We will improve the ability of the NRC and external entities to conduct our mutual business electronically.*

  The NRC can improve its efficiency and effectiveness in conducting business with external entities to the benefit of both the NRC and stakeholders. Whether they are learning about potential employment and applying for a position, competing for an agency contract, or applying for a license, stakeholders will increasingly expect to be able to conduct business with the NRC

electronically. The NRC's information management and information technology staff will be proactive in championing and enabling effective public access to the information that is needed to do business with the NRC efficiently and effectively and we will continue to be aggressive in promoting and supporting electronic information exchange and electronic commerce initiatives.

- *We will provide external stakeholders the ability to easily access desired publicly available information to aid in their participation in the NRC's regulatory processes, and to enhance understanding of the Agency's mission, goals, and performance.*

  The general public needs information to understand the NRC's mission and goals, and to evaluate the NRC's performance in achieving those goals. Interested and involved stakeholders need information to participate effectively in the regulatory process. Public confidence will be directly influenced by stakeholders' experiences in obtaining information and by the quality of that information. The NRC's information management and information technology programs, including the external Web site, the Freedom of Information Act (FOIA) program, ADAMS, and the Public Document Program, play a key role in delivering NRC information to the public. As part of these programs, we will be proactive in working with the NRC staff and seeking input from external stakeholders to ensure that the NRC's publicly available information is easily accessible, meets high standards of timeliness and quality, and that sensitive and classified information is adequately protected from disclosure. We will take a leadership role in exploring and making the Commission aware of new technologies that have potential for broadening the public's ability to learn about and participate in our regulatory processes. Recognizing that not all of the public stakeholders have access to computer technology, we will ensure that reasonable means are available for their continued participation.

Communicate Strategic Change

Communicating strategic change is essential to developing and implementing activities to improve public confidence in the NRC and to fulfilling our responsibilities in an effective and efficient manner. Communication among employees and with external stakeholders is a fundamental and necessary aspect of conducting agency business. Effective communications are instrumental in building and maintaining an environment within the NRC in which safety, technical excellence, effective and efficient decision-making, teamwork, innovation and creativity, and improved performance are paramount. Fostering such an environment will help the agency build public confidence and successfully respond to the changing environment by implementing timely changes to regulatory programs and procedures. Because of this environment of change, both internal and external, the NRC will have to continue to manage change. The success of change management will be determined by our ability to effectively communicate with all of our stakeholders.

One aspect of communication has been changed significantly during the past several years. This change was, perhaps, most noticeable during the stakeholder meetings conducted as part of the NRC's Strategic Assessment and Rebaselining Initiative in 1996. One of the broad issues included in this assessment specifically examined public communications initiatives. The results of that effort included discussing approaches that the NRC should take to improve its communication with the public. Effective communication with external stakeholders is essential to inspiring public confidence by providing the

public, those we regulate, and other stakeholders in the national and international community with clear, accurate, and timely information about our regulatory activities.

The legislation that created the NRC states that the agency is to be independent of the regulated industry and is not to promote the use of nuclear technology. This presents communications challenges for both the NRC and the public, including the regulated industry. These challenges are compounded by changing expectations of the public and the regulated industry. To inspire public confidence in the NRC's activities, we must understand the expectations of the public and provide opportunities for public interactions that are meaningful and effective, but that do not promote the use of nuclear technology.

The **strategies** listed below describe how we will establish, evaluate, and sustain effective methods of communication with our stakeholders:

Internal Stakeholders

- *We will review and assess the effectiveness of communication channels and methods within the NRC to ensure that they support the needs of a changing environment.*

- *On the basis of this assessment, we will develop and implement communication plans that support strategic change and foster the desired work environment.*

We will conduct a review of internal communications methods or channels to assess the effectiveness of internal communications actions. This will include activities such as developing an inventory of communications channels used to transmit information, identifying the staff's information needs and expectations at various organizational levels within the NRC, identifying the information transmitted on a channel, assessing the effectiveness of transmitting information on individual channels, reviewing the communications activities of external organizations, identifying best-in-class communications activities, and preparing a listing of specific changes that can be made to improve the effectiveness and efficiency of internal NRC communications.

The results of this review may include specific recommendations such as revised or new (1) communications procedures, (2) communications training for the NRC staff, and (3) communications channels or methods for different types of information.

External Stakeholders

- *We will assess the effectiveness of communications by evaluating the effectiveness of communications channels or methods used to provide information to the public.*

- *We will improve communication with the public by using strategies that recognize the ongoing changes in the environment external to the agency.*

  We will assess the effectiveness of communications with members of the public. Additionally, stakeholder opinions on whether their needs and expectations are being met will be included to

the extent possible, based upon the methods used. The results of this step will be used to review current communications channels and the information provided to external stakeholders on individual channels. This will allow us to assess the effectiveness of communications with external stakeholders. The results will be recommendations for specific changes to the channels used to provide information to external stakeholders. Noting that different segments or groups of external stakeholders may have different needs and expectations, the methods used to assess communications as well as recommended changes may be segment or group specific.

- *We will respond to requests and inquiries from stakeholders in a timely, courteous, and professional manner.*

  We will ensure that inquiries are assigned to the appropriate office and that accurate and complete responses are prepared promptly.

- *We will identify regulatory decisions or issues that are most likely to generate substantial public interest at an early stage of development and initiate actions to inform and involve the public.*

  We will utilize the information learned from assessing communications with internal and external stakeholders to identify changes to existing procedures or the need for new procedures and process controls. We will use these procedures and process controls to provide information to internal and external stakeholders as part of regulatory decision-making and issue evaluation. The responsibility for this aspect of regulatory decision-making and issue resolution will be clearly defined.

LINKS TO OTHER PLANNING DOCUMENTS, PROGRAM EVALUATIONS, AND MANAGEMENT CHALLENGES

LINKS TO OTHER PLANNING DOCUMENTS

Key documents that are linked to and complement this Strategic Plan are:

- NRC's Planning, Budgeting, and Performance Management Process
- Annual Performance Plan
- Annual Performance Report
- Annual Budget Requests to the Office of Management and Budget (OMB) and Congress
- Risk-Informed Regulation Implementation Plan
- Corporate Management Plans
- Planned Program Evaluations

NRC's Planning, Budgeting, and Performance Management Process

In applying businesslike principles to its regulatory processes, the Commission's goal is to ensure that the NRC is both effective and efficient in implementing its mission. Beginning with the FY 2000 budget cycle, the agency implemented a disciplined, integrated process to improve for planning, budgeting, and performance management. The integrated process will enable the agency to meet the demands of the new results-driven Federal environment. The four major components of the new process are:

1. Setting the strategic direction.
2. Determining resources and planned accomplishments.
3. Measuring and monitoring performance.
4. Assessing performance.

The first step of the process is to establish the goals and objectives for the agency and to decide how it will meet them. The products of this step are the agency's Strategic Plan and Performance Plan. The Strategic Plan sets the strategic direction of the agency and the Performance Plan establishes how those goals and objectives are met. Using the direction established by the Strategic Plan and the Performance Plan, the second step is to determine the resources and planned accomplishments required to achieve the objectives. The result of this step is the agency budget which reflects the priority of activities and the level of resources based on the goals and objectives established in step one. This step also includes the development of internal agency program-level operating plans, which include performance measures and targets. This enables the agency to track the degree to which it is achieving its objectives (the third step), as reflected in the planned accomplishments (found in the budget), the NRC performance goals (found in the Performance Plan), and the program- level operating plans used by each office. The final step in the process is the assessment phase, which determines the effectiveness of our performance and compares performance against established objectives. These assessments include annual program reviews,

program evaluations, self-assessments, and internal and external audits. The results of the assessment phase form the basis for the reevaluation of the agency's strategic direction, and the net cycle of the planning, budgeting, and performance management process.

