(DRAFT)

The NRC Management System

A Framework for Accomplishing NRC Objectives for the Operating Reactors Program

October 22, 2013

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COMMITMENT TO THE MANAGEMENT SYSTEM:

MESSAGE FROM THE DIRECTOR

As the Director of the Office of Nuclear Reactor Regulation, I am committed to communicating to NRC employees the basic NRC policies, requirements, and procedures necessary for the agency to comply with Executive orders, pertinent laws, regulations, and the circulars and directives of other Federal agencies for regulation and oversight of operating nuclear reactors. NRC prepares and issues various policy and guidance documents, as well as revisions to these documents, to meet the requirement that all Federal agencies have an internal management system.

The NRC has and maintains a management system. The policy and guidance in the documents comprising the various aspects of the NRC's management system apply to all NRC employees.

The purpose of the management system is to—

- Effectively communicate policies, objectives, responsibilities, authorities, requirements, guidance, and information to NRC employees.

- Properly and consistently reflect the decisions of the Commission and the Executive Director for Operations.

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

SECTION 1 INTRODUCTION

The purpose of this document is to provide a high level overview of the integrated activities used at the U.S. Nuclear Regulatory Commission (NRC) to manage the work across the organization. This document describes the relationship of each component of NRC's management system to ensure that NRC staff members have a clear understanding of how our policies, instructions and guidance relate to each other to support quality in our activities.

SECTION 2 NRC: AN INDEPENDENT REGULATORY AGENCY

2.1 STATUTORY AUTHORITY

The NRC was established by the Energy Reorganization Act of 1974 to oversee the commercial nuclear industry. The agency took over regulation formerly carried out by the Atomic Energy Commission and began operations on January 18, 1975. The NRC was established to regulate the civilian use of nuclear materials for commercial, industrial, academic, and medical uses in order to protect public health and safety and the environment, and promote the common defense and security.

Effective regulation enables the Nation to use radioactive materials for beneficial civilian purposes while protecting the American people and their environment.

The following principal statutory authorities govern the NRC's work.

- Atomic Energy Act of 1954, as Amended (P.L. 83–703)
- Energy Reorganization Act of 1974, as Amended (P.L. 93–438)
- Uranium Mill Tailings Radiation Control Act of 1978, as Amended (P.L. 95–604)
- Nuclear Non-Proliferation Act of 1978 (P.L. 95–242)
- West Valley Demonstration Project Act of 1980 (P.L. 96–368)
- Nuclear Waste Policy Act of 1982, as Amended (P.L. 97–425)
- Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L. 99–240)
- Diplomatic Security and Anti-Terrorism Act of 1986 (P.L. 107–56)
- Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990
- Energy Policy Act of 1992
- Energy Policy Act of 2005

2.2 REGULATIONS

The NRC's primary regulations are contained in Title 10 of the *Code of Federal Regulations* (10 CFR). These regulations cover the requirements for both NRC employees and licensees.

The NRC, licensees (those licensed by the NRC to use radioactive materials), and the Agreement States (states that assume regulatory authority over their own use of certain nuclear materials), share a common responsibility to protect public health and safety and the environment. Federal regulations and the NRC regulatory program are important elements in the protection of the public. However, because licensees are the ones using radioactive material, they bear the primary responsibility for safely handling these materials.

SECTION 3 FOUNDATIONS

3.1 MISSION

The NRC is an independent agency created by Congress. The mission of the NRC is to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials in order to protect public health and safety, promote the common defense and security, and protect the environment.

The NRC's regulations are designed to protect both the public and workers against radiation hazards from industries that use radioactive materials.

The NRC's scope of responsibility includes regulation of commercial nuclear power plants; research, test, and training reactors; nuclear fuel cycle facilities; medical, academic, and industrial uses of radioactive materials; and the transport, storage, and disposal of radioactive materials and wastes.

In addition, the NRC licenses the import and export of radioactive materials and works to enhance nuclear safety and security throughout the world.

NRR's missions is to support the NRC mission to protect public health, safety, and the environment by developing and implementing rulemaking, licensing, oversight, and incident response programs for reactors. We conduct these activities in a manner that develops trust and is consistent with the NRC organizational values.

3.2 VALUES

In conducting all our work, we adhere to fundamental values. These values guide every action we take; from a decision on a safety, security or environmental issue; to how we perform an administrative task; to how we interact with our fellow employees and other stakeholders.

3.2.1 Organizational values

Integrity in our working relationships, practices and decisions

Service to the public and others who are affected by our work

Openness in communications and decision-making

Commitment to public health and safety, security and the environment

Cooperation in the planning, management and performance of agency work

Excellence in our individual and collective actions

Respect for individuals' roles, diversity, beliefs, viewpoints and work-life balance

The NRC continues to identify new and innovative ways to emphasize our organizational values. For example, the Agency-wide ISOCCER campaign is an example of our efforts to reinforce our values through a video, prominently placed posters, and everyday items, such as mouse pads and badge holders, which all act as on-going reminders of the values that shape our regulatory activities.

3.2.2 Principles of Good Regulation

As a regulator, the NRC strives to exhibit the following qualities in the day-to-day activities:

- INDEPENDENCE – All available facts and opinions must be sought openly from licensees and other interested members of the public. The many and possibly conflicting public interests involved must be considered. Final decisions must be based on objective, unbiased assessments of all information, and must be documented with reasons explicitly stated.
- OPENNESS – Nuclear regulation is the public's business, and it must be transacted publicly and candidly. The public must be informed about and have the opportunity to participate in the regulatory processes as required by law. Open channels of communication must be maintained with Congress, other government agencies, licensees, and the public, as well as with the international nuclear community.

- EFFICIENCY – The American taxpayer, the rate-paying consumer, and licensees are all entitled to the best possible management and administration of regulatory activities. The highest technical and managerial competence is required, and must be a constant agency goal. NRC must establish means to evaluate and continually upgrade its regulatory capabilities. Regulatory activities should be consistent with the degree of risk reduction they achieve. Where several effective alternatives are available, the option which minimizes the use of resources should be adopted. Regulatory decisions should be made without undue delay.

- CLARITY – Regulations should be coherent, logical, and practical. There should be a clear nexus between regulations and agency goals and objectives whether explicitly or implicitly stated. Agency positions should be readily understood and easily applied.

- RELIABILITY – Regulations should be based on the best available knowledge from research and operational experience. Systems interactions, technological uncertainties, and the diversity of licensees and regulatory activities must all be taken into account so that risks are maintained at an acceptably low level. Once established, regulation should be perceived to be reliable and not unjustifiably in a state of transition. Regulatory actions should always be fully consistent with written regulations and should be promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes.

The agency puts these principles into practice with effective, realistic, and timely regulatory actions.

3.2.3 Safety culture

The NRC strives to promote and support a strong safety culture by encouraging all employees and contractors to promptly voice differing views without fear of retaliation. At the NRC, we encourage trust, respect, and open communication to foster and promote a positive work environment that is focused on developing and improving our safety culture. We maximize the potential of all individuals by reinforcing a learning and questioning attitude at all levels of the organization.

Individuals have various mechanisms for expressing and having their mission-related differing views heard by decision-makers. For example:

- The Open Door Policy supports and allows any employee to initiate a meeting with an NRC manager or supervisor, including a Commissioner or the Chairman of the NRC, to discuss any matter of concern to the employee.

- The Differing Professional Opinion (DPO) program ensures that all employees have the opportunity to express their DPOs in good faith and have their views heard and considered by NRC management.

- The Non-concurrence Process allows for the act of formally indicating disagreement with a document in the concurrence process that the individual had a role in creating or reviewing

NRC Team Player Award helps us celebrate the value of differing views by recognizing individuals who have supported an open, collaborative work environment where individuals speak up promptly, listen to differing views fairly, and treat each other with respect.

In addition to our efforts to foster our safety culture environment though the programs described above, the NRC also monitors our safety culture more formally through the use of anonymous surveys and independent audits.

3.2.4 Employee Ethics

As required by regulation detailed in the Code of Federal Regulations, NRC employees are prohibited from using their NRC title or position for personal gain or the gain of anyone else. Employees are also prohibited from appearing to show preferential treatment to or endorsing anyone.

3.2.5 Employee Satisfaction

The NRC values the ideas and opinions of our staff, not only on technical matters but also on quality of life issues. The NRC has used a variety of means to monitor the overall satisfaction of our employees with aspects of their work life. While internal surveys provide specific insights, external awards also provide an indication of the overall work experience at the NRC. As the recipient of two "BEST PLACES TO WORK *In the Federal Government"* awards, the NRC continues to look for ways to help our employees achieve a balance between a productive career and time outside of work.

3.3 STRATEGIC PLAN

3.3.1 Strategic Goals

Safety: Ensure adequate protection of public health and safety and the environment.

Security: Ensure adequate protection in the secure use and management of radioactive materials.

3.3.2 *Strategic Outcomes*

- Prevent the occurrence of any nuclear reactor accidents.
- Prevent the occurrence of any inadvertent criticality events.
- Prevent the occurrence of any acute radiation exposures resulting in fatalities.
- Prevent the occurrence of any releases of radioactive materials that result in significant radiation exposures.
- Prevent the occurrence of any releases of radioactive materials that cause significant adverse environmental impacts.
- Prevent any instances where licensed radioactive materials are used domestically in a manner hostile to the United States.

3.3.3 Strategies

The NRC's Strategic Plan describes how the agency intends to accomplish its mission and establishes the Commission's strategic direction by defining the vision, goals, and outcomes it intends to pursue. In particular, the Strategic Plan focuses on the goals of safety and security and emphasizes the characteristics of openness, effectiveness, and operational excellence. Taken together they support the agency's ability to maintain the public health, safety, and trust. Success in achieving each goal in the

Strategic Plan is gauged primarily through performance measures that have been developed for the agency's annual Performance Budget and is reported in the annual Performance and Accountability Report.

3.3.4 Performance Budget

Each year, the NRC publishes its Performance Budget (NUREG-1100). This publication describes the agency's programs in the performance plan, the budget estimates for these program activities, the distribution of the budget by major program. The performance plan also includes goals and measures that gauge the agency's success in accomplishing its mission.

