POLICY ISSUE
INFORMATION

February 27, 2007 SECY-07-0039

FOR: The Commissioners

FROM: Luis A. Reyes
Executive Director for Operations

SUBJECT: SEMIANNUAL UPDATE OF THE STATUS OF NEW REACTOR LICENSING ACTIVITIES AND FUTURE PLANNING FOR NEW REACTORS

PURPOSE:

This paper informs the Commission of the staff's new reactor licensing activities and accomplishments since the issuance of SECY-06-0187, "Semiannual Update of the Status of New Reactor Licensing Activities and Future Planning for New Reactors," dated August 25, 2006. In addition, this paper discusses ongoing strategies to prepare for projected new reactor licensing activities in 2007 and beyond with detailed descriptions presented in Enclosures 1 and 2.

The information contained in this paper is current as of January 31, 2007, and reflects the recent Congressional actions to fully fund the new reactor program during fiscal year (FY) 2007.

BACKGROUND:

In SECY-01-0188, "Future Licensing and Inspection Readiness Assessment," dated October 12, 2001, the staff assessed its technical, licensing, and inspection capabilities, and described enhancements to support new reactor licensing. The staff also committed to giving the Commission semiannual updates of the status of new reactor licensing activities.

DISCUSSION:

Office of New Reactors

The Office of New Reactors (NRO) is being staffed in phases. The Office Director and Deputy Office Director and the Division Directors and Deputy Division Directors for five divisions are currently in place. On October 29, 2006, the first staff transitioned to NRO with the Office of Nuclear Reactor Regulation (NRR) Division of New Reactor Licensing (DNRL) moving in its

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entirety to NRO. The projected time-frames in FY 2007 for the remaining staff moves from NRR to NRO are based on the anticipated new reactor workload.

Economic Simplified Boiling Water Reactor Design Certification

By a letter dated December 1, 2005, the NRC staff informed General Electric Company (GE) that its application for the economic simplified boiling water reactor (ESBWR) design certification, as revised and supplemented, was sufficiently complete to allow the staff to proceed with the detailed technical review. The NRC staff established the date of October 11, 2006, for issuing its requests for additional information (RAIs). Because of revised schedules for GE deliverables, the NRC staff established, by letter dated August 9, 2006, an additional RAI milestone of December 11, 2006, for areas impacted by delays in submittals. When the schedule for GE deliverables and proposed changes to the design and the design control document changed again, the staff established a third milestone for issuance of RAIs on January 31, 2007, by letter dated October 5, 2006. In a letter dated February 2, 2007, GE provided NRC staff with a revised approach for the RAIs and review of the ESBWR design certification.

Early Site Permit Activity

On November 7, 2006, the Atomic Safety and Licensing Board (ASLB) conducted a hearing on the Clinton Early Site Permit (ESP) and on November 29, 2006, conducted a hearing on the Grand Gulf ESP. On January 10, 2007, the ASLB issued its initial decision, which authorized the staff to issue the Clinton ESP. Pursuant to 10 CFR 2.340(f), this decision is considered stayed pending a Commission decision on this matter. On January 22, 2007, the Commission directed the staff and the applicant to respond to two specific issues on the Clinton ESP. On January 26, 2007, the ASLB issued its initial decision which authorized the staff to issue the Grand Gulf ESP. This decision is also considered stayed pending Commission review pursuant to 10 CFR 2.340(f).

Dominion issued Revision 9 of the North Anna ESP application on September 12, 2006, to address additional staff RAIs. Consistent with the North Anna ESP review schedule, the staff issued the supplemental draft Environmental Impact Statement (EIS) on July 6, 2006, Supplement 1 to NUREG-1835, “Safety Evaluation Report for an Early Site Permit (ESP) at North Anna ESP Site” on November 20, 2006, and the final Environmental Impact Statement (FEIS) on December 15, 2006.

The staff received the Vogtle ESP application on August 15, 2006, and completed its acceptance review on September 19, 2006. The staff has completed the safety and environmental site audits and submitted the environmental RAIs. Staff plans to submit safety-RAIs in March 2007.

Advanced Non-Light-Water Reactor Activities

The Office of Nuclear Regulatory Research (RES) continues to engage in activities related to advanced reactor designs (i.e., non-light-water reactor designs). These include the U.S. Department of Energy (DOE) Next Generation Nuclear Plant (NGNP) project, the pebble bed modular reactor (PBMR) preapplication review, and (to a limited extent) high-temperature gas-cooled reactor (HTGR) knowledge management. Pebble Bed Modular Reactor Company, Ltd. (PBMR [Pty] Ltd.) continues to interact with the staff in preapplication review activities supporting the PBMR design, and a HTGR design. Enclosure 1, “Preapplication Activities” provides a detailed review of each project.

Regulatory Infrastructure Development

The staff continues aggressive development of the 31 high priority Regulatory Guides (RGs) being prepared for use in new reactor licensing activities. Six have been completed and all but one of the remaining are planned for completion in March 2007. Draft RG (DG) 1145 "Combined License Applications for Nuclear Power Plants," is expected to be issued later following Commission decisions on the proposed changes to 10 CFR Part 52, as further discussed in Enclosure 1. The public comment period for DG-1145 closed on October 23, 2006, and the staff is working to resolve approximately 700 comments received from external stakeholders. The staff plans to issue the final Regulatory Guide as RG 1.206 following the resolution of public comments and the issuance of the final 10 CFR Part 52 rule. The public comment period for the other high priority RGs ended on December 24, 2006. The staff has resolved the comments for the RGs and will provide incorporation of conforming changes following the final review and approval process.

Construction Inspection Program

In the SRM for SECY-06-0144, "Proposed Reorganization of the Office of Nuclear Reactor Regulation and Region II," dated July 21, 2006, the Commission approved the creation of a Deputy Regional Administrator for Construction in Region II. On October 1, 2006, Region II established the Construction Inspection Organization at its new office space in the Richard B. Russell Federal Building in Atlanta, GA. This approach created a dedicated organization in the Region II office that will have total responsibility for the execution of all construction inspection activities across the country.

Rulemaking

On October 31, 2006, the staff forwarded SECY-06-0220, "Final Rule to Update 10 CFR Part 52, 'Licenses, Certifications, and Approvals for Nuclear Power Plants' (RIN AG24)," to the Commission. In parallel with the work on the draft final 10 CFR Part 52 rule, the staff and Office of the General Counsel (OGC) issued a supplement to the 10 CFR Part 52 proposed rule on October 17, 2006 (71 FR 61330), to address public comments that proposed to modify the limited work authorization (LWA) process in 10 CFR 50.10 to facilitate site preparation activities in advance of issuance of a COL or construction permit. After resolving the public comments, the staff and OGC prepared a final LWA rule, "Final Rulemaking on Limited Work Authorizations," for submittal to the Commission on February 7, 2007 under SECY-07-0030.

Multinational Design Evaluation Program (MDEP)

The NRC staff continues to participate in MDEP Stage 1 and 2 activities, with the goal of leveraging the experience of our foreign counterparts in the review of new reactor designs. Since the last semiannual update, and as part of MDEP Stage 1, the NRC staff has reviewed and provided written comments to the Finnish radiation and nuclear safety authority (STUK), on design information pertaining to the human factors engineering of the main control room. This marks the first substantive technical exchange in MDEP Stage 1. We also received a letter from the French nuclear safety authority (ASN), expressing their desire to engage in enhanced cooperation with the NRC on the review of the EPR design.

With regard to MDEP Stage 2 activities, ten participating countries endorsed the Terms of Reference in September 2006. Soon after, the Steering Technical Committee and the Working Group on Component Manufacturing Oversight commenced their work on a year long pilot effort to analyze the feasibility of enhancing regulatory cooperation and where feasible and desirable, converging on common regulatory requirements and regulatory review practices

associated with the design reviews of new reactors. As a first step, each of the participating countries is completing surveys on the country specific regulatory approaches in the areas of (1) severe accidents, emergency core cooling system performance, and digital instrumentation and control systems, and (2) the design, quality assurance, and inspection requirements associated with the manufacture of Class 1 pumps, valves, piping, and pressure vessels.

Contracting Strategy to Support New Reactor Licensing

In October 2006, NRO created a Contract Planning and Management Branch to manage the significant growth and technical assistance to support new reactor licensing. This branch is responsible for contract strategic planning and contract management for new reactor licensing activities. Since the branch was formed, the staff has prepared SECY-07-0009, "Procurement Strategy for Contracts and DOE Laboratory Technical Assistance Activities Supporting Combined License Activities," to the Chairman," as required by SRM SECY-04-0201, "Chairman Review Thresholds for Contractual Decisions," dated December 14, 2004, and in accordance with "Delegation of Contractual Authority," dated January 24, 2005. These papers contain statements of work requesting approval to place contracts with DOE laboratories and with various commercial contractors. With the recent Congressional action to provide full funding for the FY07 new reactor activities, contract activities will accelerate significantly.

Approach to Resource Allocation

As of January 2007, the staff is aware of at least 23 potential combined license (COL) applications. Enclosure 1, Table 2 lists the anticipated activities for FY 2007 through FY 2009 based on the formal correspondence of prospective applicants. Based on currently available budget information, the staff would begin review of 12 to 17 COL applications in FY 2008. Depending on NRC's staff to contract support resource allocation and industry application schedules, the number of applications reviewed may vary in FY 2008. Should the NRC decide, based on industry indications that more that 12 COL applications will likely be submitted in FY08, to hire additional staff and rely less on contract support, more COLs (up to 17) could be reviewed. Also, we are continuously evaluating and refining our review processes to enhance efficiencies such that we can be prepared to review as many applications as possible.

Security and Emergency Planning

Effective October 15, 2006, the Division of Preparedness and Response in the Office of Nuclear Security and Incident Response (NSIR) established a New Reactor Licensing Team. The creation of this team has increased the focus on key activities.

The Department of Homeland Security (DHS) also plays an important role in new reactor review activities. NSIR has been coordinating with DHS to clarify its role in the security and emergency preparedness areas. Work continues related to the details of DHS review schedules and ensuring timely input to the NRC review process. Pursuant to the Safe Port Act of 2006 (H.R. 4954), Section 612, "FEMA [Federal Emergency Management Agency] Programs," effective April 1, 2007, the management of the Radiological Emergency Preparedness Program will transfer from the Preparedness Directorate to the FEMA Directorate within DHS. The NRC staff will continue to work with appropriate contacts at DHS to ensure continuity of activities during this change.

Potential Policy Issues

In the SRM on COMGBJ-06-0001, the Commission directed the staff to address policy issues related to new reactor applications in this paper. At this time, the staff has not identified any potential policy issues related to current light water reactors (LWRs) under review. For

non-LWRs and other advanced reactors, staff is working to identify policy issues through the development of the NGNP Licensing Strategy and the pre-application review of the PBMR. The staff will inform the commission of non-LWR policy issues as these projects progress.

COMMITMENTS:

Staff will provide an update on the schedule for the New Reactor Business Process Plan at the next scheduled new reactor update Commission meeting.

CONCLUSIONS:

The staff continues to focus on reviewing applications for Design Certifications (DCs) and ESPs and on preparing for the review of multiple COL applications. The NRC staff continues its interactions with stakeholders to ensure openness in these activities and that any future planning reflects the most recent industry plans and schedules.