LINKS TO OTHER PLANNING DOCUMENTS, PROGRAM EVALUATIONS, AND MANAGEMENT CHALLENGES

Annual Performance Plan

The strategic goals established in the Strategic Plan set the framework for developing the NRC annual Performance Plan. The Performance Plan delineates objective, quantifiable, and measurable performance goals to be achieved in a given fiscal year that support that the strategic goals contained in the Strategic Plan. Each annual Performance Plan also includes performance indicators to be used in measuring or assessing the relevant outputs, service levels, and outcomes related to the performance goals. We expect to measure our progress by using a combination of output and outcome measures.

Annual Performance Report

Beginning in FY 2000, and within six months after the close of each fiscal year, the NRC will submit to the President and Congress a report on program performance for the fiscal year that has just closed. This performance report will review the success of the agency in achieving the performance goals established for the fiscal year being reported upon. Where those goals have been achieved, the underlying assumptions and strategies will be examined to ensure that continued application is warranted in the future. If performance goals are not met, the agency will conduct a thorough analysis of why it did not meet the goal and the actions necessary to meet the goal in the future. One result of this analysis will be the documentation of plans and schedules for achieving the established performance goal. If the analysis should indicate that the performance goal is impractical or infeasible, the performance report will document why that is the case and what action is recommended.

Annual Budget Request to OMB and Congress

Each year, the NRC submits a budget request to OMB, which is part of the President's budget to Congress. The budget specifies the programs, activities, milestones, and resources necessary to implement the Strategic Plan and the Performance Plan.

Risk-Informed Regulation Implementation Plan

The Risk-Informed Regulation Implementation Plan is a comprehensive description of the various activities being conducted by the NRC to implement the Commission's PRA Policy Statement. This report was issued previously under the title of "PRA Implementation Plan." This report is prepared semi-annually to provide the Commission with the status of risk-informing activities and identifies specific tasks being carried out to incorporate risk considerations into the Commission's rules, regulations, and practices. Project milestones are included.

Corporate Management Plans

1. Human Resources Plan

In conjunction with program and support offices, the Offices of Human Resources will use a planning process to determine future recruitment, staffing, and training and development needs agencywide. We

will look at near-term recruitment and staffing needs and longer term training and development needs. Based on information gained through this process, we will be better able to determine the appropriate knowledge, skills, and abilities needed and how to address any identified skills gaps. Information gained from this process will also help determine whether the workforce is deployed appropriately -- both geographically and organizationally -- to support efficient and effective accomplishment of strategic and performance goals.

2. Strategic Information Resources Management Plan

The NRC is required by the Paperwork Reduction Act to maintain a Strategic Information Resources Management (IRM) Plan. The Strategic IRM Plan documents how information technology and information management will contribute to the Agency's strategic and performance goals. The Strategic IRM Plan describes the programs and initiatives that will be used to implement the information technology and information management strategies that support those goals. It will also include initiatives required by legislative mandates and external technology drivers.

3. Communication Plans

Working with program offices, we will conduct a review of communications with stakeholders. Activities that are anticipated to be included in this review relate to both internal and external stakeholders. Reviews of existing communications channels and methods and an assessment of the effectiveness of these channels is expected to result in specific recommendations for change. This will include mapping communication activities to provide an inventory of current communication methods. Based upon the results of these reviews and the information gained, specific changes to activities will be identified and summarized in communication plans. Significant regulatory activities should have communication plans that identify needed public outreaches.

Planned Program Evaluations

The Government Performance and Results Act requires a description of the program evaluations used in establishing and revising Strategic Plan goals and a schedule for future evaluations. In the past, NRC program evaluations typically focused on the efficiency and effectiveness of our programs and processes. In the future, program evaluations will increasingly focus on responding to management questions about the performance of programs or activities. The program evaluations will assess the

extent to which the expected results in the Strategic Plan goals, measures, and strategies have been achieved and provide insight into whether the strategic direction of the agency should be changed. The findings and recommendations of completed program evaluations, including their effect on the Strategic Plan goals, measures, and strategies, will be reported in the annual Performance Report.

<u>Process for Identifying Future Program Evaluations</u>

The NRC will normally conduct 4-5 program evaluations (one from each Strategic Arena and one from the Corporate Management Strategies) over a 3-year period to coincide with the triennial update of the Strategic Plan. Each year a systematic agency-wide approach will be used to select future program

evaluations and to reaffirm the priorities and schedules of previously planned program evaluations. The following criteria will be used to identify program evaluations: (1) significant deviations in actual performance from performance goals, (2) significant changes to the environment (e.g., regulated community, resources, technology, workload, processes) or management expectations which dictate a major rethinking of the program, and (3) program successes, the understanding of which may prove beneficial to other NRC programs.

The following program evaluations are planned for FY 2000 through FY 2003:

NUCLEAR REACTOR SAFETY

New Reactor Oversight Process

Expected Completion Date: FY 2001

Objective: The NRC will perform a comprehensive evaluation of the effectiveness and implementation of the NRC's new reactor oversight process. The program evaluation will assess whether the revised oversight process (1) ensures that plants continue to be operated safely, (2) enhances public confidence by increasing predictability, consistency, and objectivity of the oversight process, (3) improves the efficiency and effectiveness of regulatory oversight by focusing agency resources on aspects of performance that have the greatest impact on safe plant operations, and (4) reduces unnecessary regulatory burden on licensees as the process becomes more efficient and effective. The program evaluation will be used to determine how effective the program has been in achieving all four of our performance goals and implementing strategies. The findings will be used to make any changes needed to the current goals, measures, metrics, and/or strategies.

Scope: In FY 2000, the NRC is transitioning from the current inspection, assessment, and enforcement processes to the revised reactor oversight process. The NRC developed changes to its current processes to improve their objectivity, make them more understandable and predictable, and provide increased focus on aspects of performance that have the greatest impact on safe plant operation. The improved processes include the risk-informed baseline inspection program, use of license-reported performance indicator information, and revised assessment and enforcement activities.

A pilot program of the revised reactor oversight process was conducted at nine reactor sites over a six-month period that began in June 1999. The results of the pilot program were reported to the Commission in SECY-00-0049, "Results of the Revised Reactor Oversight Process Pilot Program", dated February 24, 2000. Initial implementation at all operating reactor sites began during April 2000. In FY 2001, the NRC will evaluate the implementation and effectiveness of the first year of implementation of the NRC's new reactor oversight process and the results generated by the performance indicator reporting, baseline inspections, assessment, and enforcement activities. The evaluation will determine the effectiveness of the revised oversight process in meeting its objectives of (1) improving the objectivity of the oversight so the subjective decisions and judgments are not central features, (2) improving the scrutability of the oversight so NRC actions have a clear tie to licensee performance, and (3) risk-informing the oversight process to focus NRC and licensee resources on performance having the greatest impact on plant safety.