3.4 MANAGEMENT SYSTEM OVERSIGHT

The NRC establishes and maintains management controls to reasonably ensure that:

- our major activities achieve their intended results;
- resources are used consistent with the agency's mission;
- programs and resources are protected from waste, fraud, and mismanagement; laws and regulations are followed; and
- reliable and timely information is obtained, maintained, reported, and used for decision making.

In addition, our management controls provide an early warning system that can anticipate, identify, and resolve mission-critical issues.

Management controls include processes for planning, organizing, directing, and controlling program operations.

Management controls are an integral part of day-to-day management at all levels of the organization and help managers fulfill their responsibilities. NRC managers incorporate management controls in the strategies, plans, guidance, and procedures that govern their programs and operations and help ensure accountability for results. At the NRC, accountability for results is the concept that managers are responsible for the quality and timeliness of program performance, increasing productivity, controlling costs, and mitigating adverse aspects of agency operations, and for ensuring that programs are managed with integrity and in compliance with applicable laws and regulations.

The NRC uses operating plans as a tool to ensure that planning, budgeting, and performance management are performed in an integrated and balanced manner. It includes a summary of NRR programs, projects, activities, and other items to be measured throughout the year and the metrics which will be used to monitor them. Programs and activities are aligned under the two agency Strategic Goals.

SECTION 4 ORGANIZATIONS AND FUNCTIONS

The NRC's Commission is composed of five members nominated by the President and confirmed by the U.S. Senate for a 5-year term. The President designates one member to serve as Chairman, principal executive officer, and spokesperson of the Commission. The members' terms are staggered so that one Commissioner's term expires on June 30 every year. No more than three Commissioners can belong to the same political party.

The Commission as a whole formulates policies and regulations governing nuclear reactor and materials safety, issues orders to licensees, and adjudicates legal matters brought before it.

The Executive Director for Operations (EDO) carries out the policies and decisions of the Commission and directs the activities of the various program and regional offices.

4.1 MAJOR PROGRAM OFFICES

- **Office of Nuclear Reactor Regulation (NRR)**

Regulates all licensing activities and oversees all inspection activities associated with the operation of both nuclear power reactors and research and test reactors.

- **Office of New Reactors (NRO)**

Regulates activities related to the design, siting, licensing, and construction of new commercial nuclear power reactors.

- **Office of Nuclear Material Safety and Safeguards (NMSS)**

Regulates activities that provide for the safe and secure production of nuclear fuel used in commercial nuclear reactors; the safe storage, transportation, and disposal of high-level radioactive waste and spent nuclear fuel; and the transportation of radioactive materials regulated under the Atomic Energy Act of 1954.

- **Office of Federal and State Materials and Environmental Management Programs (FSME)**

Develops and oversees the regulatory framework for the safe and secure use of nuclear materials, industrial, commercial, and medical applications, uranium recovery activities, low-level radioactive waste sites, and the decommissioning of previously operating nuclear facilities and power plants. Works with Federal agencies, States, Tribal and local governments on regulatory matters.

- **Office of Nuclear Regulatory Research (RES)**

Provides independent expertise and information for making timely regulatory judgments, anticipating problems of potential safety significance, and resolving safety issues. Helps develop technical regulations and standards and collects, analyzes and disseminates information about the operational safety of commercial nuclear power plants and certain nuclear materials activities.

- **Office of Nuclear Security and Incident Response (NSIR)**

Oversees agency security policy for nuclear facilities and for users of radioactive material. Provides a safeguards and security interface with other Federal agencies and maintains the agency emergency preparedness and incident response program.

- **Regional Offices**
  - **Region 1**
  - **Region 2**
  - **Region 3**
  - **Region 4**

Conducts inspection, enforcement, investigation, licensing, and emergency response programs for nuclear reactors, fuel facilities, and materials licensees.

4.2 SUPPORT ORGANIZATIONS

- **Office of the Chief Financial Officer (OCFO)**

Leads the agency in planning, acquiring and ensuring the appropriate use of financial resources; and provide financial services to support the agency mission.

- **Office of Congressional Affairs (OCA)**

Provides advice and assistance to the Chairman, the Commission, and all NRC staff on Congressional matters and views of the Congress towards NRC policies, plans, and activities. Maintains ongoing communications with Congressional committees and Members on matters of interest to NRC.

- **Office of Public Affairs (OPA)**

Provides the public and the news media with clear, accurate, and complete information about NRC programs, policy decisions, and activities.

- **Office of Administration (ADM)**

Provides centralized services in the corporate areas of contracts, facilities and security, property management and administrative services including rulemaking and agency directives support.

- **Office of International Programs (OIP)**

Facilitates NRC participation in international working groups where the NRC staff provides advice and assistance to international organizations and foreign countries to develop effective regulatory organizations and enforce rigorous safety standards. Supports NRC activities for the export and import of nuclear materials and equipment.

- **Office of the Chief Human Capital Officer (OCHCO)**

Provides management of agency human capital planning and human resources (HR) planning, policy, and program development. Delivers human resources services in support of NRC's strategic management of human capital. Plans and implements NRC policies, programs, and services to provide for employment services and operations, training, employee and labor relations, organizational development, and workforce information and analysis.

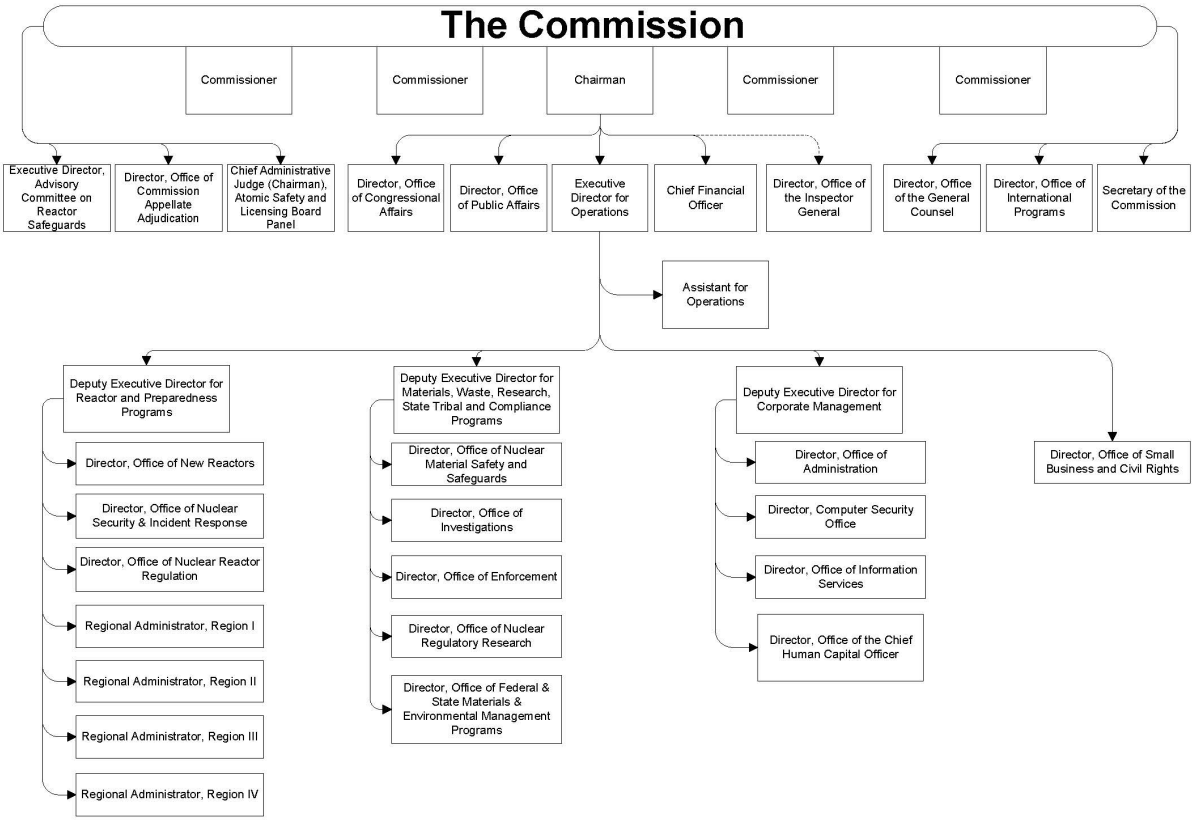
- **Office of the General Counsel (OGC)**

Provides legal advice to the Commission and other agency officials and employees on all aspects of the regulatory and administrative functions and programs of the NRC and represents the agency in administrative and judicial proceedings.

- **Office of Information Services (OIS)**

Plans, directs, and oversees the delivery of centralized information technology (IT) infrastructure, applications, and information management (IM) services, and the development and implementation of IT and IM plans, architecture, and policies to support the mission, goals, and priorities of the agency. Advances the achievement of NRC's mission by assisting management in recognizing where IT can add value while transforming or supporting agency operations.