Regarding Commission updates of new reactor activities, the staff's plan is to develop an integrated project status portal on the NRO web site thereby ensuring a continuous source of current, relevant information. The staff will continue to keep the Commission informed of any significant changes.

RESOURCES:

As of January 31, 2007, NRR and NRO have hired 351 employees in both technical and support areas. Of the 351 employees selected, 283 are on board. Personnel are categorized as follows: 30 Nuclear Safety Professional Development Program candidates, 54 administrative and 199 technical. The 68 remaining employees selected are going through the security clearance process. Under the current FY 2008 proposed budget, NRO will need to develop a new staffing plan.

COORDINATION:

The Office of the General Counsel (OGC) has reviewed this paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

/RA/

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Executive Director
for Operations

Enclosures:
1. Semiannual Update of the Status of New Reactor Licensing Activities - February 2007
2. Hiring and Training Strategies - February 2007

Semiannual Update of the Status of
New Reactor Licensing Activities

February 2007

INTRODUCTION

This enclosure to the February 2007 update of the status of new reactor licensing activities provides a brief history and current status of the Advanced Plant 1000 (AP1000) and the economic simplified boiling-water reactor (ESBWR) design certification (DC) reviews, the combined license (COL) application interactions, the early site permit (ESP) reviews, preapplication activities for other reactor plant designs, regulatory infrastructure development, and stakeholder interactions.

Staff requirements for SECY-05-0203, "Revised Proposed Rule to Update 10 CFR Part 52, 'Licenses, Certifications, and Approvals for Nuclear Power Plants,'" dated January 30, 2006, directed the staff to provide resource and organization plans for the next 4 years and proposed strategies for staff review of expected applications and support for COL hearings before the Atomic Safety and Licensing Board (ASLB) Panel (WITS200600063).

Staff requirements for COMGBJ-06-001, "Establishing a Policy for the Review of New Power Reactor Combined Operating Licenses," dated April 14, 2006, directed the staff to provide an update on activities related to the design center review approach (DCRA) for COL applications in the next semiannual update on new reactor licensing. The Commission also directed the staff to inform it of any impediments to using the DCRA. Additionally, the Commission directed the staff to continue to use the planning, budgeting, and performance management (PBPM) process for new reactor licensing activities and to address policy issues related to new reactor applications.

Staff requirements for SECY-06-0071, "Chairman Review Thresholds for Contractual Decisions," dated April 18, 2006, directed the staff to provide the Commission with a status report on the plans for contracting work in new reactor licensing and other new work areas. On January 11, 2007, the staff provided an "Official Use Only" SECY-07-0009, "Procurement Strategy for Contracts and DOE Laboratory Technical Assistance Activities Supporting Combined License Activities" to the Commission.

A June 27, 2006, memorandum from NRC Chairman Nils J. Diaz to Luis A. Reyes, Executive Director for Operations (EDO), and Graham Wallis, Chairman of the Advisory Committee on Reactor Safeguards requested that the staff provide the Commission with a status report on its interactions with stakeholders and on completing the master integrated schedule for new reactor licensing (WITS 200600279 and WITS 200600306).

DESIGN CERTIFICATION

Advanced Plant 1000

On March 28, 2002, Westinghouse Electric Company, LLC (Westinghouse), submitted its application for final design approval (FDA) and standard DC for the AP1000 design. The

U.S. Nuclear Regulatory Commission (NRC) staff issued the final safety evaluation report (FSER) and the FDA on September 13, 2004. The proposed DC rule was published in the *Federal Register* on April 18, 2005 (70 FR 20062). Subsequently, Westinghouse submitted changes to the AP1000 design information in Revision 15 to the design control document (DCD). The NRC staff evaluated these changes in a supplement to the FSER (NUREG-1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," Supplement 1). The Executive Director for Operations (EDO) transmitted the final rule to the Commission on December 14, 2005 (SECY-05-0227, "Final Rule—AP1000 Design Certification"). On December 30, 2005, the Commission voted to approve the final DC rule for the AP1000 standard plant design, and the Secretary of the Commission signed the final rule on January 23, 2006, after approval of the information collection requirements by the Office of Management and Budget.

On January 27, 2006, the NRC issued the AP1000 final design certification rule (DCR) in the *Federal Register* (71 FR 4464). Applicants or licensees intending to construct and operate an AP1000 design may do so by referencing the AP1000 DCR. On March 10, 2006, the NRC issued a revised FDA based on Revision 15 of the Westinghouse DCD.

In a joint letter dated March 8, 2006, NuStart Energy Development, LLC (NuStart) and Westinghouse stated that they would be submitting the AP1000 technical reports to the NRC for review during the preapplication phase for the Bellefonte COL application. These reports will provide the following:

- information needed to close all or part of specific generically applicable COL items in the AP1000 certified standard design

- standard design changes that are a result of the AP1000 detailed design efforts

- specific standard design information in areas or for topics where the AP1000 DCD focused on design process/methodology and Design Acceptance Criteria (DAC)

- deferral of COL information items to as-built requirements (e.g., inspections, test, analyses, and acceptance criteria (ITAAC))

Most of the technical reports are related to the closing or partial closing of the AP1000 DCD COL information items; however, the largest review effort will center on the expected design changes. The design changes include a redesign of the pressurizer, a revision to the seismic analysis to allow an AP1000 to be constructed on site with rock and soil conditions other than the hard rock conditions certified in the AP1000 DCR, changes to the instrumentation and controls (I&C) systems, a redesign of the fuel racks, and a revision of the reactor fuel design. Another area requiring large resources will be the review of DAC-related items, such as the technical reports on human factors engineering (HFE), the I&C design, and piping. Additionally, Westinghouse submitted one report covering numerous COL information items that can be completed only after the plant is built. Westinghouse proposes to convert these items to either ITAAC, license conditions, or license commitments.

As of January 24, 2007, Westinghouse had submitted 47 technical reports for staff review. Although submitted as part of the Bellefonte COL preapplication phase, these technical reports apply generically to the remaining COL applications that intend to reference the AP1000 design.

The staff has held several meetings with Westinghouse and has performed audits of documentation related to leak-before-break analyses, I&C, HFE, and seismic analyses.

Economic Simplified Boiling Water Reactor

The ESBWR is a 4500-megawatt thermal (MWt) (approximately 1550-megawatt electric (MWe)) reactor design that uses natural circulation for normal operation and has passive safety features. On August 24, 2005, General Electric Company (GE) submitted an application for final design approval and standard DC of the ESBWR standard plant design. By letter dated December 1, 2005, the NRC staff informed GE that the application, as revised and supplemented, was sufficiently complete to allow the staff to proceed with its detailed technical review.

Because of revisions in schedules for GE deliverables, by letter dated August 9, 2006 (ML062200128), the NRC staff established an additional RAI milestone of December 11, 2006, for areas affected by delays in submittals. When the schedule for GE deliverables and proposed changes to the design and the DCD changed again, the staff established, by letter dated October 5, 2006 (ML062750422), a third milestone for the issuance of RAIs on January 31, 2007.

The staff completed all RAI milestones on schedule and issued more than 2800 RAIs beginning in December 2005. In addition, the staff has completed some key activities to include public meetings with GE and audits of detailed design information and calculations. The staff has held meetings to discuss fission product removal, probabilistic risk assessment (PRA), I&C, HFE, fuel, technical specifications, and regulatory treatment of nonsafety systems. The staff has also conducted audits at the GE facilities in San Jose, California, and Wilmington, North Carolina. Audit topics have included piping analysis, seismic analysis, structural analysis, thermal-hydraulic methods and analysis, fuel design, I&C design, and HFE design. In November 2005, the staff inspected the implementation of the GE Quality Assurance (QA) program. In April and December 2006, the staff conducted followup inspections to review the corrective actions taken by GE to address inspection findings. In a letter dated February 2, 2007, GE provided NRC staff with a revised approach for the RAIs and review of the ESBWR design certification.

COMBINED LICENSE PRE-APPLICATIONS

Since the last update, the number of expected COL applications for the period of fiscal year (FY) 2007 to FY 2009 has increased to 23, and several of these applications will be for dual-unit sites. One applicant remains unannounced, and the NRC has received two new letters of intent as noted in the following paragraphs.

On July 12, 2006, the NRC received a letter of intent from an unannounced applicant notifying the NRC of its plans to submit a COL application in the third quarter of 2008. The applicant has not yet selected a reactor technology. The letter was submitted as proprietary in accordance with Title 10, Section 2.390, of the *Code of Federal Regulations* (10 CFR 2.390). The applicant has not yet publicly announced its intent.

On September 29, 2006, Exelon Nuclear (Exelon) submitted a letter notifying the NRC of its intent to submit a COL application in November 2008. Exelon is currently evaluating both the ESBWR and AP1000 design and is considering various site locations within the state of Texas.

On December 12, 2006, Progress Energy informed the NRC of its selection of a site in Levy County, Florida, for a COL for potential future expansion of nuclear generation. This site was previously listed as unannounced.

On January 18, 2007, TXU Power informed the NRC of its plans to submit two additional COLs located at greenfield sites by October 2008.

On February 15, 2007, Detroit Edison (DTE) submitted a letter notifying the NRC of its intent to submit a COL application in the 4th quarter of 2008 for a reactor on the site of the Fermi 2 plant.

NRG Energy is planning to submit an application for a COL for two ABWR units in the fourth calendar quarter of 2007 at the South Texas Project (STP) site. At a December 2006 meeting NRG/STP stated that their contractor, General Electric, is planning to submit several topical reports in advance of the COL application. These reports will address changes generic to future COL applications that choose to reference the ABWR design. To facilitate future COL applications and reviews, GE intends to use the certified design amendment process, if approved by the Commission, to incorporate the changes into the ABWR design.

The industry has generally embraced the design-centered review approach (DCRA) described in NRC Regulatory Information Summary (RIS) 2006-006. This support has been demonstrated by the active participation of industry pre-applicants in design-centered working group (DCWG) meetings with the NRC that offer a forum for communication of important issues. The NRC has held seven individual or combined DCWG meetings associated with the AP1000 and ESBWR design centers. Meeting topics have included the RIS 2006-06 response, key challenges, preapplication interactions, preapplication topical reports, development of emergency action levels for passive new reactor designs, environmental review activities, COL application format, Technical Support Center location, and Federal Energy Regulatory Commission-NRC application processes. The staff expects to continue these public meetings with the AP1000 and ESBWR DCWGs and will support other design centers holding similar meetings when requested. In support of industry's development of COL applications and as part of the DCWG work, the staff plans to support a public workshop to discuss industry's approach for developing the COL applications. The staff and industry have agreed to use sample chapters, one to be provided by the ESBWR DCWG and one to be provided by the AP1000 DCWG, to facilitate discussions at the workshop and identify insights that could be used by applicants to improve their applications.

Another indication that the industry is committed to a design-centered strategy is the involvement of the Nuclear Energy Institute (NEI) in development and submission of two topical reports to support preapplication staff review activities. The staff has received the NEI template for an industry QA program document and the NEI template for an industry training program. The expectation is that multiple applicants will reference these topical reports, if approved by the NRC, in COL applications, thus offering an efficiency in the use of staff review resources.

The staff is currently reviewing UniStar's quality assurance program description (QAPD) topical report. UniStar submitted its responses to the staff's requests for additional information (RAI) via letter dated December 22, 2006. The staff will issue its safety evaluation report by March 14, 2007.