LINKS TO OTHER PLANNING DOCUMENTS, PROGRAM EVALUATIONS, AND MANAGEMENT CHALLENGES

Findings from the program evaluation will be used to make any necessary adjustments to the reactor oversight process, and to make any changes needed to the current goals, measures, metrics and/or strategies in the Strategic Plan.

NUCLEAR MATERIALS SAFETY

National Materials Program

Expected Completion Date: FY 2001

Objective: The NRC currently shares its regulatory authority for materials regulation with 31 Agreement States throughout the country. Given the anticipated increase in the number of Agreement States, this program evaluation will consider the effectiveness of the current structure and provide the Commission with options for maintaining an infrastructure of supporting regulations, guidance and other program elements needed for the nationwide materials program. A working group of State government and NRC representatives has been established to conduct this program evaluation. The program evaluation will consider (1) the changing external environment, (2) accommodation of Federal and State strategic performance goals and outcomes under a national materials program, and (3) a process that could be used to measure the performance.

Scope: Presently, the NRC exercises regulatory responsibility over about 5,310 material licensees. The 31 Agreement States regulate about 16,550 material licensees. The NRC staff expect four additional States will become Agreement States by Fiscal Year 2003 and estimates that the number of NRC licensees will drop to approximately 4,000. At that time, the Agreement States will be regulating about 17,860 licenses. This shift in responsibility has significant implications for both the NRC's materials program and the Agreement States. The process that the NRC will use in the future to develop and maintain the infrastructure of regulations and supporting guidance applied by the NRC and the Agreement States in their respective licensing and inspection programs should reflect this shift.

The working group will formulate a number of options for the Commission's consideration. In broad terms, the selected option, when implemented, will accomplish the Commission's goal of creating an integrated materials program of national scope in cooperation with the States, professional organizations, licensees, and the public. The working group will develop a list of elements needed for a national materials program, such as licensing and inspection guidance, reciprocity, general licensing, regulations, training, and databases, using the Conference of Radiation Control Program Directors, Inc.(CRCPD) and the Integrated Materials Performance Evaluation Program (IMPEP) elements as a basis. The working group will consider issues such as:

- The continuing trend for States to assume authority for the regulation of radioactive materials;
- The potential impact of this trend on maintaining the infrastructure of the existing State and Federal regulatory programs in the current fiscal environment and the increased fee burden on a decreasing number of NRC licensees to support generic activities;
- The roles and legal responsibilities of the NRC, the Agreement States, the Organization of Agreement States (OAS), the CRCPD, and other organizations;

LINKS TO OTHER PLANNING DOCUMENTS, PROGRAM EVALUATIONS, AND MANAGEMENT CHALLENGES

- The need for statutory changes in Federal and State programs for a national materials program;
- The required elements and scope of activities in a materials regulatory program;
- The assessment process and performance indicators that could be used to measure the performance of a national materials program considering the current IMPEP process;
- Mechanisms for program coordination and program evolution; and,
- The resource needs required for a national materials program and options for meeting those resource needs at both State and Federal levels.

NUCLEAR WASTE SAFETY

Changes to the Decommissioning Process

Expected Completion Date: FY 2003

Objective: The decommissioning of reactor and other sites which used nuclear materials has been undergoing significant change with the introduction of new rules, industry restructuring and increased activity and interest in decommissioning sites. This program evaluation will assess the various NRC decommissioning initiatives, deviations, if any, from performance goals, changes in external factors, and program successes regarding the implementation of the license termination rule. We will determine how effective the program has been in achieving all four of our performance goals and implementing strategies. The findings will be used to make any changes needed to the current goals, measures, metrics and/or strategies.

Scope: This program evaluation will focus on evaluating ongoing and planned changes to the decommissioning program. These changes are the result of implementing the license termination rule, the Strategic Plan, and changes in external factors such as transfers of sites to Pennsylvania and licensee plans regarding the restricted release. Reactor decommissioning is also within the scope of this program evaluation. The following changes will be evaluated:

- Pilot for streamlining decommissioning for simple sites
- Phased approach for reviewing decommissioning plans and preparing environmental impact statements for restricted release sites
- Resolution of institutional control, financial assurance, and funding issues
- Additional contaminated sites identified from completing the Terminated License Review Project
- Transfer of sites to Pennsylvania when it becomes an Agreement State
- Lessons learned from stakeholder feedback regarding use of the decommissioning standard review plan
- Review of guidance and licenses for appropriate risk informed approach
- Improvements in public outreach and prelicensing interactions with licensees
- More realistic dose modeling
- Reactor license termination plan review process
- Lessons learned from stakeholders regarding reactor license termination plan public meeting

LINKS TO OTHER PLANNING DOCUMENTS, PROGRAM EVALUATIONS, AND MANAGEMENT CHALLENGES

CORPORATE MANAGEMENT STRATEGIES

Agencywide Documents Access and Management System (ADAMS)

Expected Completion Date: FY 2001

Objective: The ADAMS document management system has substantially changed the way the NRC staff and external stakeholders manage and retrieve documents. The implementation of ADAMS impacts essentially all of the corporate management strategies aimed at helping the NRC accomplish its strategic and performance goals. Of particular note, one of the NRC's corporate management strategies is to provide proactive information management and information technology services, including (1) making it easier for the staff to acquire, access, and use the information needed to perform its work, (2) improving the ability of the NRC and external entities to conduct our mutual business electronically, and (3) providing external stakeholders the ability to easily access desired publicly available information to aid in their participation in the NRC's regulatory processes, and to enhance understanding of the Agency's mission, goals, and performance.

Scope: This evaluation will be conducted in FY 2001 and will help us assess the extent to which we successfully implemented these strategies. The ADAMS document management system has seven objectives which identify how it will support the Corporate Management Strategies:

- Discontinue the need for individual organizational units to invest their full-time equivalent (FTE) resources and dollars in local document management applications with limited functionality by implementing an enterprise-wide document management capability that meets all of the NRC's functional requirements.

- Ensure the integrity of the NRC's document repository for record keeping, legal uses, and staff retrieval by capturing documents once, at their source, as they are electronically created or received by the agency.

- Reduce the time and effort that the staff spend searching for and retrieving distributed hardcopy and electronic versions of documents of every description by providing staff with immediate access to the full text images of documents through a comprehensive, single, electronic repository at their desktops.

- Reduce staff time spent creating documents by storing them electronically, allowing the staff to easily retrieve electronic text for reuse.

- Reduce the administrative costs of reproducing and distributing documents, and speed their delivery to the NRC staff and their availability to the public by producing and disseminating documents electronically, rather than as paper copy.

- Eventually, eliminate the time, effort, and space now spent filing, maintaining, destroying, or retiring hardcopy in centralized and local document collections by implementing a complete, easy-to-access, electronic document repository that is accepted by the National Archives and Records Administration (NARA) as the NRC's official record keeping system.

- Manage document workflow processes more efficiently by creating an automated agencywide workflow infrastructure that allows individuals to collaborate on document preparation by routing them for parallel reviews, concurrence, and signature.

As part of the Capital Planning and Investment Control (CPIC) process, OCIO will work with its ADAMS partners to prepare a 'lessons learned' study which will evaluate whether ADAMS has met these objectives. Although not part of ADAMS original objectives, we will evaluate whether ADAMS is effectively supporting the Public Confidence goal. Where goals and objectives have not been fully met, we will examine alternative options for fully achieving them. Additional alternatives will be explored which may accelerate the benefits and reduce the costs of ADAMS implementation. OCIO plans a unified approach to produce a single document which will satisfy the Capital Planning and Investment Control 'lessons learned' evaluation and this program evaluation.