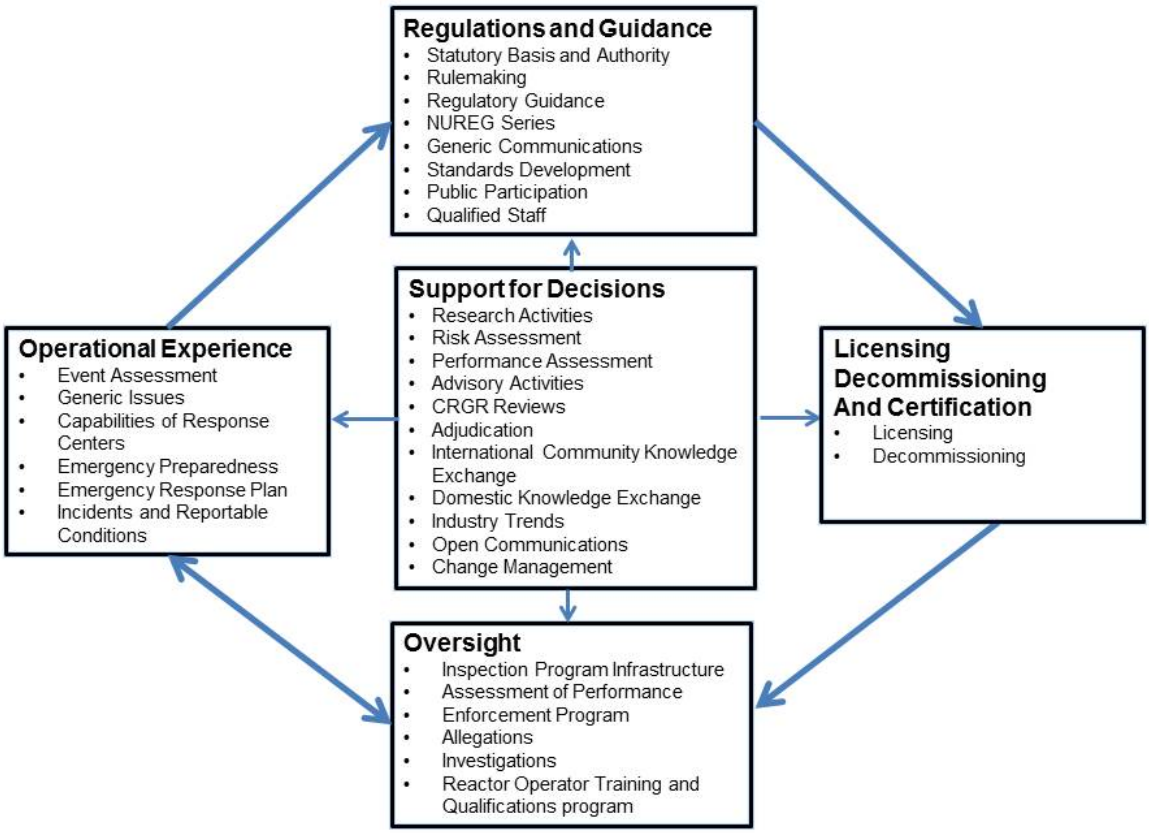
Figure 1, "NRC Organizational Chart", shows the reporting relationships within the NRC for the organizations noted in this section.



SECTION 5 MAJOR ACTIVITIES

The NRC regulates through the implementation of 5 major activities. Each of the major activities is supported by several groups of programs and initiatives to ensure adequate protection of public health and safety and the environment.

Figure 2, "How We Regulate[1]," illustrates the interdependence of the NRC's five major activities.



The 5 major activities are the primary components for ensuring public safety and the protection of the environment. The associated business process activities are depicted in Figure 3. This diagram provides a purpose based functional decomposition of the business process activities shown above in Figure 2. Each of the 5 major, Level 1 activities including, Open Communications and Dialogue, can be further decomposed to provide a comprehensive model of all subordinate business process activities contributing to the higher level purpose of ensuring public safety and the protection of the environment.

[1] This link opens a business process model

To ensure the agency provides resource support to accomplish its mission for protecting public health and safety in a more efficient and effective way, resources are aligned under three major programs: Nuclear Reactor Safety, Nuclear Materials and Waste Safety and Corporate Support. It is this infrastructure that determines business/product line workload priorities to ensure the development of an integrated budget aligns with the Chairman's priorities.

The table below reflects the three major programs and associated business lines.

MAJOR PROGRAM	BUSINESS LINE
Nuclear Reactor Safety	Operating Reactors
	New Reactors
Nuclear Materials and Waste Safety	Fuel Facilities
	Spent Fuel Storage and Transp.
	Nuclear Materials Users
	Decommissioning and LLW
Corporate Support	
	Administrative Services
	Acquisitions
	Human Resources Mgt.
	Outreach
	Training
	Financial Management
	Policy Support
	Information Management
	Information Technology

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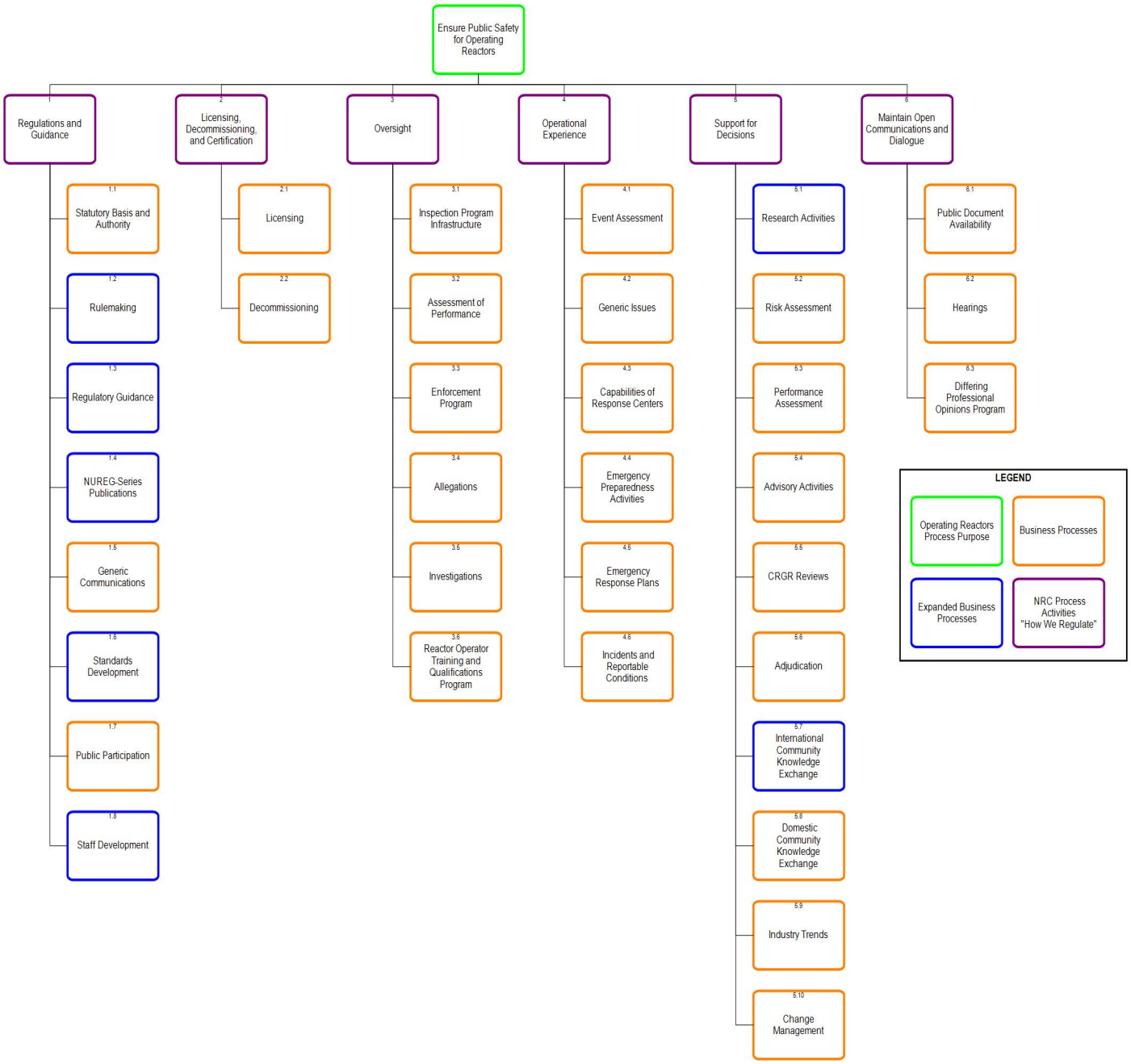
Figure 3, "Functional Decomposition Model of Business Activities[2]".

[2] This link opens a business process model


Ensure Public Safety for Operating Reactors
1
Regulations and Guidance
1.1
Statutory Basis and Authority
1.2
Rulemaking
1.3
Regulatory Guidance
1.4
NUREG-Series Publications
1.5
Generic Communications
1.6
Standards Development
1.7
Public Participation
1.8
Staff Development
2
Licensing, Decommissioning, and Certification
2.1
Licensing
2.2
Decommissioning
3
Oversight
3.1
Inspection Program Infrastructure
3.2
Assessment of Performance
3.3
Enforcement Program
3.4
Allegations
3.5
Investigations
3.6
Reactor Operator Training and Qualifications Program
4
Operational Experience
4.1
Event Assessment
4.2
Generic Issues
4.3
Capabilities of Response Centers
4.4
Emergency Preparedness Activities
4.5
Emergency Response Plans
4.6
Incidents and Reportable Conditions
5
Support for Decisions
5.1
Research Activities
5.2
Risk Assessment
5.3
Performance Assessment
5.4
Advisory Activities
5.5
CRGR Reviews
5.6
Adjudication
5.7
International Community Knowledge Exchange
5.8
Domestic Community Knowledge Exchange
5.9
Industry Trends
5.10
Change Management
6
Maintain Open Communications and Dialogue
6.1
Public Document Availability
6.2
Hearings
6.3
Differing Professional Opinions Program
LEGEND
Operating Reactors Process Purpose
Business Processes
Expanded Business Processes
NRC Process Activities "How We Regulate"

5.1 REGULATIONS AND GUIDANCE

Regulations are the rules governing the NRC licensing and regulatory activities. Guidance documents set forth methods by which the NRC staff or licensees can meet NRC requirements.

Our objectives are to:

- Establish and maintain stable and predictable regulatory programs and policies for all stakeholders.
- Maintain a safety framework of rules, regulatory guidance, and standard review plans that promote licensee compliance with underlying safety principles and stakeholder understanding.