UniStar submitted two other proposed topical reports in the areas of the security plan and emergency plan on December 1, 2006. However, the staff was unable to accept these reports for review as topical reports because they lacked sufficiently detailed and complete information. The reports do not meet the criteria for topical reports as laid out in NRR Office Instruction LIC-500 nor do the documents warrant the staff making exceptions to these requirements. The staff will continue to engage UniStar on these issues as appropriate and mutually agreed upon by UniStar and the NRC. The staff notes that, in both of these areas, the NRC staff is interacting closely with UniStar.

NRC staff have completed four additional pre-COL visits at potential sites (North Anna, South Texas, Comanche Peak, and Vogtle) to observe COL preapplication subsurface investigation (e.g., soil suitability, hydrology, etc.) activities. A combination of headquarters-based geotechnical experts, project managers, and Region II inspectors conducted these activities. Interactions with the applicant's experts provided a forum for discussing the potential site's geological attributes and the applicant's site exploration program and observing different geophysical and geotechnical investigations.

Table 1 lists the COL applications anticipated based on correspondence received from potential applicants. This information is organized consistent with the staff's DCRA.

Table 1 - Potential Combined License Applications

Applicant	(Units)	Designs under Consideration	Pre-Application	COL Application
Dominion (North Anna Site)	1	ESBWR	FY 2006-2008	FY 2008-2011
South Carolina Electric and Gas* (Summer)	2	AP1000	FY 2006-2008	FY 2008-2011
NuStart App 1* (Bellefonte Site)	2	AP1000	FY 2007-2008	FY 2008-2011
NuStart App 2 (Grand Gulf Site)	1	ESBWR	FY 2007-2008	FY 2008-2011
Progress Energy App 1* (Harris)	2	AP1000	FY 2007-2008	FY 2008-2011
Progress Energy App 2* (Florida)	2	AP1000	FY 2007-2008	FY 2008-2011
Duke Energy* (Lee)	2	AP1000	FY 2007-2008	FY 2008-2011
Entergy* (River Bend Site)	1	ESBWR	FY 2006-2007	FY 2008-2011

Applicant	(Units)	Designs under Consideration	Pre-Application	COL Application
Southern Nuclear* (Vogtle Site)	2	AP1000	FY 2006-2007	FY 2008-2011
UniStar App 1* (Calvert Cliffs)	1	EPR	FY 2007-2008	FY 2008-2011
Amarillo Power	2	ABWR	FY 2007-2008	FY 2008-2011
NRG Energy * (South Texas Project)	2	ABWR	FY 2007-2008	FY 2008-2011
UniStar App 2* (Nine Mile Point)	1	EPR	FY 2007-2008	FY 2008-2011
Florida Power and Light * (Site TBD)	1	TBD	FY 2007-2008	FY 2009-2012
UniStar App 3* (Site TBD)	1	EPR	FY 2007-2008	FY 2008-2011
UniStar App 4* (Site TBD)	1	EPR	FY 2007-2008	FY 2008-2011
UniStar App 5* (Site TBD)	1	EPR	FY 2007-2008	FY 2008-2011
TXU Power* (Comanche Peak)	2	TBD	FY 2007-2009	FY 2009-2011
TXU Power*	TBD	TBD	FY 2007-2009	FY 2009-2011
TXU Power*	TBD	TBD	FY 2007-2009	FY 2009-2011
Exelon* (Site TBD)	1	TBD	FY 2007-2009	FY 2009-2010
Unannounced COL* (Site TBD)	1	TBD	FY 2007-2008	FY 2008-2011
DTE (Fermi)	1	TBD	FY 2007-2008	FY 2009-2011

* COL Application not referencing an ESP

APPROACH TO RESOURCE ALLOCATION

Since the last update, the number of expected COL applications for the period FY 2007 through FY 2009 has increased to a total of 23, and several of these applications will be for dual unit sites. Table 2 lists the anticipated activities for FY 2007 through FY 2009 based on the intent of prospective applicants.

The transition plan for staffing NRO considers all expected new reactor licensing applications including COL applications, DC applications, currently ongoing ESP application reviews, expected ESP application review, and regulatory infrastructure work Standard Review Plan

(SRP) development and topical/technical report reviews). Initial staffing levels (January 2007) were set to support known case work (ESBWR DC and ongoing ESP reviews) as well as infrastructure activities. The office growth rates, selected to provide a smooth transition to FY 2008 staffing levels, are slightly skewed toward the first half of FY 2007 to ensure that adequate resources will be on board, trained and available to support new reactor licensing reviews when needed in early FY 2008. The staff is maintaining some flexibility in the plan so that it can make adjustments as the staff gains experience in performing new reactor licensing reviews.

Table 2 - FY 2007-2009 New Reactor Licensing Anticipated Activities

FY 2007	FY 2008	FY 2009
Complete Grand Gulf, Clinton	North Anna ESP	
Continue Southern ESP	Continue Southern ESP	Complete Southern ESP
Start Advanced Boiling Water Reactor (ABWR) applicant (Amarillo Power) ESP	Continue ABWR (Amarillo Power) ESP	Continue ABWR (Amarillo Power) ESP
DC pre-application activities for EPR, PBMR, IRIS and US APWR *	DC pre-application activities for EPR, PBMR, IRIS and US APWR	DC pre-application activities for IRIS
Continue ESBWR * DC	Continue ESBWR DC	Continue ESBWR DC
	Start EPR DC	Continue EPR DC
	Start US APWR DC	Continue US APWR DC
	Start PMBR DC	Continue PBMR DC
Pre-application activities for potential COL applicants	Pre-application activities for potential COL applicants	Pre-application activities for potential COL applicants
	Start SC E&G (Summer) COL	Continue SC E&G COL
	Start Dominion (North Anna) COL	Continue Dominion COL
	Start UniStar (Calvert Cliffs) COL	Continue UniStar COL
	Start Duke (Lee) COL	Continue Duke COL
	Start NuStart 1 (Bellefonte) COL	Continue NuStart 1 COL
	Start NuStart 2 (Grand Gulf) COL	Continue NuStart 2 COL
	Start Southern (Vogtle) COL	Continue Southern COL
	Start UniStar (Nine Mile) COL	Continue UniStar COL
	Start three UniStar COLs	Continue three UniStar COLs
	Start NRG Energy (South Texas) COL	Continue NRG Energy COL
	Start Progress Energy (Harris) COL	Continue Progress Energy COL
	Start Progress Energy (Florida) COL	Continue Progress Energy COL
	Start Entergy (River Bend) COL	Continue Entergy COL
	Start Amarillo Power COL	Continue Amarillo Power COL
	Start one unannounced applicant COL	Continue one unannounced applicant COL
	Start three TXU Power COLs	Continue TXU Power COLs
		Start Exelon COL
		Start FP&L COL
		Start DTE COL

FY 2007	FY 2008	FY 2009
Regulatory infrastructure development and technical development	Regulatory infrastructure development and technical development	Regulatory infrastructure maintenance and technical development
Continue NGNP interactions with DOE*	Submit joint NGNP licensing strategy to Congress	Continue NGNP interactions with DOE

* Economic simplified boiling-water reactor (ESBWR), Evolutionary Power Reactor (EPR), pebble bed modular reactor (PBMR), International Reactor Innovative and Secure (IRIS), Next Generation Nuclear Plant (NGNP), Department of Energy (DOE), Advanced Pressurized Water Reactor (APWR)

MULTINATIONAL DESIGN EVALUATION PROGRAM

This multinational initiative name was changed from (MDEP) Multinational Design Approval Program, to MDEP by consensus of the 10 countries participating in the Stage 2 activities. The Chairman signed the Terms of Reference (TOR) on September 22, 2006. Since the issuance of SECY-06-0187, the NRC staff has continued to make progress in implementing Stages 1 and 2 of the MDEP.

MDEP Stage 1 Developments

Several NRC staff members, along with representatives from the Finnish and French regulatory authorities (STUK and ASN), attended the first trilateral meeting on the Evolutionary Power Reactor (EPR) in Helsinki September 6 - 8, 2006. Prior to the trilateral meeting, NRC staff met with STUK and agreed to cooperate more closely on our reviews of the EPR in the following areas (this cooperation includes the review of documents and exchange of information): human factors engineering (HFE) or main control room design, technical specifications (TSs), instrumentation and controls (I&C), probabilistic risk assessment, fire protection, and outage management. Close cooperation on construction inspection issues was also agreed upon as desirable. These topics were chosen based on STUK's priorities for the Olkiluoto3 (OL3) design review as well as the planned pre-application review activities for the U.S. EPR.

On October 24, 2006, STUK sent information submitted to it by the licensee of the OL3 to the NRC in the areas of TSs and HFE. The staff reviewed this information and provided feedback on the HFE area to STUK on January 9, 2007 in the form of proposed questions or requests for additional information. STUK will use these questions to inform their review of the OL3 design information. The information submitted to the NRC by STUK in the TSs area was very preliminary and did not lend itself to the formulation of questions at this time. The NRC staff informed STUK that the NRC staff's open to reviewing additional information when STUK submits it to the staff and in accordance with the already established bilateral agreement. The staff expects reciprocal support from STUK as the U.S. EPR standard design review moves from the pre-application stage into the design certification review stage.

At the time of the meeting in September 2006, ASN and the NRC did not specifically agree upon areas in which they would cooperate more closely. However, on December 26, 2006, the NRC received a letter from the ASN, expressing their desire to enhance cooperation with respect to the EPR. The staff is currently responding to this letter and will work with ASN staff to implement these interactions. The staff plans to attend the next MDEP Stage 1 trilateral meeting in Paris in March 2007, where cooperation opportunities with ASN will be discussed.

MDEP Stage 2 Developments

The ten participating countries endorsed the MDEP Stage 2 TOR on September 22, 2006 in Paris at the Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency (NEA) headquarters. The TOR direct the establishment of a one-year pilot program to test the overall feasibility of the MDEP Stage 2 concept (followed by a three-month assessment period). Mr Andre-Claude Lacoste, Chairman of ASN, was chosen as the Chair of the Policy Group. NRC staff attended the initial pilot project working group meetings in Paris October 23 - 27, 2006. The first meeting, which took place on October 23-25, 2006, was that of the MDEP Steering Technical Committee of which the NRC representative was elected Chair. The purpose of the meeting was for the ten participating MDEP countries (U.K., France, Finland, China, South Korea, Japan, South Africa, Russia, Canada, and U.S.) to begin discussions and develop work plans for evaluating the similarities and differences with regard to the safety goals, regulatory practices, and the scope of the regulatory review for new reactor designs.

The second meeting, which took place on October 26 and 27, 2006, was a meeting of the MDEP Stage 2 working group on component manufacturing oversight (WGCMO) of which South Korea will chair. The purpose of this meeting was for the ten participating MDEP countries to begin discussions and develop work plans for evaluating the similarities and differences with regard to the regulatory oversight of component manufacturing. Each of these working groups plans to meet as necessary throughout the next year to attempt to identify differences in regulatory approaches in these areas and opportunities to harmonize approaches. A 3-month assessment period will follow the year-long work by both groups.

Note that International Atomic Energy Agency (IAEA) representatives will actively participate in the working group efforts, but the Nuclear Energy Agency will remain the sole secretariat for the initiative. This is a change from the previous position that IAEA would have only observer status.