MANAGEMENT CHALLENGES

The NRC has no high risk areas designated by the General Accounting Office (GAO) *(High Risk Series: An Update* GAD/HR-99-01) as being particularly vulnerable to fraud, waste, abuse, and mismanagement. Additionally, the NRC does not have any mission-critical management problems that pose a realistic and prospective impediment to carrying out the agency's mission or achieving its goals. Moreover, the NRC has several strategies in this Plan that address general GAO recommendations on management challenges. For example, this Plan includes a number of strategies focused on making our regulatory process more risk-informed and on improving how we communicate change. The strategies will help correct previously identified problems and findings in GAO's reports on "Strategy Needed to Regulate Safety Using Information on Risk and NRC staff have not Fully Accepted Planned Changes".

Also in response to a Congressional request, in December 1998, OIG identified what it believed to be the 10 most serious management challenges facing the agency and reaffirmed this list in December 1999. Various sections of this Plan substantially cover the management challenges identified by the OIG and provide the actions underway or planned that would address them. For example, one of the challenges identified by the OIG was *developing and implementing a risk informed, performance-based approach to regulatory oversight.* The Plan states that the agency will continue to develop and incrementally use risk-informed and, where appropriate, less prescriptive performance-based regulatory approaches to maintain safety. Another challenge identified by OIG was *effectively communicating with the public and industry.* The Plan's Performance Goal to "Increase Public Confidence" addresses the agency's plans to strengthen communications, including (1) assessing the effectiveness of communication channels and methods for providing information to the public and (2) improving communication with the public by using strategies that recognize the ongoing changes in the environment external to the agency.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Several Government agencies have missions that are related to the NRC. The NRC identified no inconsistent or duplicative areas in this Plan compared to other agencies' Strategic Plans, but the Agency continues to be alert to potential inconsistencies or duplication in its cooperative activities. These interaction and coordination efforts are important in accomplishing the Agency's mission. In most instances, the NRC has, or is developing, memoranda of understanding (MOU) or other agreements with these agencies to ensure that areas of mutual interest and cooperation are treated in a consistent, coordinated, and complementary way that avoids unnecessary duplication or conflict. To develop programs in those areas that are critical to the NRC's mission, senior agency management meet with agency counterparts and establish plans and strategies in the areas of common programs and goals. Interagency committees are established, as necessary, to facilitate consensus on programs and promote consistent approaches in implementation. One such example is the Interagency Steering Committee on Radiation Standards. Commission briefings on the status of programs are held as well, such as the periodic briefings by DOE on the high-level waste program. In other areas of mutual interest, agency staff coordinates with other agencies as appropriate. The review of cross-cutting programs, the coordination of those programs, and the identification of any issues are also an integral part of the NRC's internal technical program review process. In the area of intra-agency cross-cutting activities and functions within the NRC, there is no substantive cross-cutting or overlap between the programs within the agency. A table of the major cross-cutting functions with other agencies and their relationship to NRC programs is provided below, followed by descriptions of the specific NRC areas of mutual interest with other agencies.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of Energy (DOE)	High-Level Waste Disposal	High-Level Waste/(Nuclear Waste Safety)
	Transportation and Storage of Spent Fuel and Waste	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
	Uranium Mill Tailings Radiation Control Act	Uranium Recovery Licensing and Inspection (Nuclear Waste Safety)
	Low-Level Waste	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Excess Plutonium Disposition Mixed Oxide Fuel Fabrication DOE Tank Waste Remediation System (TWRS) Regulatory Oversight at Gaseous Diffusion Plants	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Mitigation of Threat from Certain Discrete Radioactive Material	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Security of Classified National Security Information and Restricted Data	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
Department of Energy (DOE) Federal Bureau of Investigation (FBI) U.S. Customs Service Defense Intelligence Agency (DIA) Central Intelligence Agency (CIA) Department of State (DOS)	Threat Assessment	Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
Environmental Protection Agency (EPA)	Protection of Public Health and Safety and the Environment	(Nuclear Materials Safety) (Nuclear Waste Safety)
	High-level Waste Site-specific Standards	High-Level Waste Regulation (Nuclear Waste Safety)

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Federal Bureau of Investigation (FBI)	Response to Suspected Terrorist or Criminal Initiated Threat or Incident Involving Licensed Reactor, Material or Fuel Facilities	Reactor Incident Response (Nuclear Reactor Safety) (Nuclear Materials Safety)
Federal Emergency Management Agency (FEMA)	Offsite Nuclear Power Plant Emergency Planning	Reactor Licensing Reactor Incident Response (Nuclear Reactor Safety)
	Offsite Fuel Cycle Facility Emergency Planning	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	National Dam Safety Program	Uranium Recovery Licensing & Inspection (Nuclear Waste Safety)
	Potassium Iodide (DI) Supplement Program	Reactor Incident Response (Nuclear Reactor Safety)
Federal Energy Regulatory Commission (FERC)	Utility Economic Deregulation, Antitrust and Market Power Issues	Reactor Licensing (Nuclear Reactor Safety)
Department of Transportation (DOT)	Transportation of Radioactive and Fissile Materials	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Food & Drug Administration (FDA)	Approval of Medical Devices Incorporating Byproduct Materials, Radiopharmacuticals, and Radioactively Labeled Biologic Materials	Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)
Occupational Safety & Health Administration (OSHA)	Worker Health and Safety	Fuel Facilities Licensing & Inspection (Nuclear Materials Safety)

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (HHS/PHS/ATSDR)	Public Health and Safety in the Release and Transportation of Ionizing Radiation	Reactor Inspection Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection Materials Incident Response State Programs (Nuclear Materials Safety) High-Level Waste Regulation (Nuclear Waste Safety)
Department of Interior (DOI)	Protection of the Environment	Reactor Licensing (Nuclear Reactor Safety) Uranium Recovery Licensing and Inspection (Nuclear Waste Safety)
Department of Labor (DOL) Department of Justice (DOJ)	Enforcement	Reactor Enforcement Actions (Nuclear Reactor Safety) Materials Enforcement Actions (Nuclear Materials Safety)
	Investigations	Reactor Investigations (Nuclear Reactor Safety) Materials Investigations (Nuclear Materials Safety)
Department of State (STATE)) Department of Defense (DoD) Agency for International Development (AID) Department of Energy (DOE)	Nuclear Safety Assistance to Other Countries	Participation in International Activities (International Nuclear Safety Support)
Department of State (DoS) Department of Defense (DoD) Department of Energy (DOE) Department of Commerce (DOC)	Export of Nuclear and Nuclear Related Materials, Equipment, and Technology	Participation in International Activities (International Nuclear Safety Support)

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
National Security Council (NSC) Department of State (DOS) Department of Energy (DOE)	Nuclear Safeguards Assistance to Other Countries	Participation in International Activities (International Nuclear Safety Support)

Department of Energy (DOE)--The NRC and DOE share responsibility for high-level waste (HLW) disposal. As specified in the Nuclear Waste Policy Act of 1982, as amended (NWPA), DOE is responsible for characterizing the site and for the design and construction of the repository and NRC is responsible for regulatory oversight, including licensing the construction and operation of the facility. Our strategy is to provide regulatory guidance to DOE and prepare to license a high-level waste repository at a pace consistent with the national program. An agreement is in place with DOE that outlines the procedures for staff consultation and exchange of information. This procedural agreement was updated in 1999 to incorporate changes to the HLW program since 1993.