We achieve our regulatory objectives by implementing programs and processes related to the following:

- Establishing safety and security policies, goals, rules, regulations, and orders that govern licensed nuclear activities and interacts with other Federal agencies, including the U.S. Department of Homeland Security, on safety and security issues. *(Responsibility: NSIR, NRR, FSME, NMSS)*
- Providing opportunities for public involvement in the regulatory process that include the following: holding open meetings, conferences, and workshops; issuing rules, regulations, petitions, and technical reports for public comment; responding to requests for NRC documents under the Freedom of Information Act; reporting safety concerns; and providing access to thousands of NRC documents through the NRC Web site. *(Responsibility: All NRC Major Program Offices)*
- Developing effective working relationships with State and Tribal Governments regarding reactor operations and the regulation of nuclear materials. *(Responsibility: FSME, NRR, NMSS)*
- Endorsing developed standards. *(Responsibility: All NRC Major Program Offices)*
- Issuing written information and guidance on topics of widespread interest or with general applicability. *(Responsibility: All NRC Major Program Offices for development, NRR/DPR for issuance)*

Regulatory products include:

- Proposed and Final Rules examples
  - Fitness for Duty (10 CFR 26)
  - Training and Qualification of Nuclear Power Plant Personnel (10 CFR 50.120)
- Policy Statement examples
  - Enforcement Policy
  - Enhancing Public Participation in NRC Meetings

Guidance products include:

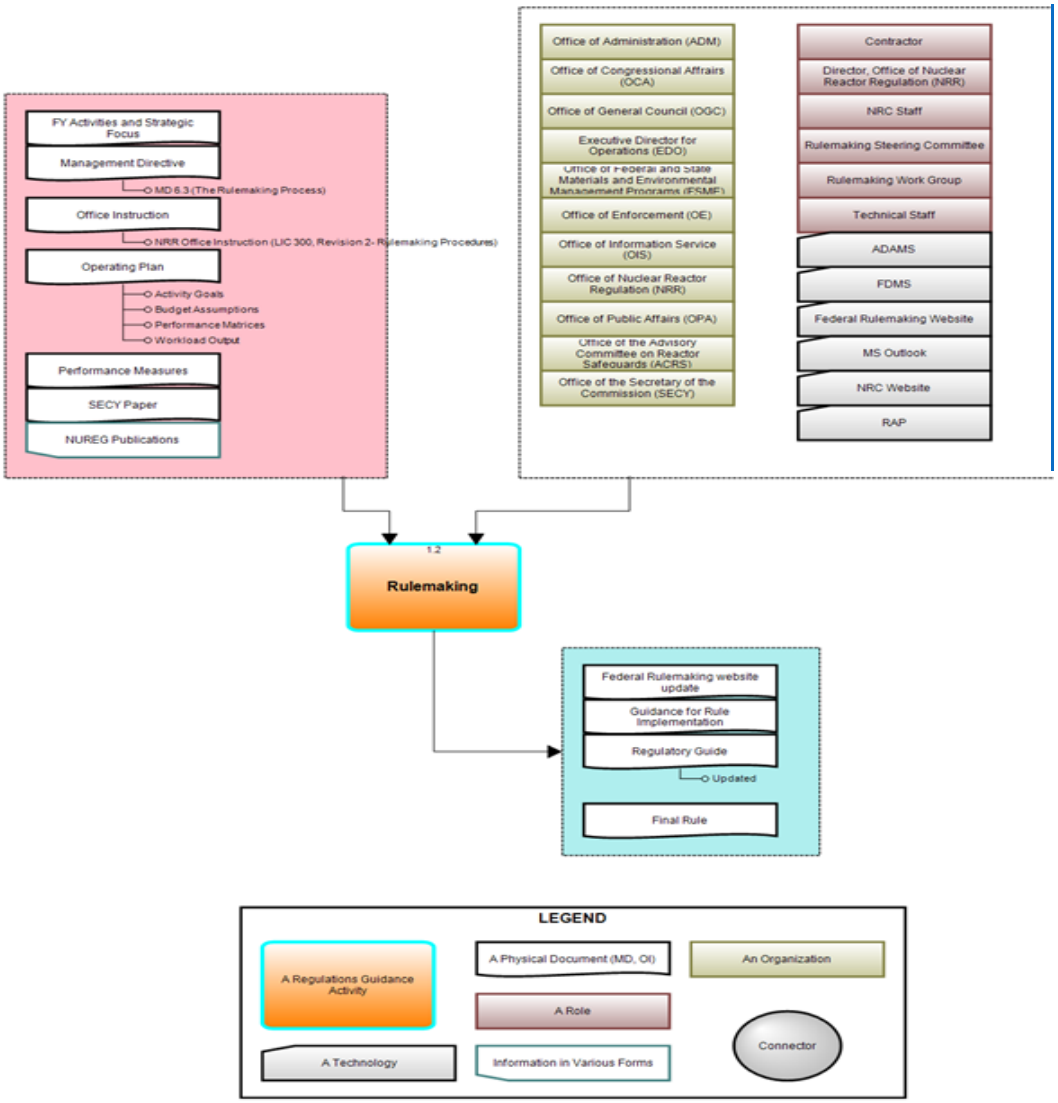
- Generic Communications examples
  - Regulatory Issue Summary
  - Information Notice
  - Generic Letters
- Regulatory guides
- NUREGs

The business process models in the following sections provide illustrations of process inputs, outputs, and process stakeholders related to Regulations and Guidance.

5.1.1 Rulemaking Process Model[3]

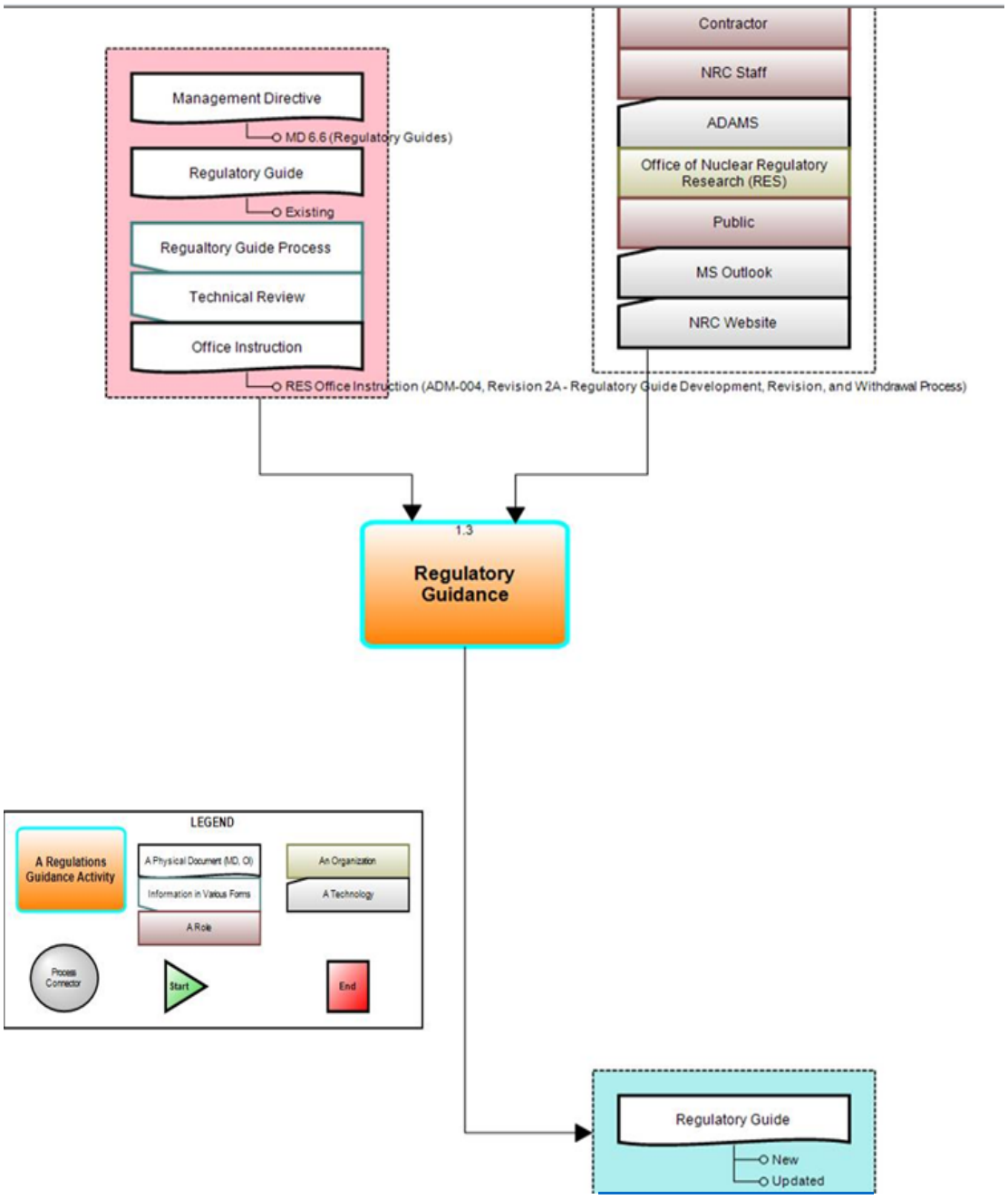
[3] This link opens a business process model. These models are included for the IRRS mission and will not be included in final NUREG.

Figure 3.1 illustrates process inputs and outputs for the Rulemaking process in the form of management directives, office instructions, and publications. Process stakeholders including NRC offices, specific organizational roles, and information technology systems/components are shown below. For example, the Office of Administration (ADM), Office of Congressional Affairs (OCA), Office of General Council (OGC), Executive Director for Operations (EDO), Office of Federal and State Materials and Environmental Management Programs (FSME), Office of Enforcement (OE), Office of Information Service (OIS), Office of Nuclear Reactor Regulation (NRR), Office of Public Affairs (OPA), Contractor, Director, Office of Nuclear Reactor Regulation (NRR), NRC Staff, Rulemaking Steering Committee, Rulemaking Work Group, Technical Staff, ADAMS, FDMS, Federal Rulemaking Website , MS Outlook, NRC Website, RAP, Office of the Advisory Committee on Reactor Safeguards (ACRS), Office of the Secretary of the Commission (SECY), in order to perform Rulemaking will use the following input(s): FY Activities and Strategic Focus, Management Directives, Office Instructions, Operating Plans, Performance Measures, SECY Papers, NUREG Publications. The outputs produced are the: Federal Rulemaking website update, Guidance for Rule Implementation, Regulatory Guide, Final Rule.