The NRO Division of New Reactor Licensing staff continues to work with the Office of International Programs on the MDEP and is coordinating communications to the Commission and other stakeholders.

EARLY SITE PERMITS

The staff is currently reviewing four ESP applications. The staff received ESP applications in September and October 2003 from Exelon Generation Company, LLC (Exelon), for the Clinton site; from System Energy Resources, Inc. (SERI), a subsidiary of Entergy Corporation, for the Grand Gulf site; and from Dominion Nuclear North Anna, LLC (Dominion), for the North Anna site. The staff also received an ESP application in August 2006 from Southern Nuclear Operating Company (SNC) for the Vogtle site.

ESP Safety Reviews

The staff has completed its safety review for the Grand Gulf, Clinton, and North Anna ESP applications and has issued FSERs. The NRC issued the Grand Gulf FSER (NUREG-1840) on April 14, 2006 and the Clinton FSER (NUREG-1844) on May 1, 2006. The staff issued its FSER for the North Anna ESP (NUREG-1835) in September 2005.

In October 2005, Dominion changed the design of the cooling system for proposed Unit 3 from a once-through cooling system to a closed cooling system to address the water usage concerns expressed by the Commonwealth of Virginia and local citizens. The power level of the proposed new units was increased from 4300 MWt to 4500 Mwt. The change resulted in revisions to the application, the environmental impact statement (EIS), and the FSER. On April 13, 2006, Dominion submitted Revision 6 of the North Anna ESP application, and on May 4, 2006, the staff issued a letter to Dominion acknowledging receipt of Revision 6 and providing the review schedule for the revised application. Dominion incorporated the RAI responses into Revisions 7, 8, and 9 of the North Anna ESP application on June 21, July 31, and September 12, 2006. Consistent with the North Anna ESP review schedule, the staff completed its review of the North Anna ESP application and issued Supplement 1 to NUREG-1835, "Safety Evaluation Report for an Early Site Permit (ESP) at North Anna ESP Site," on November 20, 2006.

On August 15, 2006, the staff received an application from SNC for an ESP at the Vogtle site. Following receipt of the application, the staff conducted an acceptance review and identified two areas, seismology and emergency planning, where additional information would be necessary for the staff to accept the application. In a teleconference on September 8, 2006, SNC committed to supplement the emergency plans contained in the ESP application by March 1, 2007, to address the staff's concerns. By letter dated September 13, 2006, SNC supplemented its ESP application to address the concerns identified in the area of seismology. Following receipt of the SNC commitments and supplements to the ESP application, the staff found the application acceptable for docketing on September 19, 2006.

On November 1, 2006, the safety review team conducted an audit at the Vogtle site focusing on the applicant's site hazards analysis. The staff toured the Vogtle site and held discussions with the applicant. On December 6, 2006, the safety review team conducted a second site audit focused on meteorology. The staff participated in a second tour of the site and met with SNC meteorological experts to discuss the information contained in the application. The staff conducted a final audit in January 2007, which focused on hydrology, seismology, geology, and geotechnical engineering. The intent of these site audits is for the staff to become familiar with the site, to review supplemental information, and to engage the applicant early in the process to address staff questions. The staff will issue RAIs on the site safety analysis report by March 15, 2007.

ESP Environmental Reviews

The staff completed EISs for the Grand Gulf, Clinton, and North Anna ESP applications. The NRC issued the Grand Gulf EIS as NUREG-1817 on April 7, 2006, the Clinton EIS as NUREG-1815 on July 20, 2006, and North Anna EIS as NUREG 1811 on December 15, 2006.

The NRC issued the draft EIS (DEIS) for the North Anna ESP application for public comment in December 2004. A July 2006 supplement to the DEIS (SDEIS) evaluated changes to the cooling system for proposed Unit 3 and an increase in power level for Units 3 and 4 made by Dominion after publication of the DEIS. The scope of the SDEIS was limited to the environmental impacts associated with the changes in the cooling system for Unit 3 and the maximum power level for the proposed new units. On July 12, 2006, the staff issued a Notice of Availability for the SDEIS in the *Federal Register* (71 FR 39372). On July 14, 2006, the

U.S. Environmental Protection Agency (EPA) published the Notice of Filing of the SDEIS (71 FR 40096), which initiated a 45-day period during which the public could comment on the SDEIS. Subsequently, in response to requests from the Commonwealth of Virginia and members of the public, the comment period was extended an additional 15 days, ending September 12, 2006 (71 FR 46927). A public meeting was held August 15, 2006, in Mineral, Virginia, to inform the public of the staff's preliminary findings and to receive public comments. On November 22, 2006, Dominion provided certification from the Commonwealth of Virginia that its project complied with the enforceable policy of the Virginia Coastal Zone Management Program. On December 15, 2006, the staff delivered Volumes 1 and 2 of NUREG-1811, "Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site," to the U.S. Environmental Protection Agency.

The NRC received the environmental report (ER) for the Vogtle ESP on August 15, 2006. The staff performed the acceptance review and accepted the ER, along with the other portions of the ESP application, for docketing on September 19, 2006. Acceptance of the ER initiated the EIS scoping process. On October 17–19, 2006, the environmental review team toured the Vogtle site and obtained additional information from the applicant. The NRC held a public meeting on October 19, 2006, to receive comments on the scope of the EIS. Over 200 members of the public attended the meeting. On November 6–9, 2006, the environmental team visited the alternate sites proposed by the applicant. These sites included Plant Hatch, Plant Farley, and the Barton Site in Clanton, Alabama. After the scoping comment period closed on December 4, 2006, the preparation of the scoping summary report began. The staff will address all comments received during the scoping period and include its responses in the Scoping Summary Report. This report is scheduled to be final in April 2007. RAIs were sent to the applicant on December 29, 2006, and responses were received by the staff on January 30, 2007. The DEIS is scheduled to be available to the public on July 6, 2007. Issuance of the draft DEIS will initiate another public comment period, and a DEIS public comment meeting will be held on July 26, 2007, in Waynesboro, Georgia.

Table 3 shows the major remaining schedule milestones in the NRC staff's review of the other ESPs.

Table 3 - Schedule Milestones

ESP Milestone	SNC (Vogtle)
Draft EIS issued to EPA	07/10/07 T
Final EIS issued to EPA/NRC Notice of Availability Issued	05/16/08 T
Safety Evaluation Report (SER) with Open Items*	08/30/07 T
FSER issued	05/20/08 T

C - Complete
T - Target
* Previously titled as draft safety evaluation report (DSER).

ESP Proceedings/Hearings

Federal Register notices of hearing and opportunity to petition for leave to intervene were published for the North Anna, Grand Gulf, and Clinton applications. Subsequently, the NRC received petitions to intervene for all three of the ESP applications. The Blue Ridge Environmental Defense League, Nuclear Information and Resource Service (NIRS), and Public Citizen petitioned regarding the Dominion application. The same groups, along with two others (the Environmental Law and Policy Center and the Nuclear Energy Information Service), petitioned for leave to intervene in connection with the Exelon ESP application. Four organizations petitioned for leave to intervene in the SERI ESP application proceeding—NIRS; the Mississippi Chapter of the Sierra Club; Public Citizen; and the National Association for the Advancement of Colored People, Claiborne County, Mississippi, Branch. On March 22, 2004, the Chief Administrative Judge of the Atomic Safety and Licensing Board (ASLB) Panel established an ASLB for the proceedings. The board held an initial prehearing conference June 21–23, 2004, for all three applications. On August 6, 2004, the ASLB issued rulings in each of the three proceedings, admitting one environmental contention (EC) in the Clinton proceeding and portions of two ECs in the North Anna proceeding, and denying intervention in the Grand Gulf proceeding. Three separate ASLBs were then established in the three proceedings.

Clinton

Following the issuance of the Grand Gulf and Clinton ESP FSERs and final EISs, the ASLB issued orders on April 17, 2006, and April 19, 2006, requesting the staff to provide the ASLB with documents and briefings to support the upcoming mandatory hearings for the ESPs. In both cases, the staff filed motions for reconsideration of the ASLB orders. The ASLB responded to the staff's motions for reconsideration by granting, in part, some of the requests and denying in part others. The staff filed requests for interlocutory reviews of these issues for the Clinton and Grand Gulf proceedings. The Commission issued its decision on July 26, 2006.

On July 28, 2005, the ASLB denied amending the EC in the Clinton proceeding and granted summary disposition of the contention. This resulted in termination of the contested portion of the Clinton proceeding. On August 12, 2005, the petitioners for the Clinton proceeding filed a petition for review of the ASLB dismissal of the EC. On December 12, 2005, the Commission denied the petition for review. On February 8, 2006, the interveners petitioned the U.S. Court of Appeals for the Seventh Circuit for review of the Board and Commission decisions. On June 12, 2006, the NRC filed its brief opposing the petition for review. On December 5, 2006, the U.S. Court Appeals for the 7th Circuit affirmed the Commission's decision.

On August 2, 2006, the ASLB issued an order establishing a preliminary schedule in the proceeding involving the Clinton ESP application. For the Clinton proceeding, the staff filed its brief on September 14, 2006. The staff's prefiled environmental and health and safety testimony was filed on October 17, 2006. The hearing was held on November 7–8, 2006, in Decatur, Illinois, and the limited appearance session for the Board to hear from members of the public was held on November 8, 2006, in Clinton, Illinois. Under 10 CFR 2.340(f), this decision is considered stayed pending a Commission decision on this matter. On January 10, 2007, the ASLB authorized the issuance of Clinton Early Site Permit. On January 22, 2007, the Commission issued an order requesting the staff and applicant to respond to two specific issues raised by the ASLB order.

North Anna

On April 22, 2005, Dominion moved for summary disposition of EC 3.3.2 admitted on the North Anna ESP proceeding, and on June 16, 2005, the Board granted the motion in part and denied it in part. Following the submittal of Dominion's Revision 6 to the North Anna ESP application and the issuance of the staff's SDEIS, on August 7, 2006, Dominion filed a second motion for summary disposition of EC 3.3.2. On October 24, 2006, the ASLB granted Dominion's motion for summary disposition of EC 3.3.2, thereby terminating the contested portion of the proceeding. The ASLB issued a scheduling order for the North Anna hearing on January 4, 2007. The Board plans to begin the hearing on April 24, 2007 and continue until the oral testimony is completed or May 4, 2007, whichever comes first.

Grand Gulf

On October 12, 2006, several environmental interest groups petitioned for a hearing on a late-filed National Environmental Policy Act contention concerning the environmental impacts of a terrorist attack on the proposed facility. By Commission Order CLI-06-28, dated November 9, 2006, the Commission announced that it would decide the handling of this late-filed contention.

On August 1, 2006, the ASLB issued an order establishing a preliminary schedule in the proceeding involving the Grand Gulf ESP application. On August 29, 2006, the ASLB held a limited appearance session in Port Gibson, Mississippi. Interested parties had the opportunity to address the board regarding the proposed ESP for the Grand Gulf site. In September 2006, the ASLB issued an order requesting information regarding the staff's Safety Evaluation Report (SER), and in November 2006 the staff submitted written testimony to the board. The ASLB held the hearing on November 29 and December 1, 2006. On January 26, 2007, the ASLB issued an Order in the matter of the System Energy Resources, Inc. Application for a an ESP for the Grand Gulf site. The Order authorized issuance of the ESP for the Grand Gulf site for a duration of 20 years. The Board's order is considered stayed pending Commission action pursuant to 10 CFR 2.340(f).