The NRC also interacts with DOE on a number of activities associated with the transportation and storage of spent nuclear fuel and high-level radioactive waste. The NRC and DOE have a procedural agreement regarding spent fuel and HLW transportation packaging. Further, DOE is required by law to use NRC-certified packaging for certain waste and spent fuel shipments. NRC and DOE have signed a cost-reimbursable interagency agreement whereby NRC provides DOE with oversight of physical security arrangements for certain foreign research reactor spent fuel shipments. NRC and DOE have signed a second cost-reimbursable interagency agreement whereby NRC provides DOE with review of a cask design for shipment of spent fuel from the West Valley Demonstration Project to the Idaho National Engineering and Environmental Laboratory. Lastly, NRC and DOE-Naval Reactors have signed a cost-reimbursable interagency agreement whereby NRC provides DOE-NR with review of a spent fuel dry storage facility for navy fuel.

The NRC and DOE have a joint responsibility in carrying out the Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I Program and in the long-term care of reclaimed uranium mill tailings sites. Although DOE has the responsibility for carrying out remedial action, the NRC must concur in DOE's selection and completion of the remedial action and must license the sites for long-term care. The NRC and DOE have a memorandum of understanding (MOU) to minimize or eliminate unnecessary duplication of effort between the two agencies.

NRC and DOE are assigned responsibilities for the management of low-level radioactive waste (LLW) under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments. These responsibilities are different but complementary; thus, an MOU or other type of agreement has not been necessary. NRC and DOE interact on LLW policy, regulatory, and technical issues.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

DOE and NRC have established a cost-reimbursable agreement for NRC to provide technical assistance and coordinate with DOE on regulatory issues associated with DOE's disposition of excess plutonium through measures other than mixed-oxide (MOX) fuel fabrication/irradiation. Under the agreement, NRC advises DOE on regulatory issues associated with activities such as pit disassembly, conversion and immobilization.

The FY 1999 Defense Authorization Act (P.L. 105-261) gave NRC statutory licensing authority over any MOX fuel fabrication facility constructed by DOE or its contractors to convert excess weapons plutonium into MOX reactor fuel. The facility will be located at DOE's Savannah River Site. This program depends on a number of factors outside of NRC control, including national policy, DOE funding, and Russian progress on dispositioning excess plutonium.

The NRC will continue to assist DOE in regulating the Tank Waste Remediation System (TWRS) at Richland, Washington. DOE initiated this effort in 1996 to demonstrate technologies for solidifying highly radioactive tank waste at the Hanford site through the design of a pilot-scale facility. NRC and DOE developed an MOU in 1997 and is updating it to reflect the current status and required objectives for the TWRS program.

The NRC and DOE have regulatory oversight of different portions of the Portsmouth and Paducah Gaseous Diffusion Plants. The NRC regulates those portions which are leased by the United States Enrichment Corporation while DOE has the regulatory oversight for the remainder of the sites. Regulatory issues occasionally arise which concern both DOE and NRC. An MOU establishes the protocol between the NRC and DOE to address those issues.

The NRC and DOE currently have an agreement that outlines the procedures for NRC requests for DOE assistance to mitigate threats to the public from certain discrete radioactive material, including material that exceeds Class C waste (10 CPR 61.55) classification. This agreement is being formalized in an MOU.

The NRC and DOE share responsibility for the security of classified National Security information and Restricted Data at certain licensees (principally Naval Nuclear Fuel Facilities) and at the U.S. Enrichment Corporation (USEC). Although DOE has principal responsibility at Naval Nuclear Fuel Facilities under the auspices of its classified contracts with those firms, NRC has responsibility for the personnel security program for access to or control over strategic nuclear material and for information related to the physical protection plans for the protection of the strategic nuclear material. At USEC, NRC has primary responsibility for the protection of classified information and DOE for the personnel security program. The NRC and DOE have several MOUs in place to minimize or eliminate duplication of effort between the two agencies.

<u>DOE, FBI, CIA, Customs, DIA, DoS</u>-- The NRC, as part of its mission to protect public health and safety and ensuring the common defense and security, maintains close working relationships with other agencies to ensure the design basis threat for radiological sabotage and theft or diversion are current and

accurate. For this reason, NRC has established Memorandums of Understanding and Letters of Agreement for the exchange of relevant threat information. These arrangements also facilitate the timely receipt by NRC of any potential threats to NRC licensed materials or facilities.

Environmental Protection Agency (EPA)--The NRC and EPA share responsibility for protection of public health and safety and the environment. There are numerous MOUs and interrelated activities between the NRC and EPA. NRC and EPA have been successful in many of these interrelated activities, including the development of the Multi-Agency Radiation Site Survey and Investigation Manual and the Multi-Agency Radiation Laboratory Protocols Manual, support for the National Research Council Committee on the Biological Effects of Ionizing Radiation, development of the Joint NRC/EPA Guidance for Testing Requirements for Mixed Radioactive and Hazardous Waste, development of a Technical Position for Disposition of Cesium-137 Contaminated Emission Control Dust, development of a nationwide survey to analyze for radioactive contamination of sewer sludge and ash at publicly-owned treatment works, and development of modeling scenarios in support of potential rulemakings for recycle/reuse of radioactively contaminated materials. The NRC is currently working with EPA to define roles, responsibilities, and jurisdictions regarding orphan source issues and to develop regulations to facilitate the disposal of mixed wastes.

As specified in the Energy Policy Act of 1992 (EnPA), EPA is tasked to develop site-specific HLW standards consistent with the recommendations of the National Academy of Sciences report on the Technical Bases for Yucca Mountain Standards. NRC has one year to develop an implementing rule after issuance of final EPA standards. EPA proposed a HLW standard in August 1999 for public comment. Both Houses of Congress have legislation pending that would, among other things, prescribe an overall performance standard for Yucca mountain, and, depending on which bill is enacted, could impact NRC and EPA responsibilities. The NRC maintains a formal liaison with the EPA staff and has implemented a strategy for the conforming requirements to ensure that the NRC completes the implementing rule within a year of issuance of the final EPA standards. Differences continue between the EPA and the NRC on groundwater protection requirements and other matters; they may impact the requirements, complexity, and costs of licensing the repository.

One area in which the NRC and EPA have been unsuccessful in their interrelated activities is setting standards to establish radiological criteria for decommissioning/cleanup of contaminated sites, and high-level waste disposal. EPA is responsible for developing general radiation standards, which are then reflected in NRC regulations and other requirements. The NRC continues to seek legislation as reflected in the House Report 2531, “The Nuclear Regulatory Commission Authorization Act for Fiscal Year 2000, Title II”, that would make it clear that, with very limited exception, the standard issued by NRC and Agreement States governs cleanup of Atomic Energy Act material at facilities licensed by them. EPA expressed concerns with certain provisions of NRC’s license termination rule and included in their guidance, “Establishment of Clean-up Levels for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites with Radioactive Contamination”, a statement that the dose limits established in the NRC license termination rule would not provide a protective basis for establishing preliminary remediation goals for cleanup at CERCLA sites and that the NRC sites could require further remediation. Top-level NRC and EPA management will continue to address these issues

to resolve the question of finality for sites that have complied with the NRC cleanup standards for license termination based on the House Report 2684, "Hazardous Substance Superfund (Including Transfers of Funds)". It is NRC's current position that changes to legislation are needed to resolve these issues, however NRC will continue to engage EPA in resolution of this matter as directed by the House Report 2684. The NRC has also supported provisions in high-level waste legislation in both Houses of Congress that would effectively remove EPA from the standard-setting role for the Yucca Mountain repository and establish a Congressional standard for which NRC would issue implementing regulations. While the bills differ on specifics, either would be preferable to the current statutory provisions on standard setting.