5.1.2 Regulatory Guidance Process Model[4]

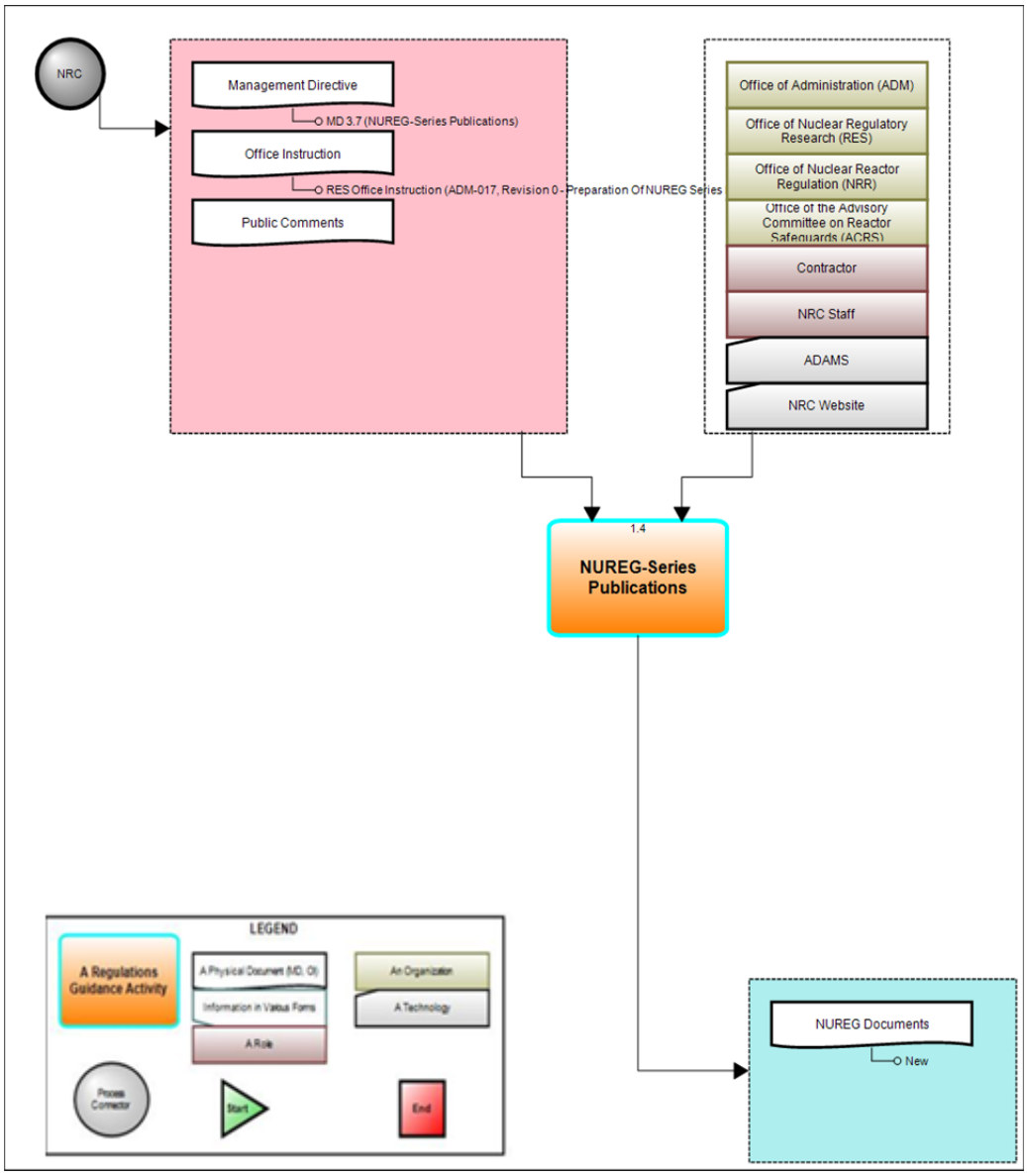
Figure 3.2 depicts the Regulatory Guidance process model. The Public, Office of Nuclear Regulatory Research (RES), Office of Nuclear Reactor Regulation (NRR), NRC Staff, and Contractors are stakeholders who can access ADAMS, MS Outlook, and NRC Websites for various Regulatory Guidance. The process inputs are: existing Regulatory Guidance, Office Instructions, Management Directives, and Technical Review. The process outcome is the creation of new or updated Regulatory Guides shown below as output.



[4] This link opens a business process model. These models are included for the IRRS mission and will not be included in final NUREG.

5.1.3. NUREG Series Publications Process Model[5]

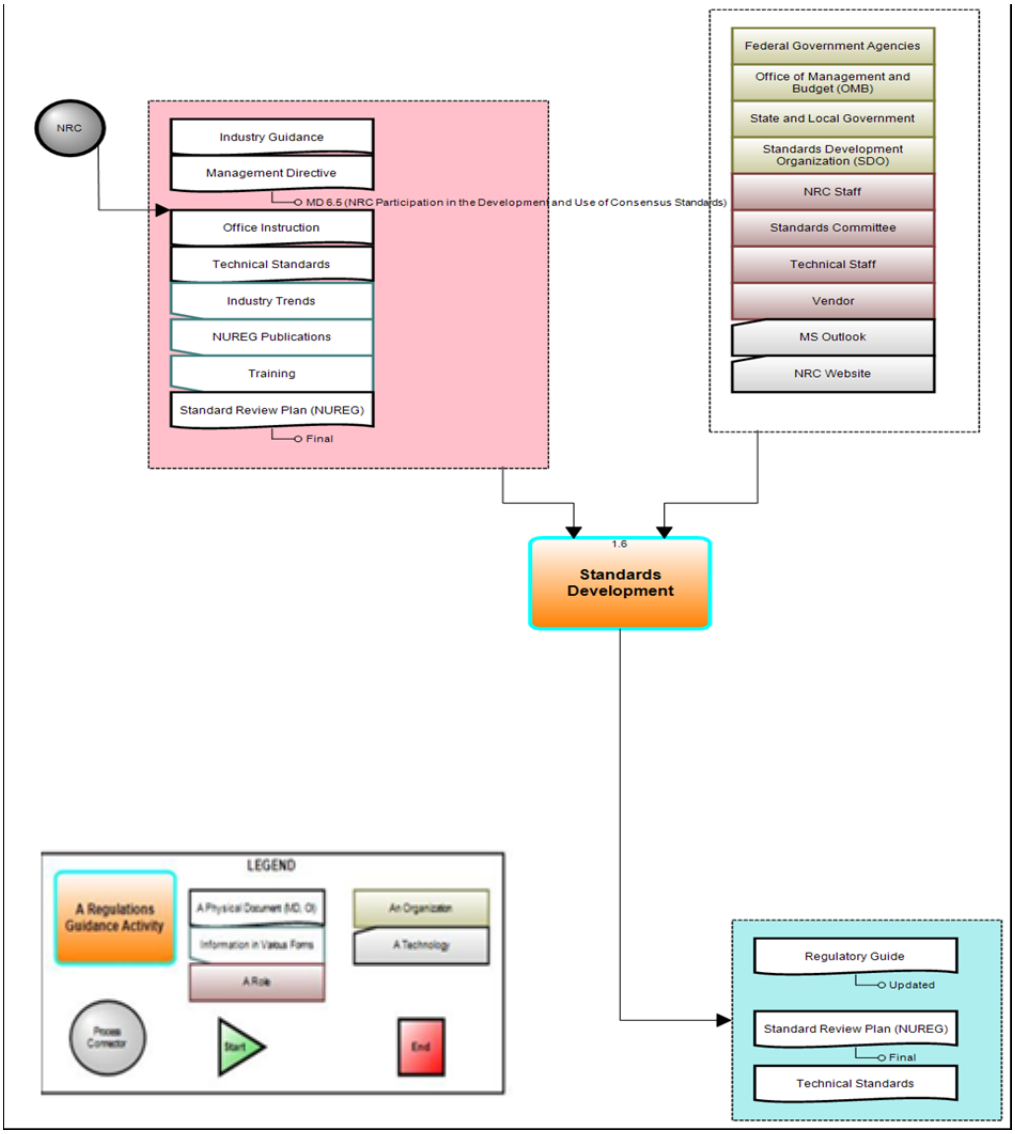
Figure 3.3 illustrates the NUREG Series Publication process model. The Federal Government Agencies, Office of Management and Budget (OMB), State and Local Government, Standards Development Organization (SDO), NRC Staff, Standards Committee, Technical Staff, Vendors are primary stakeholders who utilize MS Outlook, NRC Websites in order to perform Standards Development. The following input(s) Industry Guidance, Management Directives, Office Instructions, Technical Standards, Industry Trends, NUREG Publications, Training, and Standard Review Plans (NUREG) are utilized in the creation of NUREG documents.



[5] This link opens a business process model. These models are included for the IRRS mission and will not be included in final NUREG.