Vogtle

The staff received the Vogtle ESP application on August 15, 2006, and completed its acceptance review on September 19, 2006. The staff has completed the safety and environmental site audits and submitted the environmental RAIs. Staff plans to submit safety RAIs in March 2007.

Future ESPs

By letter dated March 16, 2006, Duke Energy stated that it was designating two additional sites for possible future ESP development. These two sites, in Davie County, North Carolina, and Oconee County, South Carolina, will undergo limited site characterization in the future. Duke Energy did not indicate a schedule for future interactions with the NRC staff.

PREAPPLICATION ACTIVITIES

U.S. Evolutionary Power Reactor

The U.S. EPR is a large pressurized-water reactor of evolutionary design, with a design output of about 1600 MWe, designed by AREVA NP (AREVA). Design features include four divisions of engineered safety features and a "core catcher" for containment and cooling of core materials for severe accidents resulting in reactor vessel failure. The design also includes a shield building around the containment, two of four engineered safety feature divisions, the control room, and spent fuel pool. The design does not rely on passive safety features.

The first EPR is currently being constructed in Finland at the Olkiluoto site known as OL3. An EPR is also planned for the Flamanville site in France, with operation currently slated for 2012. AREVA expects to apply for NRC certification of the U.S. EPR design in December 2007. UniStar Nuclear has stated its plans to reference the U.S. EPR design in a COL application in the fourth quarter of calendar year (CY) 2007.

AREVA submitted a proposed revised scope of work for the preapplication review that includes 14 topical reports and 7 informational technical reports. The NRC staff is reviewing four topical reports covering the applicability of accident and transient analysis codes and methodologies to the U.S. EPR, the QA program, piping analysis and design criteria, and severe accident evaluation. Other topical reports planned to be submitted over the next year include critical heat flux correlation, several digital I&C topics, human factors program, instrument setpoint methodology, realistic large-break loss-of-coolant accidents, I&C diversity and defense in depth, and fuel assembly mechanical analysis. The NRC staff is holding two to four meetings a month with AREVA on various topics including those mentioned above.

While the EPR is an evolutionary design, some of its features require research to provide the tools, knowledge, and data to support the staff's review of the design. Accordingly, the staff has developed a research plan to provide these tools.

Mitsubishi US-APWR

The NRC staff hosted a second public meeting with Mitsubishi Heavy Industry (MHI) representatives on September 26, 2006. This meeting provided a general overview of the design, as well as an update from the first meeting held on July 13, 2006. In the meeting, MHI proposed a scope of work for the pre-application review, which includes seven proposed topical reports on the accumulator with flow damper, digital I&C, QA program, fuel design criteria and methodology, thermal design methodology, and safety analysis methodology. On November 28 and 29, 2006, a public meeting was held on QA, I&C, and the accumulator topical reports. On January 31 and February 1, 2007 public meetings were held to discuss loss of coolant accident, thermal design, and fuel design topical reports with future meetings planned in April 2007 to discuss upcoming pre-application topical reports. Mitsubishi plans to send the NRC 10 topical reports this calendar year.

MHI has stated that it plans to submit a DC application for the US-APWR in December 2007. In a letter dated January 18, 2007, TXU Generation Management Company, LLC publicly stated potential interest in referencing this design in a future COL application.

Pebble Bed Modular Reactor

The pebble bed modular reactor (PBMR) is a helium-cooled high-temperature reactor. A full-scale demonstration plant is being planned for construction in the Republic of South Africa. The NRC has entered into preapplication discussions with the company responsible for the design, construction, and operation of the reactor, PBMR (Pty) Ltd., based on its stated purpose to pursue a DC under 10 CFR Part 52. The company intends to eventually seek deployment of the PBMR in the United States.

PBMR (Pty) Ltd. projects in its most recent schedule that the preapplication phase will extend to the end of CY 2007; the company has proposed submitting a DC application (DCA) in CY 2008. Consistent with resource allocations, the staff has committed to engage in a limited preapplication review at this time. PBMR (Pty) Ltd. submitted a letter dated December 8, 2005, summarizing preapplication outcome objectives and planned white papers (WPs) to support preapplication interactions with the NRC. The staff discussed these objectives and plans in a meeting on December 12, 2005. Subsequently, the staff met with the company on February 28 and March 15, 2006, to familiarize NRC staff with the PBMR design and related issues. The company had proposed submitting a series of 20 WPs as part of preapplication activities. Each WP would include a substantive discussion on a specific PBMR topic, including pertinent technical, regulatory, and policy issues.

The staff reviewed the company's proposal and agreed to evaluate a limited set of WPs as part of preapplication activities. By letter dated April 24, 2006, the staff communicated its intention to review and provide feedback on the three WPs on licensing-basis event selection, system structure and component classification, and defense in depth. Collectively, these WPs provide the framework of the DC approach planned by PBMR (Pty) Ltd. The process and results of these reviews would serve as the basis for any future interaction.

These three WP topics represent a significant portion of the technical and policy challenges involved in the entire set of proposed WPs. Outcomes of the staff's preapplication review would include identification of key technical, regulatory, and policy issues that would need to be resolved in support of an effective DCA for PBMR (Pty) Ltd.

By letters dated May 25, 2006, and June 27, 2006, the staff informed PBMR (Pty) Ltd. that it would consider reviewing a WP on the PRA approach, as well as the paper on the proposed format and content for the DCA, to the extent that such reviews enable the staff to better understand the company's safety approach and planned format and content for the DCA. The staff considers gaining mutual understanding of the DCA approach necessary to ensure a complete and acceptable application will be submitted. The staff also clarified that, although the PBMR preapplication review may take place concurrent with the NRC's ongoing development of a regulatory framework that can be applied to non-light-water reactors (non-LWRs), the two activities are not directly related. The staff's objective for the PBMR preapplication review continues to focus on resolving PBMR-specific technical, regulatory, and policy issues pertinent to DC. The feedback from the preapplication review would enable PBMR (Pty) Ltd. to prepare a high-quality, non-LWR DCA, consistent with 10 CFR Part 52.

On June 13, July 3, and August 28, 2006, PBMR (Pty) Ltd. submitted WPs entitled, "Probabilistic Risk Assessment Approach for the Pebble Bed Modular Reactor," "Licensing Basis Event Selection for the Pebble Bed Modular Reactor," and "Safety Classification of

Structures, Systems, and Components for the Pebble Bed Modular Reactor," respectively. On October 27, 2006, the staff had a public meeting with the company to discuss the review of these WPs, as well as the licensing approach for the DCA. The NRC issued the meeting summary on November 8, 2006 (ML063060597). The staff will establish a review schedule for these and the other papers mentioned above based on available resources and the relative priorities of the NRC's workload.

To prepare for the PBMR preapplication process, the staff has created an interoffice team consisting of staff from the Offices of Nuclear Reactor Regulation (NRR), NRO, and Nuclear Regulatory Research. The staff expects to take advantage of the earlier efforts related to the pre-application process that occurred in 2001 and 2002 for the PBMR concepts presented by Exelon Corporation.

International Reactor Innovative and Secure

The NRC held the last public meeting regarding the International Reactor Innovative and Secure IRIS on September 28, 2005, when the staff and Westinghouse discussed WCAP-16392, "IRIS Test Plan," WCAP-16318, "IRIS Small Break LOCA Phenomena Identification Ranking Table," and the submittal of scaling analysis in support of the IRIS test program.

Westinghouse submitted a letter on September 7, 2006, providing some details of its plans to submit a DCA. In this letter, the company outlined a proposed schedule for pre-application activities and restated its intent to begin the formal DC process in 2010. Westinghouse also indicated a two-path approach to obtaining a DC. The first approach is to submit a DCA under 10 CFR Part 52 requirements in 2010. The second approach involves a separate DCA pending evolution of 10 CFR Part 53. The September letter also outlined plans for additional topical report submittals describing the company's Simulatore PWR per Esperienze di Sicurezza, 3-loop (SPES-3) test facility and the related IRIS test matrix early in FY 2007, with further periodic reports of test results, related analyses, and evaluation model changes through CY 2010.

Small Liquid-Metal Reactor for Galena, Alaska

In April 2006, the City Manager of Galena, Alaska, requested a meeting with the NRC to discuss the WPs, preliminary safety information document, and other issues relating to the potential filing of an ESP application for their small liquid-metal reactor design in Galena.

On December 7, 2006, the NRC's Tribal Consultation Team (TCT) met with the Yukon River Inter-Tribal Watershed Council (YRITWC) to discuss Tribal interests and consultation processes, NRC organizational changes, and future interactions between NRC and the Tribes, as related to the potential siting of a reactor in Galena, Alaska. Some of the concerns expressed by the YRITWC during the meeting were the adequate timing of communications to the tribes in the potential pre-application review and licensing process, the advantage of written consultation protocols, the importance of the Yukon River to the Tribes' subsistence, and site specific issues related to siting a reactor in Galena, such as the complexity of permafrost and nearby fault lines.

The TCT plans to provide a status report to the Commission in November 2007 on the items included in the scope of work, such as the identification of prospective roles, responsibilities, and expectations of the Native American tribal governments and the NRC in consultation, whether a written agreement documenting the consultation process is needed, and future plans and resource requirements for the development, implementation, and maintenance of consultation with the appropriate Native American tribal governments.

High-Temperature Teaching and Test Reactor, University of Texas

On May 11, 2006, the NRC staff held an initial public meeting with the University of Texas and General Atomics (GA) to discuss the potential licensing of a proposed test reactor at the University of Texas of the Permian Basin (UTPB) campus. As described by UTPB and GA, the proposed test reactor, High-Temperature Teaching and Test Reactor (HT3R), would be a small high-temperature gas-cooled reactor (HTGR) with prismatic graphite fuel blocks, 10-percent enriched uranium-oxide coated particle fuel, a thermal power level of 25 megawatts, and a helium coolant outlet temperature of 850 °C (1562 °F). The passive safety characteristics of the HT3R would be similar to those of proposed commercial modular HTGR designs such as the gas turbine-modular helium reactor (GT-MHR) and PBMR.

The potential uses of HT3R include (1) testing and demonstration of HTGR technology and its application to Brayton-cycle electric power generation, hydrogen production, water desalination, and other uses of high-temperature process heat and (2) isotope production, basic research, teaching, and operator training. UTPB has indicated that its preliminary plans include submitting a license application in early 2009, starting construction in early 2010, and completing construction and licensing by the end of 2012. Pursuant to these plans, UTPB and GA requested NRC staff input on the test reactor licensing process to support planning during the remainder of the HT3R preconceptual design phase in 2006 and NRC staff review of the licensing plan developed during the conceptual design phase in 2007.

REGULATORY INFRASTRUCTURE

This section provides the status of the 10 CFR Part 52 rulemaking, construction inspection program (CIP) development, COL issues, and other regulatory guidance for both LWR and non-LWR technologies.

10 CFR Part 52 Update

On March 13, 2006, the NRC issued for public comment a proposed a rule to update 10 CFR Part 52 (71 FR 12781). The NRC received 19 comment letters from industry stakeholders, other Federal agencies, and individuals during the public comment period. On September 27, 2006, the NRC staff published draft final rule language on the NRC Web site and, on October 25, 2006, held a public meeting to answer questions about the draft final rule language. On October 31, 2006, the staff forwarded SECY-06-0220, “Final Rule to Update 10 CFR Part 52, ‘Licenses, Certifications, and Approvals for Nuclear Power Plants’ (RIN AG24),” to the Commission for consideration. The draft final rule addressed all public comments received on the proposed rule.