Federal Bureau of Investigation (FBI)--The NRC and the Federal Bureau of Investigation (FBI) share responsibility (along with FEMA) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC licensed facilities or material. The FBI has lead responsibility for crisis management during a threat or incident and the NRC retains the responsibility for radiological matters. The NRC and FBI have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

Federal Emergency Management Agency (FEMA)--FEMA has the lead responsibility for offsite nuclear power plant emergency planning and for nuclear materials emergency planning. FEMA also has the lead in assessing offsite emergency plans and preparedness for adequacy. NRC is responsible for onsite radiological emergency preparedness and for review of FEMA findings and determinations as to whether offsite plans are adequate and can be implemented. NRC also has the responsibility to make radiological health and safety decisions with regard to the overall state of emergency preparedness, such as assurance for continued operation and shutdown of operating reactors. Should an actual peacetime radiological emergency require more than one agency to respond, the Federal Radiological Emergency Response Plan (FRERP) provides for coordination of all Federal response activities. The FRERP is maintained by the Federal Radiological Preparedness Coordinating Committee (FRPCC); NRC is an active member in several FRPCC subcommittees that develop Federal procedures and guidance. In the event of an emergency involving an NRC-regulated entity, NRC is the lead Federal agency and works closely with six agencies: FEMA, DOE, EPA, USDA, HHS, and NOAA. Representatives of these agencies train with, and are integrated into, the NRC response team. Response coordination on a broader scale is provided by the Federal Response Plan (FRP) for emergencies of all kinds, including responses under the National Contingency Plan (NCP) for emergencies involving chemical and radiological hazards occurring together. NRC is a member of the teams that coordinate actions under the NCP. The NRC and FEMA share responsibility (along with FBI) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC licensed facilities or material. FEMA has lead responsibility for consequence management during a threat or incident and the NRC retains the responsibility for radiological matters. The NRC and FEMA have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

FEMA and the NRC share involvement in the National Dam Safety Program. The primary purpose of this program is to bring together the expertise and resources of the Federal and non-Federal communities to achieve national dam hazard reduction. The NRC has regulatory authority over only uranium mill

tailings dams and those dams integral to the operation of licensed facilities, or the possession and use of licensed material, that pose a radiological hazard if these dams should fail.

Federal Energy Regulatory Commission (FERC)--The NRC and the Federal Energy Regulatory Commission (FERC) have ongoing interaction regarding issues of mutual concern, such as: (1) FERC actions with respect to economic deregulation of the electric utility industry and the potential impact of FERC's deregulation activities on the NRC's mandate to protect public health and safety, and (2) the respective roles of the NRC and FERC in evaluating antitrust and market power issues arising from NRC power reactor license applicants or licensees. NRC supports those aspects of the President's electric sector restructuring legislation that pertain to it, in particular, the elimination of NRC's duplicative role in antitrust reviews.

Department of Transportation (DOT)--Under an MOU, the NRC and the Department of Transportation (DOT) share responsibility for developing, establishing, implementing, and enforcing consistent and comprehensive regulations and requirements for the safe transportation of radioactive and fissile materials, often through interagency committees. Generally, the NRC works with DOT to develop regulations for transporting materials, and the NRC adopts DOT requirements into its regulations.

Food and Drug Administration (FDA)--The NRC and the Food and Drug Administration (FDA) have an MOU that outlines procedures for sharing information of mutual interest relating to the approval of medical devices, radioactive drugs, and radioactive biologies when these products contain NRC-regulated material. The NRC routinely relies on prior FDA approval of medical devices as an essential component of the NRC's sealed source and device safety evaluations. The MOU also establishes procedures for notification, sharing of information, and coordination of joint inspections of events related to design and manufacturing defects and failures of these devices or of radioactive drugs or radioactive biologies.

Occupational Safety and Health Administration (OSHA)--By an October 1988 OSHA/NRC MOU, NRC and OSHA share responsibility for worker health and safety at NRC-regulated facilities. NRC regulates worker safety concerning radiation and chemical risks resulting from processing radioactive material and OSHA regulates worker safety concerning non-radiological and other industrial hazards.

Agency for Toxic Substances and Disease Registry (ATSDR)--The NRC coordinates with ATSDR on issues relevant to the agency's mission to prevent exposure and human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution in the environment. This coordination includes ATSDR's hazardous substances role in public health, including the impact of radioactive releases from power plants on adjacent communities' and Indian reservations' air, water, and food chain and impacts resulting from transportation of nuclear waste.

Department of the Interior (DOI), Fish and Wildlife Service--Under the Endangered Species Act, the NRC has responsibility to assure that its actions are protective of endangered species. NRC consults with the Fish and Wildlife Service (FWS) in evaluating effects on endangered species of proposed NRC

actions. If a proposed NRC action has the potential to affect endangered species, NRC prepares a biological assessment of the effects, and the FWS then renders a biological opinion. This consultation process can be extensive, as in the Atlas uranium mill tailings remediation case.