5.1.4 Standards Development Process Model[6]

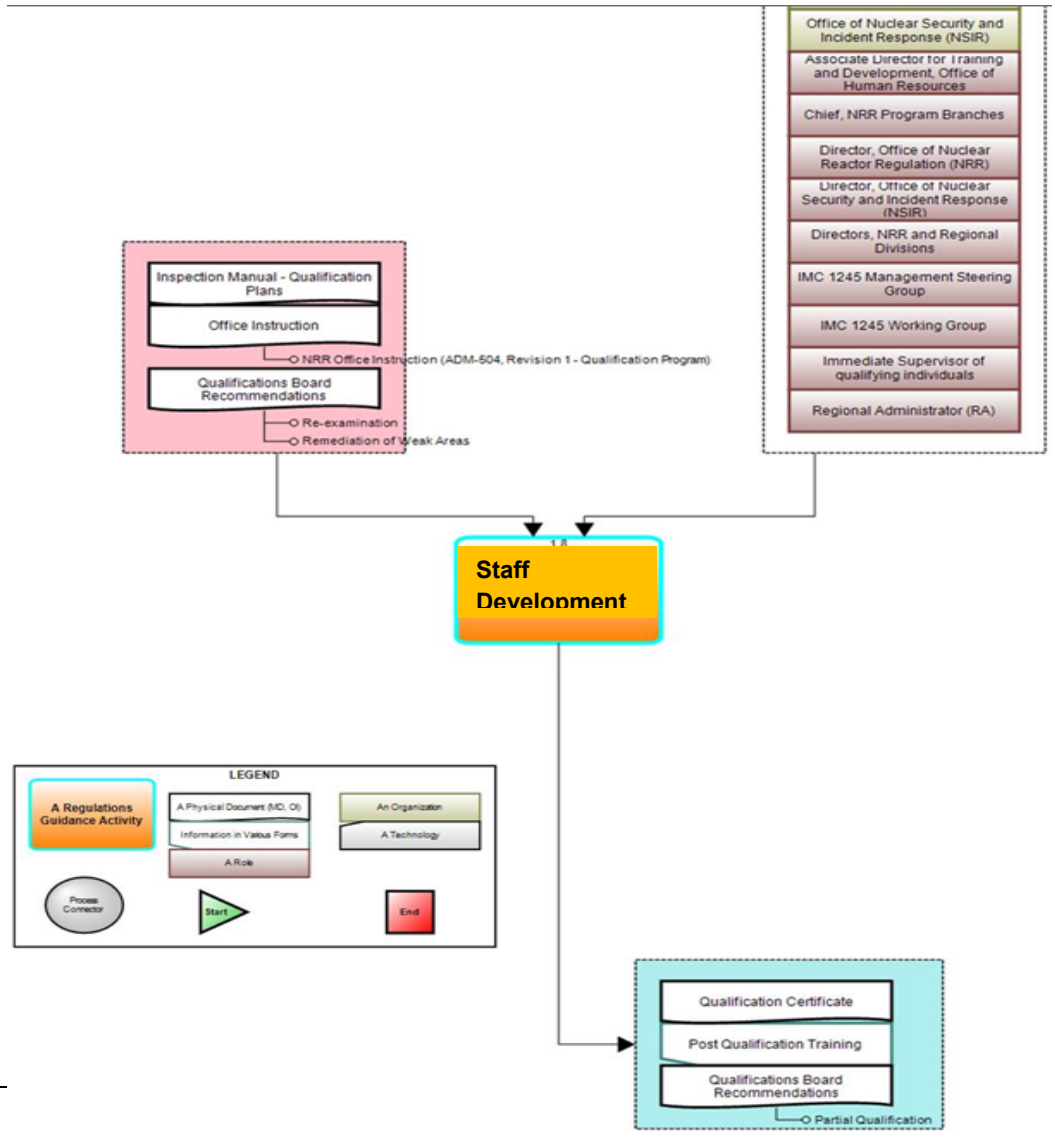
Figure 3.4 illustrates the Standards Development process inputs, outputs, and associated stakeholders and technology. As shown below, this process includes The Federal Government Agencies, Office of Management and Budget (OMB), State and Local Government, Standards Development Organization (SDO), NRC Staff, Standards Committee, Technical Staff, Vendors, use of MS Outlook, and use of NRC Website for performing Standards Development. The following input(s) Industry Guidance, Management Directives, Office Instructions, Technical Standards, Industry Trends, NUREG Publications, Training, and Standard Review Plans (NUREG) are employed to produce the following output(s): Regulatory Guides, Standard Review Plans (NUREG), and Technical Standards.



[6] This link opens a business process model. These models are included for the IRRS mission and will not be included in final NUREG.

5.1.5 Staff Development Process Model[7]

Figure 3.5 displays a process model for staff development. The Office of Nuclear Reactor Regulation (NRR) staff includes experts in nuclear, mechanical, electrical, chemical, metallurgical, and civil engineering, as well as specialists in the fields of instrumentation and control, environment, health physics, quality assurance, human performance, training, fire protection, and probabilistic safety assessment. These resources review technical information provided by licensees, vendors, or other sources. NRR also has staff devoted to receiving and reviewing industry operating experience data, which is used to assess the significance of safety issues and inform the agency's decisions. Vital services such as budgeting resources, maintaining and upgrading information technology, providing administrative support, and maintaining a qualified work force contribute to the ability of all NRR staff to perform essential activities pertaining to the execution of four major programs (rulemaking, licensing, oversight, and incident response for two significant classes of licensees: those using commercial power reactors and those using test and research reactors.). Inputs and outputs related to the process are depicted below.



[7] This link opens a business process model.

5.2 LICENSING, DECOMMISSIONING AND CERTIFICATION

Licensing, decommissioning and certifications involve performing the analyses and evaluations that develop the background and bases for our regulatory decisions.

Our objectives are to:

- Review licensing requests to confirm that they provide adequate margin of safety consistent without rules and regulations.
- Conduct periodic reviews of Agreement State programs to ensure they are adequate to protect public health and safety and are compatible with NRC's program.

We achieve our licensing objectives by implementing programs and processes related to the following:

- Licensing the design, construction, operation, and decommissioning of nuclear plants and other nuclear facilities, such as uranium enrichment facilities and research and test reactors. *(Responsibility: NRO, NRR, FSME, NMSS)*
- Licensing the possession, use, processing, handling, and importing and exporting of nuclear materials. *(Responsibility: FSME, OIP)*
- Licensing the siting, design, construction, operation, and closure of low-level radioactive waste disposal sites under NRC jurisdiction and the construction, operation, and closure of a proposed geologic repository for high-level radioactive waste. *(Responsibility: NMSS)*
- Certifying privatized uranium enrichment facilities. *(Responsibility: NMSS)*
- Licensing the operators of civilian nuclear reactors *(Responsibility: NRR, NRO)*

Products produced during the licensing, decommissioning and certification processes include:

- Safety Evaluation Reports
- Environmental Statements
- Plant Technical Specifications
- Construction Permits
- Operating Licenses
- License Amendments
- Operator's Licenses
- Transportation and storage container certificates

5.3 OVERSIGHT

Oversight involves the inspection, assessment and investigation activities we use to verify that the plants are being operated in accordance with NRC rules and regulations.

Our objectives are to:

- Implement, review and refine the Reactor Oversight Program to better identify significant performance issues.
- Review and refine the enforcement framework that emphasizes the importance of compliance with regulatory requirements and encourages prompt identification and comprehensive correction of licensee violations.

We achieve our oversight objectives by implementing programs and processes related to the following:

- Inspecting licensed and certified facilities and activities. *(Responsibility: Regions, NRR, NRO, NMSS, FSME)*
- Conducting regular assessments of overall reactor licensee performance. *(Responsibility: NRR, NSIR, Regions)*
- Investigating nuclear incidents and allegations concerning any matter regulated by the NRC. (Responsibility: OI, NRR, NSIR, NRO, FSME, NMSS, Regions)
- Enforcing NRC regulations and the conditions of NRC licenses. *(Responsibility: OE, NRR, NRO, NMSS, FSME, OGC)*
- Directing the NRC program for response to incidents involving licensees and conducts a program of emergency preparedness and response for licensed nuclear facilities. *(Responsibility: NSIR)*

Products produced to support our oversight activities include:

Inspection product examples:

- Inspection Manual Chapters
- Inspection procedures
- Inspection Reports
- Significance Determination Outcomes
- Assessment of performance

Enforcement product examples:

- Notices of Violation
- Orders
- Allegation Dispositions

Investigation reports

5.4 OPERATIONAL EXPERIENCE

Operational experience activities systematically collect, communicate, and evaluate domestic and international reactor operating experience, and apply the lessons learned.

Our objectives are to:

- Evaluate domestic and international operating events and trends for risk significance and generic applicability in order to improve NRC programs.
- Work with the international counterparts to exchange information, expertise, operating experience and ongoing research to recognize and respond to emerging technical issues and promote best practices.
- Conduct a program for the identification and resolution of generic issues.

We achieve our operational experience objectives by implementing programs and processes related to the following:

- Collecting, analyzing, and disseminating information about the operational safety of commercial nuclear power reactors and certain nonreactor activities. *(Responsibility: NRR, RES)*
- Identifying issues requiring a generic resolution. *(Responsibility: All NRC Major Program Offices*)

Operating Experience products include:

- Daily summaries of significant events
- Communication of the summary of a single significant event (OpE COM)
- Risk informed inspection samples (OpE Smart Sample)
- Semi Annual Notable OpE Events Report

5.5 SUPPORT FOR DECISIONS

Our objective is to:

- Conduct research to identify, lead and/or sponsor reviews that support the resolution of ongoing and future safety issues.

We support our decisions by implementing programs and processes related to the following:

Conducting light-water reactor safety research, using independent research, data, and expertise, to develop regulations and anticipate potential safety problems. *(Responsibility: RES)*

- Conducting public hearings on matters of nuclear and radiological safety, environmental concern, and common defense and security. *(Responsibility: All NRC Major Program Offices)*
- Ensuring implementation of new rules, regulations and development of new guidance to existing licensees has an adequate safety justification. *(Responsibility: All NRC Major Program Offices)*

Products used to support our decisions include:

- Research results
    - Technical Reports
- Significance Determination results
- Legal reviews and opinions
- Annual reactor licensee performance assessment
- Annual Risk Assessment and Reasonable Assurance Determinations

SECTION 6 NRC'S MANAGEMENT SYSTEM

The NRC's management system is made up of multiple interrelated and interacting programs and processes. The management system supports our regulatory mandate and structure and integrates the programs and processes of our major activities with programs and process in three support areas.