On November 9, 2006, the NRC staff and industry representatives briefed the Commission on the draft final rule to update 10 CFR Part 52. On November 13, 2006, the Commission issued a staff requirements memorandum (SRM) on that briefing. In its SRM, the Commission stated that it supported the staff's holding of a public meeting to discuss comments raised on the draft final 10 CFR Part 52 rule, including 10 CFR 52.99. On November 17, 2006, the staff held the public meeting that had been requested by industry stakeholders and supported by the Commission. On December 1, 2006, NEI sent a letter to the Commission outlining its remaining concerns about the draft final rule.

In parallel with the work on the draft final 10 CFR Part 52 rule, the staff issued a supplement to the 10 CFR Part 52 proposed rule on October 17, 2006 (71 FR 61330), to address public comments that proposed to modify the limited work authorization (LWA) process in 10 CFR 50.10 to facilitate site preparation activities in advance of the issuance of a COL or construction permit. On November 1, 2006, the staff held a public meeting to answer stakeholder questions on the supplemental proposed rule. The public comment period for the supplemental proposed rule closed on November 16, 2006. The NRC received 13 comment from external industry stakeholders, public advocacy organizations, the U.S. Environmental Protection Agency (EPA), and an NRC staff individual during the public comment period. After resolving the public comments, the staff and prepared a final LWA rule, "Final Rulemaking on Limited Work Authorizations" for submittal to the Commission on February 7, 2007 under SECY-07-0030.

Construction Inspection Program Development

The Region II construction organization is currently budgeted for 16 full-time equivalents (FTE) in FY 2007 (10 reactor staff members and 6 fuel facility staff members) and 26 FTE in FY 2008 (20 reactor and 6 fuel facility). The near-term activities for the organization will involve infrastructure development, staffing, and training. Headquarters and Region II construction organization staff are working closely on infrastructure and preapplication activities. Additional, near-term activities include supporting ESP and COL geotechnical investigation activities, conducting QA program reviews, and fuel facility construction activities.

Headquarters and Region II construction organization staff are working closely to develop the detailed guidance to be used by inspectors examining the performance of ITAAC-related work during construction. This includes the development of the procedures to be used when inspecting ITAAC-related field work. Issuance of the 26 ITAAC inspection procedures is currently targeted for the spring of 2007. The development of guidance for assessment and enforcement is also underway, and public meetings are being scheduled to solicit stakeholder input.

The NRC has developed a qualification journal for new reactor construction inspectors following the model of the existing Inspection Manual Chapter (IMC) 1245. The staff has identified the training objectives for required courses, and the development of the needed courses is in progress. The journal is expected to be issued as IMC 1252 in the spring of 2007.

The staff is progressing with its update of the inspection guidance for operational programs. Since the programs will be approved when the COL is issued, the staff is revising the inspection procedures for operational programs to focus the guidance on ensuring appropriate program development and implementation. The staff is coordinating the procedure revisions with the project to update the SRP to ensure that the inspection guidance complements the reviews

performed to support issuance of the COL. In addition to operational programs, IMC 2504 addresses the inspection of other non-ITAAC activities, including the pre-operational test and startup test programs and the transition to the reactor oversight process. The staff issued startup testing inspection procedures for the ABWR and AP1000 in September 2006. In total, the agency will develop or revise approximately 150 inspection procedures to support IMC 2504 activities. The work is scheduled to be completed over the next 12 months, with the exception of security procedures, which are being coordinated with an anticipated rulemaking.

The construction inspection team has worked with the Office of Information Services (OIS), the Region II construction organization, and the Information Management Branch in NRR to complete the basic design of the CIP Information Management System, a database that will allow the NRC staff to manage inspection-generated information. Over the next year, the system will be built and the functions tested. The system is scheduled for deployment in late FY 2007.

Additionally, the construction inspection team conducted a test project to explore the use of Primavera scheduling software. The test focused on the ability to edit licensee Primavera construction files to include NRC inspections among licensee construction activities. The team was able to create and edit licensee construction projects and import licensee construction schedules into the Primavera software. This means that a modified version of a licensee construction schedule can be used for NRC inspection scheduling activities. The staff is working with OIS to have Primavera added to the NRC's list of approved software.

Regulatory Treatment of Operational Programs in the COL Process and Emergency Planning ITAAC

The Commission approved the staff's proposal for the treatment of operational programs and emergency planning ITAAC in the SRM on SECY-05-0197, "Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria," dated February 22, 2006. In SECY-05-0197, the NRC staff concluded that a COL applicant can fully describe all the operational programs and their implementation, which are required by regulation and which the staff expects to review in a COL application and inspect to verify implementation. Therefore, if a COL application fully describes these programs and their implementation, they will not require ITAAC. The staff proposed that a COL include license conditions associated with implementation. The staff also proposed to allow using the current SRP update effort to identify any operational programs that are additional to those discussed in the paper. The paper also proposed to allow the use of the generic emergency planning ITAAC, as discussed in SECY-05-0197, as the minimum set of ITAAC for emergency planning included in a COL application.

Regulatory Guides

The staff continues aggressive development of the 31 high priority Regulatory Guides (RGs) for issuance in March 2007 to support new reactor licensing activities. Of the 31 RGs, six have been completed and all but one of the remaining are planned for completion in March 2007. The majority of the draft regulatory guides (DGs) were issued for 45-day public comment periods starting in September 2007 (see *Federal Register Notice* 71 FR 55517). All the public comment periods ended by December 24, 2006. The staff conducted several public meetings

on the DGs to facilitate public interaction in the development of the RGs. The staff has resolved the comments and the RGs are in the final review and approval process. In addition, the staff provided the DGs to the Advisory Committee for Reactor Safeguards (ACRS) for consideration for review and the ACRS selected several to be briefed on. The staff completed the ACRS briefings on February 2, 2007 with a summary briefing on the status of the updates and a specific briefing on RG 1.189, "Fire Protection for Nuclear Power Plants." The staff is addressing the ACRS comments received on the RG.

DG 1145 "Combined License Applications for Nuclear Power Plants (LWR Edition)," is not expected to be issued by March 2007. This draft guide is based, in part, on Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," and will be applicable to all LWR COL applications submitted under 10 CFR Part 52, whether the application references a certified design, an ESP, both, or neither. The timing of publication of this RG will depend on issuance of the final 10 CFR Part 52 rule, with about 60 days needed to incorporate conforming changes into the DG, depending on the extent of the changes. The NRC staff developed this guide using an open process through monthly public workshops. The NRC staff has used its external Web site to facilitate public interactions by posting work-in-progress technical sections in advance of the workshops and soliciting public comments. The NRC reviewed comments received during the public workshops and through the agency's external Web site and incorporated the comments, as applicable, into the work-in-progress DG-1145. Following comment incorporation, the agency made the draft guide available to the public on September 1, 2006, on the NRC's external Web site. The NRC also issued DG-1145 formally for a 45-day public comment period on September 7, 2006 (71 FR 52826). The public comment period closed on October 23, 2006, and the staff is working to resolve approximately 700 comments that were received on DG-1145 from external stakeholders. In addition, the staff is finalizing DG-1145 in close coordination with the SRP update project. The staff plans to publish the final Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," following resolution of public comments and issuance of the final 10 CFR Part 52 rule.

Standard Review Plans

The NRC staff is on schedule to issue a revision to the SRP in March 2007. While the agency is making preliminary SRP section revisions publicly available, it will not issue them formally until March following review against the proposed 10 CFR Part 52 rulemaking and concurrent RG updates, including Regulatory Guide 1.206, with about 60 days needed to incorporate conforming changes into the DG, depending on the extent of the changes. The staff provides the Commission with a quarterly update on the status of the SRP. The most recent memorandum was dated December 28, 2006 (ML063480208).

The NRC made SRP Section 13.3, "Emergency Planning," Second Draft, Revision 3, available for preliminary use on September 8, 2006. This SRP section does not represent new staff positions; however, the staff rewrote it to reflect the 10 CFR Part 52 licensing process. For this reason, the agency issued Section 13.3 in draft for public comment on September 30, 2006. The staff will consider public comments in the preparation of the March 2007 revision to the SRP.

Certain sections of the SRP will not contain a complete set of acceptance criteria. One example of this is the staff review of the technical adequacy of the information pertaining to dynamic analysis models for jet thrust force and jet impingement load that are included in SRP Section 3.6.2, "Determination of Rupture Locations and Dynamic Effects Associated with the Postulated Rupture of Piping," and American National Standards Institute (ANSI)/American Nuclear Society (ANS) 58.2. (See ACRS Safety Evaluation letters to the Chairman of the NRC (ACRSR-2097 (ML042920334) and ACRSR-2110 (ML043450346).) Because of the complexity of these technical issues, the staff will not have an updated technical position. Before the technical bases for the staff position are available, the staff will review the jet-related issues on a case-by-case basis. Other sections depend on related activities (e.g., the update of SRP Section 13.6, "Physical Security," depends on ongoing efforts to revise 10 CFR Part 73). For these sections, the staff has identified those dependencies and is reviewing those schedules for opportunities to update the SRP.

In March 2000, the NRC issued NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," (ESRP), which subsumed NUREG-0555, "Environmental Standard Review Plans for the Environmental Review of Construction Permit Applications for Nuclear Power Plants." Volumes 1 and 2 of NUREG-1555 were incorporated by reference into Review Standard (RS)-002, "Processing Applications for Early Site Permits." Based on experience gained from the initial ESP application reviews, changes in the electric power markets (related to benefits assessments), and changes in statutes and regulations, the staff will update selected sections of the ESRP. The staff has initiated work on the update of the ESRP and plans to ask external stakeholders for input on (1) the priority for individual update activities and (2) technical issues to be addressed in the updates.

Additional information on the SRP can be found on the SRP Web page http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800.

Watts Bar Nuclear Plant Unit 2 Feasibility Assessment

In a November 14, 2006 letter the Tennessee Valley Authority (TVA) informed the NRC of its intention to perform a feasibility study on completing Watts Bar Nuclear Plant (WBN) Unit 2. Results of this study are to be presented to the TVA board of directors in August 2007. If the board decides to resume construction of WBN Unit 2, TVA will notify the Director of NRR 120 days in advance in accordance with the Commission Policy Statement on Deferred Plants (52 FR 38077, October 14, 1987).

The NRC staff is reviewing the letter and anticipates there will be additional coordination with TVA prior to the board decision. The staff will also inform the Commission of any policy or resource allocation issues it identifies associated with WBN Unit 2. If TVA pursues completion of WBN Unit 2, the plant would be licensed under 10 CFR Part 50, with NRR having lead responsibility for the project.

Office Instructions

The staff is developing procedures (office instructions) to support the various functions and responsibilities of the Office of New Reactors (NRO). This effort includes administrative controls for the new office, as well as specific procedures for processing applications submitted under 10 CFR Part 52 for COLs, DCs, and ESPs. These procedures and related tools, such as

information systems and document templates, will give the NRO staff and managers the necessary infrastructure to operate as an office, including guidance to orchestrate the receipt, acceptance, review, and environmental evaluation of applications related to new reactor facilities. The staff is developing the licensing-related procedures in coordination with the revisions to 10 CFR Part 52, the standard format and content guide (DG-1145), and the SRP. NRO will determine priorities and schedules for the completion of specific office instructions and related tools based on the expected application schedules and the needs of the staff and management in the office.