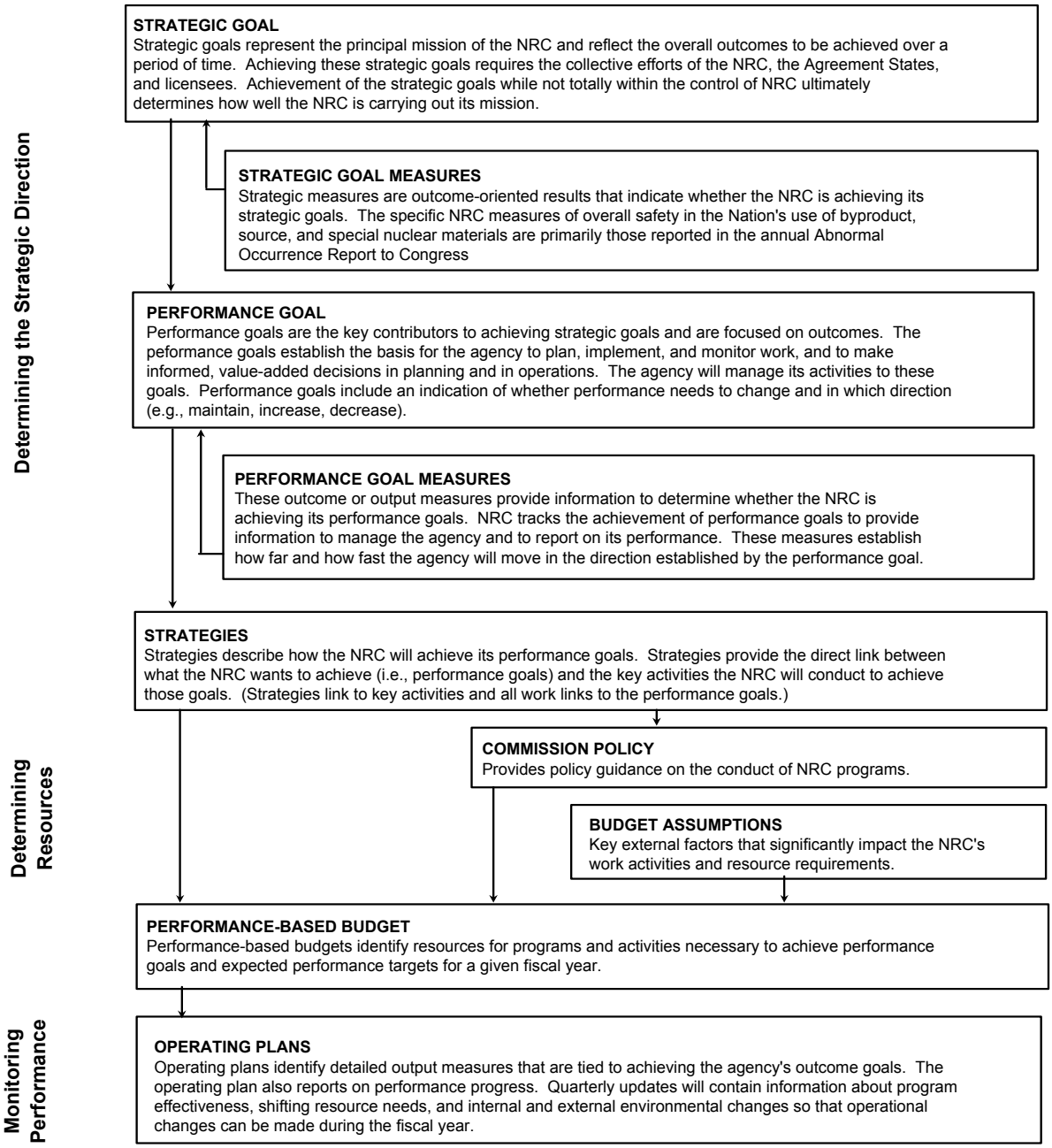
Department of Labor (DOL)/Department of Justice (DOJ)--The NRC monitors discrimination actions filed with the Department of Labor (DOL) under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination, either from NRC's Office of Investigations or from DOL adjudications. Suspected criminal activities concerning NRC licensees, and others within NRC's regulatory jurisdiction, are referred to the Department of Justice (DOJ). Coordination with DOJ occurs prior to initiating any civil enforcement action for matters under DOJ consideration for criminal prosecution.

Department of State (DoS), Department of Defense (DoD), Agency for International Development (AID), Department of Energy (DOE), Department of Commerce (DOC)--The NRC shares responsibility with the DoS, DOE, DoD and the Agency for International Development (AID) in providing nuclear safety and safeguards assistance to other countries. State provides foreign policy guidance for U.S. government agencies in carrying out such assistance, while NRC contributes actively to the formulation of this guidance and clears its assistance programs with State to ensure they are within U.S. Government policy. The NRC also shares responsibility with DOE for providing nuclear safety and safeguards assistance internationally. The NRC and DOE coordinate their efforts with each other and with other countries providing assistance to ensure they are complementary and to avoid duplication and conflict. The National Security Council and the Office of the Vice President provide high-level policy guidance on key issues in the international assistance area and resolve questions that arise in providing such assistance.

The NRC, DOE, DoS, DoD, and the Department of Commerce (DOC) have interrelated roles in controlling exports of nuclear and nuclear-related materials, equipment, and technology. The NRC's primary role involves issuing export licenses for nuclear materials and equipment, including reactors. The following issue licenses or authorizations in related areas: DOE for nuclear technology exports and for retransfers or changes in form or content of previously exported nuclear materials and equipment; DoS for munitions made with depleted uranium; and Commerce for nuclear reactor balance-of-plant equipment and "dual use" commodities. Each agency is obliged to consult with the others (including, if warranted, DoD) for significant cases.

DOE and NRC are in the process of establishing a cost-reimbursable agreement for NRC to provide Material Protection, Control, and Accounting Support to the regulatory agencies of Russia, Ukraine, and Kazakhstan through the development of regulations and the development of the licensing, inspection, and enforcement programs.

NRC'S PLANNING, BUDGETING, AND PERFORMANCE MANAGEMENT PROCESS
PRINCIPAL COMPONENTS OF THE PROGRAM CHAPTERS OF THE STRATEGIC PLAN



LISTING OF REFERENCED DOCUMENTS

SP Page Pt 2	Document Name
Policy Documents-	
72	Key Uranium Recovery Policies
1,2	Safety Goal Policy (51 FR 28044)
Regulations-	
41	10 CFR Part 63
12,28,44,50,55,80	Atomic Energy Act of 1954
12,28	Clean Air Act of 1977
12	Clean Water Act
2,4	Commission Backfit Rule (10 CFR 50.109)
79	Defense Authorization Act
12,44,83	Endangered Species Act
12,28,44,80	Energy Policy Act of 1992
12,28,44,50,55,83	Energy Reorganization Act of 1974
44	Hazardous Materials Transportation Uniform Safety Act of 1990
44	Low-Level Radioactive Policy Amendments Act of 1985
44,79	Low-Level Radioactive Waste Policy Act of 1980
12,28,44	National Environmental Policy Act (NEPA)
12,44	National Historic Preservation Act
12,28,44,50,55	Nuclear Non-Proliferation Act of 1978
80	Nuclear Regulatory Commission Authorization Act
44,78	Nuclear Waste Policy Act of 1982 (NWPA)
44	Nuclear Waste Policy Amendments Act of 1985
7,23,38,39	Petition Process (10 CFR 2.206)
7,38,69	Planning, Budgeting, and Performance Management Process
72	Reactor Oversight Processes
44	Uranium Mill Tailings Radiation Control Act of 1978
44	Waste Isolation Pilot Plant Land Withdrawal Act of 1992
44	West Valley Demonstration Project Act of 1980

LISTING OF REFERENCED DOCUMENTS (CONT'D)

Planning Documents-

69,70	Annual Performance Plans
71	Communication Plan
69	Corporate Management Plans
81	Federal Radiological Emergency Response Plan (FRERP)
81	Federal Response Plan (FRP)
71	Human Resources Plans
81	National Contingency Plan
24	Probabilistic Risk Assessment Implementation Plan
4,8,10,11,26,40,41,69,70	Risk-Informed Regulation Implementation Plan
47,72	Site Decommissioning Management Plan (SDMP)
71	Strategic Information Resources Management Plan
7	Strategic Plan
41,44	Yucca Mountain Review Plan

SECY Documents-

7	SECY-99-071

ENDNOTES

1. "Licensees" as used in this Strategic Plan include persons required to be licensed (as defined in Section 11(s) of the Atomic Energy Act, as amended) as well as, where appropriate, applicants for NRC licenses, certificate of compliance holders and applicants for certificates of compliance, contractors (including subcontractors, suppliers, consultants, and vendors), and all persons subject to the NRC's regulatory jurisdiction.

2. Specific values of the metrics were, in general, set after consideration of past performance. Failure to meet a metric will generally prompt a re-evaluation of the involved programs and activities. However, some failures to meet some metrics may be due solely to randomness in the timing of events and not due to a change in underlying level of safety. In such cases, no changes to programs or activities would be warranted.