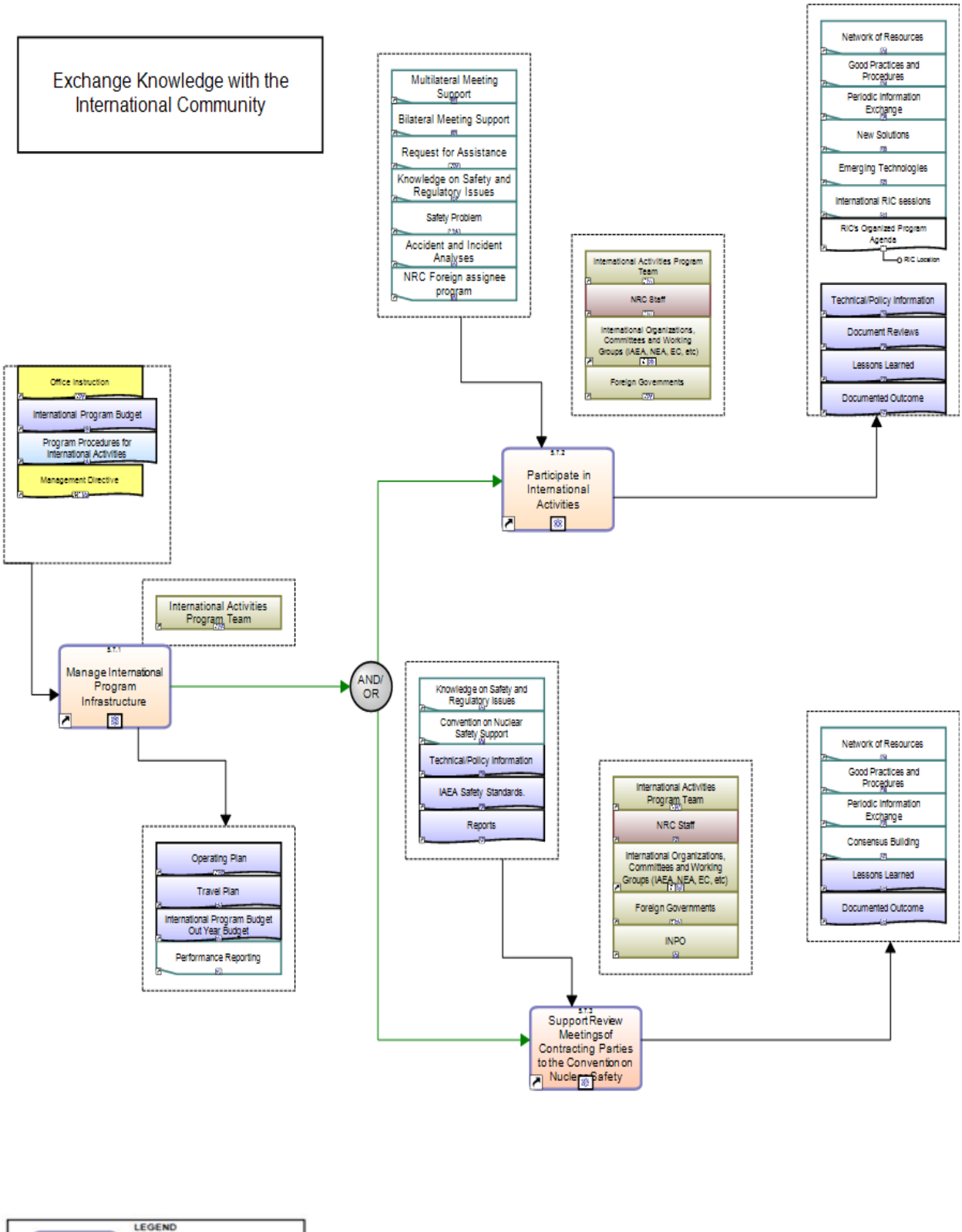
6.1 SUPPORT ACTIVITIES

Support activities provide the necessary framework that allows all programs to be successful. Our support programs fall into three categories.

6.1.1 Regulatory Support programs and processes include the development and maintenance of the technical standards, processes and guidance used by NRC staff to complete work activities. This also includes how we shape our relationships with other federal, state, local, and tribal entities, and how we develop, maintain, and manage our relationships with our licensees, the public and other stakeholders such as the international community.

Figure 4, "Exchanging Knowledge with the International Community[8]", depicts the business process activities for this area. The model below shows 3 processes related to international knowledge exchange. These include but are not limited to the management of the international program infrastructure, participation in international activities, and support for review meetings of the Contracting Parties to the Convention on Nuclear Safety. Process inputs, outputs, and the various process stakeholders are depicted below.

[8] This link opens a business process model. These models are included for the IRRS mission and will not be included in final NUREG.


Exchange Knowledge with the International Community
Multilateral Meeting Support
Bilateral Meeting Support
Request for Assistance
Knowledge on Safety and Regulatory Issues
Safety Problem
Accident and Incident Analyses
NRC Foreign assignee program
International Activities Program Team
NRC Staff
International Organizations, Committees and Working Groups (IAEA, NEA, EC, etc)
Foreign Governments
Network of Resources
Good Practices and Procedures
Periodic Information Exchange
New Solutions
Emerging Technologies
International RIC sessions
RIC's Organized Program Agenda
RIC Location
Technical/Policy Information
Document Reviews
Lessons Learned
Documented Outcome
Office Instruction
International Program Budget
Program Procedures for International Activities
Management Directive
Participate in International Activities
International Activities Program Team
Manage International Program Infrastructure
AND/ OR
Knowledge on Safety and Regulatory Issues
Convention on Nuclear Safety Support
Technical/Policy Information
IAEA Safety Standards.
Reports
International Activities Program Team
NRC Staff
International Organizations, Committees and Working Groups (IAEA, NEA, EC, etc)
Foreign Governments
INPO
Network of Resources
Good Practices and Procedures
Periodic Information Exchange
Consensus Building
Lessons Learned
Documented Outcome
Operating Plan
Travel Plan
International Program Budget Out Year Budget
Performance Reporting
Support Review Meetings of Contracting Parties to the Convention on Nuclear Safety
LEGEND
A Business Process Activity
An OI, MD, or Procedure
An Organization
Information in Various Forms
A Physical Document
A Role

Responsibility for providing regulatory support resides in a variety of organizations including the major program offices and Office of Administration.

Regulatory Support products include:

- NRR Office Instructions in the LIC (licensing) and OVRST (Oversight) series
- Site Specific Risk Notebooks
- Standard Review Plan (NUREG-0800)
- Handbooks for Project Managers in such areas as decommissioning, environmental, non-power reactors, operating power reactors
- Interim staff guidance

The NRC's regulatory actions are also supported by the use of management tools. For example, the Reactor Program System (RPS) is a work planning and reporting tool for power reactor inspections. It is used by NRR and the regions as the primary tool to plan and schedule work assignments, record inspection activities, record inspection findings, document plant performance indicators, and cite inspection follow-up items. In addition, items recorded in RPS are sent to the time and labor reporting system and also to our billing system.

6.1.2 Corporate Support programs and processes are those that provide the infrastructure and resources necessary for our staff to complete their assigned tasks. Responsibility for providing corporate support resides in OCFO, OCIO, and ADM.

Corporate support products include:

- Management Control Plan
- Budget
- Operating Plan including performance metrics
- Quarterly Performance Report documenting status of metrics

Several systems provide agency-wide corporate support. The time and labor system captures data on employee hours worked and links that time to specific activities. Information on time spent on plant-specific activities is then used by the NRC's billing system. The billing system creates the bills sent to fuel cycle facility and power reactor licensees for work performed on such things as licensing actions, topical reports reviews, and operator examinations.

The NRC also uses the Federal Financial System as its core financial system. It encompasses all accounting and financial records and activity within the agency and interfaces with more than 16 financial systems within NRC and the United States Treasury.

6.1.3 Human Capital programs, processes and strategies are those used to ensure that our staff members are competent and fulfilled in their jobs. Responsibility for providing support in the area of human capital resides in the Office of Human Resources.

Human capital products include:

- Staffing plans
- Individual performance plans and appraisals
- Knowledge management activities
- Training and qualification courses and programs for NRC staff

The NRC uses the iLearn system as its learning management tool. The iLearn system houses the NRC's course catalog and allows employees to register for instructor lead courses and to complete on-line courses. The iLearn system is the repository for the learning history for each NRC employee.

The agency's personnel system is on-line and provides real time information to the agency and the individual. The system captures all individual personnel transactions from hiring to retirement.

6.2 GUIDANCE DOCUMENTS

The NRC's management system is implemented through a series of internal guidance documents. Those documents fall into one of five levels. Each level represents documents with equivalent levels of authority and similar intended audiences within the NRC.

- Documents at the highest level, **Level 1,** are Commission level policies and papers.