Advance Notice of Proposed Rulemaking

The SRM for SECY-05-0130, "Policy Issues Related to New Plant Licensing and Status of the Technology-Neutral Framework for New Plant Licensing," dated September 15, 2005, directed the staff to consider ACRS comments in developing a subsequent notation vote paper addressing the policy issues of level of safety and integrated risk. In addition, the Commission directed the staff to expeditiously develop an Advance Notice of Proposed Rulemaking (ANPR) to consider the spectrum of issues relating to risk-informing the reactor requirements and to incorporate into this ANPR the formal program to risk-inform 10 CFR Part 50, as well as other related risk-informed efforts. The Commission also directed that safety, security, and preparedness be integrated throughout this effort. The staff prepared an ANPR incorporating the issues identified by the Commission in the SRM for SECY-05-0130. In accordance with the SRM for SECY-06-0007, "Staff Plan to Make a Risk-Informed and Performance-Based Revision to 10 CFR Part 50," dated March 22, 2006, the staff published the ANPR in the *Federal Register* (71 FR 26267). Additionally, the staff placed the latest working draft of the technology-neutral framework on the RuleForum Web site to facilitate stakeholder comment on the framework as part of the ANPR. The staff conducted a public workshop on this subject on September 14–15, 2006. The ANPR comment period ended in December 2006. In May 2007, the staff will recommend to the Commission whether and how to proceed with a rulemaking to make the requirements of 10 CFR Part 50 risk informed and performance based after assessing stakeholder comment on the ANPR and the technology-neutral framework and considering the views of ACRS.

Security Requirements for New Reactors

Power Reactor Security (10 CFR 73.55, 73.56, 73.58, 73.71 and Appendices B, C, and G)

The staff submitted the proposed rule 10 CFR 73.55, 73.56, 73.58, 73.71 and Appendices B, C, and G to 10 CFR Part 73 to the Commission on May 31, 2006, in SECY-06-0126, "Proposed Rulemaking—Power Reactor Security Requirements (RIN 3150-AG63)." The Commission approved the proposed rule in SRM-SECY-06-0126 on June 30, 2006. The staff has completed incorporating comments from the SRM and revised the proposed 10 CFR 73.18 and 10 CFR 73.19 (firearms background checks and enhanced weapons) and is coordinating to reflect current Department of Justice views. The proposed rule appeared in the *Federal Register* on October 26, 2006 (71 FR 62663), and had an extended public comment period ending February 23, 2007. The staff is expected to provide the final rule package to the EDO about January 2008.

The public will be able to view some chapters or sections of the proposed regulatory guidance as they are completed; some finished parts are expected in the spring of 2007. Publication of final regulatory guidance is expected in spring 2008.

Security Assessment Rulemaking and Guidance Development

On July 6, 2005, the staff provided the Commission with SECY-05-0120, "Security Design Expectations for New Reactor Licensing Activities." On September 9, 2005, the Commission issued an SRM approving the actions proposed in SECY-05-0120. One of the proposed actions, to conduct rulemaking to require applicants to submit a security assessment and target set analysis is due September 29, 2007. The NRC conducted two public meetings (March 6 and July 17, 2006) on this rulemaking and posted draft rule language on the Web for stakeholder information. The staff delivered the proposed rule to the Commission in SECY-06-0204 on September 28, 2006.

Currently, NRR staff is coordinating with the Office of Nuclear Security and Incident Response (NSIR) to develop the guidance for the security assessment and target set analysis. The staff is currently reviewing drafts of the format and content guidance.

Security Measures During Construction of a New Plant

The staff issued a memorandum dated September 7, 2006, regarding "Access Authorization and Physical Protection Requirements for Nuclear Power Plant Construction," to inform the Commission of the status of the staff's plans for developing access authorization and physical protection requirements for a nuclear power plant under construction.

On August 18, 2006, NSIR received, for official endorsement, an industry-proposed revision to Appendices E and F to "Generic Security Plan Template" that addresses physical security measures and controls during the new reactor construction phase. The staff has begun its review of NEI 03-12 and expects to complete it in March 2007.

The staff continues to meet with the New Plants Security Task Force (Industry/Vendors) on a periodic basis to discuss security for new reactors. Topics normally include Appendices E and F to NEI 03-12, the topical report concept outline, ITAAC, final safety analysis report, and Revisions 3 and 4 to NEI 03-12.

Security Memorandum of Understanding with Department of Homeland Security

Section 657 of the Energy Policy Act of 2005 provides that before issuing a license for a utilization facility, the NRC shall consult with DHS concerning the potential vulnerabilities of the location of the proposed facility to terrorist attack. The NRC staff met with DHS representatives to reach a mutual understanding and develop a memorandum of understanding (MOU) on the DHS role and resource needs for new reactor licensing activities. The staff plans to develop an implementation plan (procedure) on the MOU for interaction between the two organizations for new reactors licensing.

Contracting Strategy to Support New Reactor Licensing

The staff is now implementing the contracting strategy in anticipation of the new reactor licensing activities projected to increase during FY 2007 and FY 2008. This contracting strategy includes identification and use of a broad mix of contractors, early identification of needs and placement of contracts which is consistent with the DCRA.

In October 2006, NRO, in anticipation of significant growth in new reactor licensing, created a Contract Planning and Management Branch responsible for strategic planning and management of contracts related to new reactor licensing activities. The staff consists of engineering project managers and contract specialists. This branch develops contracting strategies, using the DCRA, through the use of U.S. Department of Energy (DOE) laboratories, commercial contractors, and other Federal agencies to accommodate all phases of new reactor licensing activities. These activities include infrastructure, DCs, ESPs, COLs, and preapplication licensing support.

NRO prepared SECY-07-0009, "Procurement Strategy for Contracts and DOE Laboratory Technical Assistance Activities Supporting Combined License Activities to the Chairman," as required by SRM SECY-04-0201, "Chairman Review Thresholds for Contractual Decisions," dated December 14, 2004, and in accordance with "Delegation of Contractual Authority," dated January 24, 2005. These papers contain statements of work requesting approval to place contracts with DOE laboratories and various commercial contractors.

Finding organizations that are free from organizational conflict of interest (OCOI) is of utmost importance to ensure the independence of COL reviews. The staff is committed to ensure that each laboratory agreement and commercial contract is assessed for OCOI and that the laboratories and commercial contractors are required to comply with the NRC's OCOI rules.

NRO staff is finalizing MOUs with the U.S. Army Corps of Engineers (USACE) and the U.S. Geological Survey (USGS). The breadth of knowledge possessed by USACE in the area of environmental impact statements is extensive, and USGS currently provides services relating to seismic reviews.

Licensing Program Plan

The New Reactor Licensing Program Plan (LPP) defines the process that NRO will use to perform licensing reviews of design certifications (DC), combined construction and operating license (COL), and early site permit (ESP) applications. Accompanying the LPP document is an integrated licensing review schedule (Gantt Chart) for all the DC, COL, and ESP applications that industry has indicated they will submit, starting in the first quarter of fiscal year 2008. The LPP defines the anticipated work, the schedule and resources required to perform the reviews, processes to perform this work, methods of statusing the work, practices for change controls of the work, communication plans, and the information technology requirements for implementing the review process. The schedules will be developed, monitored, and maintained using the Microsoft Project Management Enterprise software suite (EPM Solution). The EPM Solution will permit task statusing through the NRC intranet.

Version 1 of the LPP and its integrated schedule (~80,000 line-items of task) was issued on February 7, 2007. The servers needed to deploy the schedules have been purchased, hardened and are available for use. Training of management and staff on the use of the EPM Solution will occur in the third-quarter of FY 2007. Refinements of the integrated schedule will occur based on new insights and evolving budget considerations. NRO will maintain the LPP and its associated schedules throughout the licensing reviews.

New Reactor Business Process Plan

The staff is developing a Business Process Plan, formerly known as the master integrated schedule, to facilitate interactions among key stakeholders for significant issues directly related to the success of the new reactor program. The Business Process Plan currently includes activities related to filling NRO vacancies with personnel having the appropriate skills and providing them with the necessary training, acquiring and equipping co-located office space for NRO staff, and preparing for processing an unprecedented number of contracts and task orders. Other significant issues will become part of the Business Process Plan as they are identified.

The agency published a draft version of the Business Process Plan on the Microsoft Project Enterprise server to provide access to all NRC users. The staff is currently revising the plan to reflect changing priorities and stakeholder needs and will provide an update on the schedule for the plan at the next scheduled new reactor update to the Commission.

Information Technology/Information Management

As the agency prepares to conduct the review and adjudicatory processes associated with new reactor licensing, Office of Information Services (OIS) is coordinating closely with agency offices to define and document requirements and service levels in advance of the anticipated ESP and COL applications. OIS has designated a lead project manager responsible for coordinating the office's efforts. OIS continues to review the information technology/information management (IT/IM) infrastructure and coordinate improvements with NRR and other offices. Several projects are underway to provide technology and services to meet program timelines.

OIS is planning to hire additional staff based on the number and complexity of these new reactor projects and a review of current workloads. The staff is planning, implementing, and supporting application enhancements, technology improvements, security requirements, and other initiatives to address agency growth and expanding Headquarters locations. The staff is also preparing to fulfill increased IM requirements that support the New Reactor Licensing Program.

<u>IT/IM Contracting Strategy</u>

OIS is using a diverse mix of contractors under various contracting vehicles to effectively meet agency IT/IM support requirements. Whenever possible, OIS uses existing support and service contracts to quickly and efficiently meet agency needs. OIS is modifying existing contracts for desktop computers, network support, computer center operations, systems administration, applications development and support, telecommunications services, and IM to accommodate enhancements and changes in scope. For example, the December 2006 modification to the Seat Management Services Contract to install Microsoft Word is enhancing the NRC's ability to

effectively communicate with licensees and other external stakeholders where microsoft word is predominantly used. For requirements beyond these established contracts, OIS identifies additional commercial contracting requirements and pursues competitive sources. The office is also exploring General Services Administration and other interagency agreements as potential sources. OIS documents all procurement activities in the Advance Procurement Plan provided to the Division of Contracts.

The following four primary factors drive OIS contracting activities:

(1) Agency Growth

The growth in agency staff and the expansion to additional offsite buildings have increased costs in a number of areas. For example, direct expenses include direct costs for computer workstations, telecommunications services, software licenses, and help desk support personnel. Agency growth and the expansion in Headquarters locations also drive the need for additional capacity for Internet service, remote access, and audio/video conferencing. Plans to modify the Seat Management Services Contract to provide infrastructure services and support for projected agency staff growth will be in place in March 2007.

(2) Technology Requirements

The initial efforts to address technology requirements involve working directly with program offices to ensure that technology investments effectively meet business needs, minimize duplication of systems, maximize data sharing, and integrate well with the agency IT/IM infrastructure. OIS has initiated specific technology projects to address known and emerging requirements, such as electronic receipt and review of COLs, agency wide deployment of Microsoft Office, electronic receipt and processing of adjudicatory documents for COL hearings, or capturing email in the Agency wide Documents Access and Management System (ADAMS). A combination of contract modifications, competitive procurement, and interagency agreements supplies the expertise to deliver the required solutions.