3. "Nuclear reactor accidents" is defined in the NRC Severe Accident Policy Statement (50 Federal Register 32138, August 8, 1985) as those accidents which result in substantial damage to the reactor core, whether or not serious offsite consequences occur.

4. "Significant radiation exposures" are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criteria I.A.3.

5. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by AO criteria 1.B.1 {normally 5,000 times Table 2 (air and water) of Appendix B, Part 20}.

6. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions in Plant Specific Changes to the Licensing Basis," establishes general principles for using risk information in NRC review and approval of licensing actions.

7. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgement, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decision-making. This definition is from the Commission White Paper which can be located at www.nrc.gov/NRC/COMMISSION/SRM/1998-144srm.html.

8. Such events have a 1/1000 (10^{-3}) or greater probability of leading to a reactor accident.

9. The agency provides oversight of plant safety performance on a plant-specific basis as well as on an industry-wide basis. As a refinement to the existing process, the specific parameters and criteria for measuring statistically significant adverse trends in industry-wide safety performance will be developed. The parameters to be monitored will include NRC-approved performance indicators, inspection findings, accident sequence precursor results, and other risk-related indications or measures of industry safety performance that will be developed and qualified for use in phases.

10. Overexposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2), excluding instances of overexposures involving a shallow dose equivalent from a discrete radioactive particle in contact with the skin.

11. Releases for which a 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.220)(3).

ENDNOTES

12. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern or investigates the wrongdoing presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant the petition, in whole or in part, or deny the petition. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that the NRC staff has taken or will take to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.

13. The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of the NRC Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions" and acknowledges by letter the petitioner's request. MD 8.11 is currently being revised to allow the petitioner and the licensee various opportunities to participate in the petition process. This additional stakeholder involvement may have an effect on the 120 day performance measure.

14. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR Part 70.

15. "Licensees" as used in this Strategic Plan include persons required to be licensed (as defined in Section 11(s) of the Atomic Energy Act, as amended) as well as, where appropriate, applicants for licenses, certificate of compliance holders and applicants for certificates of compliance, contractors (including subcontractors, suppliers, consultants, and vendors), and all persons subject to NRC's regulatory jurisdiction.

16. In this context, the regulatory framework consists of several interrelated aspects. They are: 1) the NRC's mandate from Congress in the form of enabling legislation; 2) the NRC's rules in Title 10 of the Code of Federal Regulations; 3) the regulatory guides and review plans that amplify those regulations; 4) the body of technical information, obtained from research performed by the NRC or by others and from evaluation of operational experience, that supports the positions in the rules and guides and review plans; 5) the licensing and inspection procedures utilized by the staff; and 6) the enforcement guidance.

17. Significant exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician. Hazardous material exposures only apply to fuel cycle activities in the Nuclear Materials Safety Arena.

18. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by AO criteria 1.B.1 {normally 5,000 times Table 2 (air and water) of Appendix B, Part 20}.

19. In accordance with Appendix G to 10 CFR part 73 and 10 CFR 74.11(a).

20. In accordance with the requirements of 10 CFR 95.57.

21. For fuel cycle activities, this also extends to other hazardous materials used with, or produced from licensed material, consistent with proposed amendments to 10 CFR Part 70.

22. Material entering the public domain in an uncontrolled manner. The Nuclear Materials Event Data base contains the list of these events as reported by NRC licensees and, through the Agreement States, their licensees.

ENDNOTES

23. Overexposures are those maximum annual exposures that exceed limits as provided by 10 CFR 20.2203(a)(2). For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR 70. Reportable chemical exposures are those that exceed license commitments.

24. Medical events as reported under 10 CFR 35.

25. Releases for which a 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3).

26. We recognize that no explicit reporting requirements exist for substantiated breakdowns of programs. The NRC relies on its safeguards inspection findings and licensee notifications.

27. "Licensees" as used in this Strategic Plan include persons required to be licensed (as defined in Section 11(s) of the Atomic Energy Act, as amended) as well as, where appropriate, applicants for licenses, certificate of compliance holders and applicants for certificates of compliance, contractors (including subcontractors, suppliers, consultants, and vendors), and all persons subject to the NRC's regulatory jurisdiction.

28. Significant radiation exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician.

29. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given in AO criteria 1.B.1 {normally 5,000 times Table 2 (air and water) of Appendix B, Part 20}.

30. In accordance with Appendix G to 10 CFR Part 73, and 10 CFR 74.11(a).

31. In addition to radiological releases, this also includes chemical releases from the NRC regulated activities under the Uranium Mill Tailings Radiation Control Act.

32. Overexposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2).

33. We recognize that no explicit reporting requirements exist for substantiated breakdown determination. The NRC relies on its safeguards inspection findings and licensee notifications.

34. Releases for which a 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3). In addition to radiological releases, this measure also includes chemical releases from NRC regulated activities under the Uranium Mill Tailings Radiation Control Act.

35. Releases for which a 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3). This measure includes only to radiological releases.

36. This measure includes chemical releases from the NRC regulated activities under the Uranium Mill Tailings Radiation Control Act.

37. Resolving issues at the staff level is consistent with our regulation, which explains that prelicensing activities such as this constitute informal conferences between a prospective applicant and the staff and are not part of a potential licensing proceeding. Furthermore, "resolution" means that the staff have no further questions at a particular time, but recognizes that new information could lead the staff to reevaluate the issue.

ENDNOTES

38. As used in this arena:

- Nuclear safety means protection of the public health and safety and the environment.

- Domestic safeguards are those nuclear material control and accounting measures and physical protection measures implemented by and within any country, including the U.S., to prevent sabotage of nuclear materials or facilities or theft or diversion of nuclear materials by an individual or a group within that country. Secure use of nuclear materials is achieved through the successful implementation of domestic safeguards.

- International safeguards are the independent verifications performed by the International Atomic Energy Agency (IAEA) of a country's "peaceful use" declarations on nuclear materials and nuclear facilities.

- Nuclear nonproliferation means control over or deterrence of the spread of nuclear explosive devices or of the direct capability to manufacture or otherwise acquire such devices.

39. Agreements for Cooperation in the Civil/Peaceful Use of Nuclear Energy are required under section 123 of the Atomic Energy Act of 1954, as amended, to establish the legal framework for technical cooperation in the production and use of special nuclear material as well as for the supply of such material or fuel cycle equipment, or related sensitive information to another country or international organization. These Agreements for Cooperation (or Section 123 Agreements, as they are also known) include such nonproliferation conditions and controls as safeguards commitments; a guarantee of no explosive or military use; a guarantee of adequate physical protection; and U.S. rights to approve retransfers, enrichment, reprocessing, other alterations in form or content, and storage of U.S.-supplied or derived material. They must be in effect before an NRC export license can be issued.

40. The INES is a tool designed by an IAEA/NEA-sponsored group of experts to communicate promptly and consistently to the public the safety relevance of reported events at nuclear installations. Criteria for INES Level 3 are (a) an external release of radioactivity above authorized limits, resulting in a dose to the most exposed individual off-site on the order of 0.1 millisievert. (With such a release, off-site protective measures may not be needed.); (b) an on-site event resulting in a dose to workers sufficient to cause acute health effects and/or an event resulting in a severe spread of contamination; and (c) an incident in which a further failure of safety systems could lead to accident conditions, or a situation in which safety systems would be unable to prevent an accident if certain initiators were to occur.

41. As defined in 10 CFR Part 73.2.