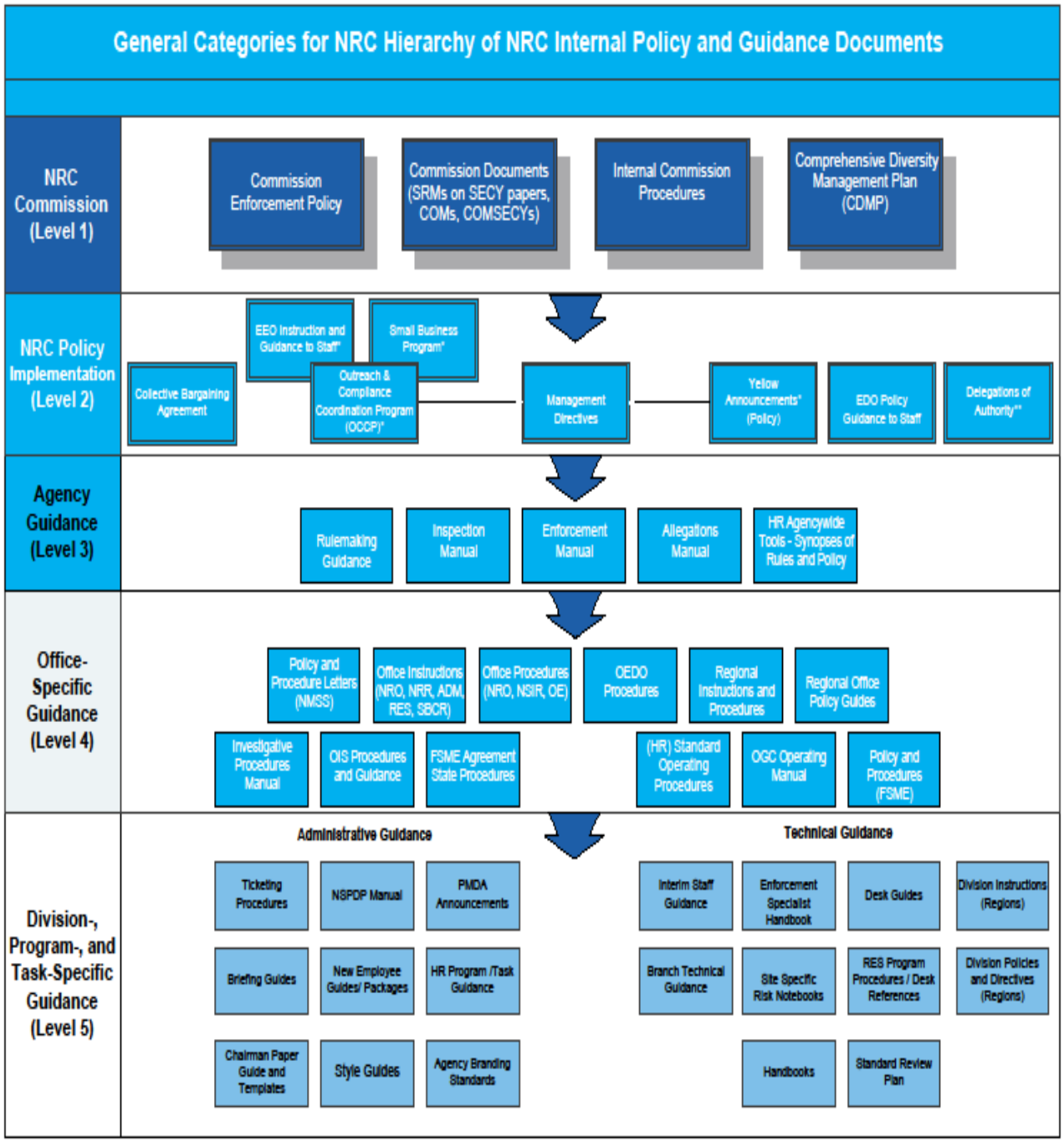
- **Level 2** documents address general, high-level policy implementation. At the center of our policy implementation are the Management Directives. Directives specify policy, objectives, responsibilities, authorities, and other requirements in specific functional areas. They are formal issuances that guide, inform, and instruct NRC employees in the performance of their jobs and communicate policies to enable employees to work effectively within the agency, with other agencies, and with the public. Directives have associated handbooks which contain instructional material consisting of procedures, guides, standards, reporting requirements, exhibits, and identification of pertinent laws that require compliance with the policy stated in the directives.

- **Level 3** documents contain agency-level guidance for activities spanning multiple agency offices.

- **Level 4** documents are office specific implementation guidance which contains extensive detail that applies internally to a particular NRC organization. Within each major office of NRC, a series of documents (e.g., Office Instructions) provide guidance on administrative activities, budget formulation, communication with other Offices, and guidance on carrying out licensing or other regulatory activities that are the assigned to that Office. In addition to providing guidance for completing the specified activity, each guidance document typically highlights special responsibilities or authorities required of or by the managers and staff for that activity. Each series of guidance documents also includes directions for the control of and approval of changes to the information contained in any document in the series.

- **Level 5** documents contain more detailed task-specific user guidance for implementation of activities in the various divisions. Documents in this level fall into two categories. Administrative guidance documents provide information to the staff on how some day-to-day tasks are completed. Included in this category are templates for producing routine documents as well as instructions on how to disseminate general, time-sensitive information. Technical guidance documents are normally vary by work unit. Technical guidance documents normally provide more detailed information used only by part of the organization. These documents can identify interactions with other processes, inputs, process flow, and process outputs.

Figure 5, "General Categories for NRC Hierarchy of NRC Internal Policy and Guidance Documents," provides examples of the documents which can be found at each of the levels.



6.3 RECORDS

All official records made or received by NRC in the course of its official business comply with the regulations governing Federal records management issued by the National Archives and Records Administration (NARA) and the General Services Administration (GSA). All internally and externally generated records and documents are processed, maintained, distributed, made available to the public, and preserved or destroyed, as appropriate.

The Agency-wide Documents Access and Management System (ADAMS) is a repository for appropriate NRC unclassified, non-Safeguards, official program-related records in a centralized electronic records repository. NRC's publicly available documents are made available to the public via NRC's external Web site and the ADAMS public libraries. In addition to ADAMS, NRC maintains hard copy and electronic record and document-handling systems necessary to meet the needs of the agency.

All NRC systems, including ADAMS, are designed to meet NARA regulations which include retention requirements.

SECTION 7 MEASUREMENT, ASSESSMENT AND IMPROVEMENT

7.1 METRICS

The NRC uses an integrated process to plan, budget, and assess its performance. Three principal publications document this process:

- Strategic Plan (NUREG-1614)
- Performance Budget (NUREG-1100)
- Performance and Accountability Report (NUREG-1542)

The Strategic Plan describes the NRC's mission, values, and strategic goals of Safety and Security. For each of these goals, the Plan describes its strategic outcomes and discusses issues, strategies, and the means to support the strategies.

The NRC Strategic Human Capital Plan shows important linkages, goals, strategies for success, and key outcomes. The most recent version of our human capital plan was published in October, 2009 as NUREG/BR-0455. The Human Capital Strategic Plan is the framework for managing the NRC's human capital system and is key to continuing our efforts to build a highly effective, performance-based organization by attracting, retaining, developing, motivating, and rewarding a high-performing, top-quality workforce. The Strategic Human Capital Plant is directly linked to the NRC Strategic Plan and its overall strategy. Details of the Performance and Accountability Report are discussed under self-assessments.

7.2 SELF ASSESSMENTS

7.2.1 The Performance and Accountability Report

For each fiscal year, NRC evaluates its own performance against the previous year's Performance Budget (NUREG-1100). The Performance and Accountability Report (NUREG-1542) presents a comprehensive and integrated picture of the agency's performance for a specific fiscal year. This report includes:

- the NRC's audited financial statements,
- the results of an evaluation of management controls,
- a report on the agency's success in achieving its strategic and performance goals,
- the results of any significant assessments of program activities that were carried out during the reporting period, and
- the NRC Inspector General's most serious management challenges facing the agency and how the NRC is addressing them.

7.2.2 Reasonable Assurance

The Federal Managers' Financial Integrity Act of 1982 (Integrity Act) requires the Chairman of the NRC to annually certify, with reasonable assurance, that NRC meets the following objectives:

- Efficient/Effective Operations;
- Reliable Financial Reporting; and
- Compliance with Laws and Regulations.

All major programs, including Nuclear Reactor Safety, certify that the following Integrity Act objectives are achieved:

- Programs are achieving their intended results, and are protected from waste, fraud, abuse, and mismanagement;
- Resources are being used consistently with the agency's mission;
- Information systems are authorized and appropriately secured;
- Laws and regulations are followed ; and
- Reliable and timely information is obtained, maintained, reported, and used for sound decision-making.

The NRC's annual reasonable assurance process requires each Business Line Lead and Corporate Support Product Line Lead to provide reasonable assurance that their respective lead office's and partner offices' internal controls are in place and functioning as intended.

7.2.3 Programmatic Internal Control

Programmatic internal control helps program managers achieve intended results and safeguard the integrity of their program. Internal control applies to all aspects of an entity's operations, including organization, policies, and procedures. NRC's internal control program follows the five GAO Standards for Internal Control in the Federal Government, which are as follows:

- Control Environment (includes Safety Culture)
- Risk Assessment
- Control Activities (includes IT Systems)
- Information and Communication
- Monitoring

NRC business lines are required to annually assess their programmatic internal control and make continuous improvements. They report whether controls are performing as intended. When combined with the internal control plans, risk assessments, self-assessments, external audits and reviews, these provide a strong culture at the NRC for compliance with applicable regulations and laws.

7.3 INDEPENDENT ASSESSMENTS

In addition to monitoring our own performance through the processes noted above, certain aspects of NRC's performance also receive independent assessment by the Inspector General (OIG) and the Government Accountability Office (GAO).

7.3.1 Inspector General (OIG)

The NRC's Office of the Inspector General (OIG) was established on April 15, 1989, as an independent and objective unit within the NRC to conduct and supervise audits and investigations relating to NRC's programs and operations. The purpose of OIG's audits and investigations is to prevent and detect fraud, waste, abuse, and mismanagement, and to promote economy, efficiency, and effectiveness in NRC programs and operations. In addition, OIG reviews existing and proposed regulations, legislation, and directives, and provides comments, as appropriate, regarding any significant concerns. The Inspector General reports to and is under the general supervision of the NRC Chairman but operates with personnel, contracting, and budget authority independent of that of the NRC. The OIG keeps the Chairman and the Congress fully and currently informed about specific issues, recommends corrective actions, and monitors NRC's progress in implementing such actions.

The NRC's OIG independently and objectively conducts and supervises financial and performance audits and conducts criminal, civil, and administrative investigations. Performance audits focus on NRC administrative and program operations. Financial audits review NRC's internal control systems, transaction processing, financial systems, and contracts. The OIG also assists the agency by assessing

and reporting on the NRC's efforts to ensure its safety-related programs are operating in accordance with prescribed rules and regulations.

After collecting, verifying and reporting on its results, the OIG works with NRC management to reach agreement on how best to achieve a positive change in addressing the recommendations resulting from the audit.

7.3.2 Government Accountability Office (GAO)

The GAO is the investigative arm of Congress. GAO exists to support the Congress in meeting its Constitutional responsibilities and to help improve the performance and accountability of the Federal government for the American people. GAO examines the use of public funds; evaluates Federal programs and activities; and provides analyses, options, recommendations, and other assistance to help the Congress make effective oversight, policy, and funding decisions.

The NRC reviews the results and recommendations for all independent assessments performed by GAO and responds, in writing, to document our planned actions in response to the assessment.

7.4 MANAGING CHANGE

The NRC’s ability to achieve its goals depends on a changing mix of industry operating experience, national priorities, market forces, and availability of resources. As part of its Strategic Plan, the NRC identifies significant external factors, all of which are beyond the control of the NRC but could have an impact on the agency’s ability to achieve its strategic goals. A process for managing change continues to be refined and implemented to ensure that the NRC is ready to address changing priorities in a timely manner.