The agency is using the IT/IM improvements recently implemented to support the adjudicatory process in the context of a pilot during the December 2006 Vogtle ESP proceeding. These improvements provide for electronic filing, review, and distribution of adjudicatory documents. The staff will evaluate the pilot to identify necessary adjustments to the process and IT/IM components.

In partnership with NRO and the industry, OIS has made significant progress in streamlining the process for electronic receipt and online review of COL applications. All of the stakeholders are now aligned concerning how a COL will be formatted, packaged, and submitted to the NRC. The design of the IT components that will support the process improvements is progressing on schedule. Project completion is planned for July 2007.

(3) End User and Systems Support

Contract resources will be integral to delivering an enhanced level of end user and system support as the efforts to review ESPs and COLs peak. To better support telecommuting and overtime work, modifications to the Seat Management Services Contract are planned to extend the hours of the Desktop Support Center to 6 a.m. to 9 p.m. weekdays (the Desktop Support Center previously closed at 6 p.m.), and to add weekend support hours from 9 a.m. to 9 p.m.. Network and data center onsite support is being extended beyond current business hours to provide an immediate response capability to the NRC's core infrastructure components (i.e., local and wide area networks, email, ADAMS). Implementation of these seat management services is planned for March 2007. A new help desk is planned in FY 2007 to provide specialized support to ensure that licensees, staff, and citizens can effectively use the processes and systems designed for the electronic submission and review of ESP and COL documents. OIS is acquiring these enhanced support services through a combination of contract modifications, competitive procurement, and interagency agreements.

(4) Information Management

Both the FY 2007 and FY 2008 budget requests include resources to process an increased volume of documents generated during the new reactor licensing review process. The Technical Library has deployed 25 online journal titles from Elsevier's ScienceDirect collection; the GeoRef technical research database; and online codes and standards from the collections of the American Welding Society, Underwriters Laboratories, and the National Electrical Manufacturers Association to support the staff's reference material needs. The Technical Library staff will perform a needs assessment for additional online technical research databases. Action to acquire and deploy online electronic end-user IT support books is in progress with target completion in January 2007. OIS is acquiring these materials and services through a combination of contract modifications, purchase card transactions, and competitive procurement.

TECHNICAL DEVELOPMENT ACTIVITIES

Support for Light-Water Reactors

The staff is using the TRACE thermal-hydraulics code to perform independent confirmatory analyses of ESBWR accidents and transients. Activities include model development, TRACE code assessment against test data, and confirmatory calculations. Moreover, the MELCOR code (the NRC's severe accident code) is used in performing the ESBWR containment performance analysis to identify the limiting containment pressure response.

To support the review of the ESBWR design, the staff developed a version of the TRACE code, along with (1) ESBWR input decks, (2) a report documenting the results of calculations to demonstrate the ability of the code to model operating and accident scenarios (e.g., breaks in the gravity-driven cooling system line, bottom drain line, and main steam line), (3) descriptions of models included in the TRACE code, and (4) supporting documentation for code users.

Additional support for the ESBWR design review is provided in the area of computational fluid dynamics (CFD). The staff is developing a detailed CFD model of the core bypass region to support the review of anticipated transient without scram scenarios. The CFD predictions will provide insights into the mixing of the boric acid solution injected into the core bypass region from the standby liquid control system.

In the area of ESBWR severe accidents, the staff has identified risk-dominant accident sequences for analysis to confirm DC data and supporting information provided by GE. The staff prepared MELCOR input decks and performed baseline calculations for one of the highest risk-dominant sequences. These calculations address severe accident issues identified in SECY-93-087, "Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor (ALWR) Designs," and include direct containment heating, hydrogen combustion, core-concrete interaction, steam explosion, and ex-vessel debris coolability. In addition, since MELCOR has been assessed against relevant ESBWR-related containment thermal-hydraulic data (which are comparable to the CONTAIN code in modeling the containment phenomena), the staff performed preliminary calculations of containment loading for design-basis events along with selected code sensitivities to confirm the adequacy of the ESBWR containment design. Additional severe accident and design-basis containment analyses including alternative source term calculations and sensitivity studies are in progress. The staff has developed an EPR research plan. The main objectives of the plan are to (1) identify key safety research area needs and (2) describe subsequent research to develop the necessary tools, knowledge, and data to conduct an independent safety review of the EPR design. Key research areas include severe accident and thermal-hydraulics analyses and digital I&C.

Support for Gas-Cooled Reactors

The NRC staff's HTGR knowledge management efforts have involved remaining cognizant of domestic and international developments in safety-related aspects of HTGR technology, ensuring that the HTGR analysis tools developed are documented and retrievable for future staff use, and preserving and transferring the knowledge gained from the staff's earlier efforts on HTGR technology. Under this activity, the staff has been capturing critical internal and external HTGR information and establishing the ability to make the appropriate information available to cognizant NRC staff as needed. As part of this process, staff attended the 3rd International Topical Meeting on High Temperature Reactor Technology (HTR-2006) in Johannesburg, South Africa. This meeting presented information concerning fuel technology, nuclear analysis, thermal fluid analysis, accident analysis, high-temperature materials, safety and licensing, experimental programs, and nuclear process heat applications. The South African National Nuclear Regulator participated with presentations on pebble-bed reactor licensing. The staff is preserving and sharing the HTGR information through a Web-based HTGR community of practice, where information can be shared to facilitate current work assignments and knowledge transfer between expert and journeyman staff.
To effectively and efficiently develop the NRC's HTGR technical and licensing review infrastructure in FY 2007, the staff updated the advanced reactor research and development infrastructure needs assessment and is now updating its safety research and development (R&D) plans previously documented in SECY-03-0059, "NRC's Advanced Reactor Research Program." The update is focused on HTGR (including very-high-temperature reactor (VHTR)) design- and technology-specific issues and related generic infrastructure assessments, needs, and plans. This update supports the development of the joint NRC-DOE licensing strategy for

the Next Generation Nuclear Plant (NGNP) project as required by the Energy Policy Act of 2005. DOE received the first working draft of the safety R&D infrastructure needs assessment for use by the national laboratories supporting DOE NGNP R&D activities. DOE and NRC staff members are currently working to establish cooperative phenomena identification and ranking table (PIRT) panels in several key areas to provide additional focus and to enhance the quality and completeness of the NRC's revised infrastructure R&D assessment for the VHTR designs that DOE is considering for the NGNP reactor. The results of these PIRTs, which are next steps described in the infrastructure assessment, will also inform the decision on the safety R&D that the NRC will need to conduct in order to review an NGNP application.

Support for Other Reactor Technologies

The staff has completed a draft infrastructure assessment survey of key safety and technical issues and safety R&D needs associated with liquid-metal-cooled fast reactors. The survey will support limited infrastructure development activities in FY 2007 for small secure reactors. The infrastructure assessment survey will be applicable to potential future applications involving a small, secure liquid-metal-cooled fast reactor or the liquid-metal-cooled "burner" fast reactor, which is part of the Global Nuclear Energy Partnership initiative.

Codes and Standards Development

On November 14–16, 2006, the NRC staff continued its participation in the quarterly meetings of the ANS 28 Subcommittee, which is preparing an ANS safety standard for modular HTGRs (i.e., "Nuclear Safety Criteria for the Design of Modular Helium-Cooled Reactor Plants"). The objective of the standard is to establish the nuclear safety criteria, functional performance, and design requirements of structures, systems, and components of modular gas reactor plants consistent with established risk objectives. The staff is participating on the subcommittee to provide input to the development of the standard in a way that maximizes its compatibility with the staff's proposed regulatory structure for new plant licensing documented in NUREG-1860, "Working Draft: Framework for Development of a Risk-Informed, Performance-Based Alternative to 10 CFR Part 50." The most recent meeting focused on the quality and completeness of the plant PRA, which is needed to implement a safety standard, the designation of reference documents as providing either optional background tutorial information or required procedural information on the use of a standard as well as defense in depth in the design, and the conduct of modular gas reactor safety analyses. The ANS 28 Subcommittee working group plans to complete the first full draft of the safety standard by the end of June 2007.

The staff is working with the American Society of Mechanical Engineers (ASME) and ANS on a suite of PRA standards to support regulatory guidance being developed by the NRC. The staff is also working with other ANS committees to appropriately endorse existing safety criteria standards that have been used in advanced reactors such as the AP1000, ESBWR, and EPR. These standards are based on deterministic principles that have provided the safety criteria for LWRs.

The NRC staff is also supporting ASME code development by serving on the steering committee and as a technical advisor to the DOE/ASME collaboration to update and expand appropriate materials, construction, and design codes for application in future Generation IV (Gen IV) nuclear reactor systems that operate at elevated temperatures. The NRC staff

participated in related ASME code meetings on August 7–11 and October 30–November 3, 2006. Within the context of the ASME/DOE Gen IV Materials Project, the staff is involved with a task addressing "Regulatory Safety Issues in Structural Design Criteria of ASME Section III Subsection NH and for Very High Temperatures for VHTR & Gen IV." During FY 2006, NRC staff participated in the meetings of the subgroup under Section III of the ASME Boiler and Pressure Vessel Code, which is charged with the task of developing design codes and standards for nuclear graphite used in high-temperature gas-cooled reactors. The NRC staff also participated at the biannual meetings of the American Society for Testing Materials, which is developing nuclear graphite materials specifications and testing standards for important properties determination.

EXTERNAL STAKEHOLDER INTERACTIONS

Department of Energy

The Energy Policy Act of 2005, Section 641, provides that the Secretary of Energy shall establish a project known as the "Next Generation Nuclear Plant Project." The NGNP Project consists of research, development, design, construction, licensing, and operation of a prototype plant, including a VHTR, that can be used to generate electricity and/or hydrogen. Section 644(a) of the Act provides that the NRC shall have licensing and regulatory authority for any reactor authorized under Sections 641–645 of the Act. Section 644(b) of the Act requires the Secretary of Energy and the Chairman of the NRC to develop and jointly submit a licensing strategy for the prototype nuclear reactor within 3 years of the date of the law's enactment (i.e., August 8, 2008).

On February 28, 2006, NRC and DOE staff representatives met to continue informal initial discussions about the NGNP project plans and schedule, including development of a joint licensing strategy, coordination between the NRC and DOE, future interactions, and resources. Pursuant to the meeting, the NRC staff prepared a draft proposed NRC/DOE MOU for the development and documentation of the joint NGNP licensing strategy. On May 18, 2006, pursuant to the SRM on COMSECY-06-0020, the staff transmitted a proposed draft MOU to DOE to establish a joint licensing strategy for the NGNP reactor. The MOU established the framework for interactions between the NRC and DOE to develop and document the licensing strategy, respective organizational responsibilities, the interaction process and schedule, planned work products, and funding. The NRC signed the final MOU on September 28, 2006, and DOE countersigned it on October 12, 2006. On December 13, 2006, a DOE/NRC management briefing took place to discuss the plan for developing the NGNP licensing strategy.

The staff also worked with DOE and Office of Management and Budget staff to support publication of the DOE interim final rule and request for comment on standby support for certain nuclear plant delays, which became effective on June 14, 2006. The final rule was published on August 11, 2006, and became effective on September 11, 2006.

Department of Homeland Security

In support of the new reactor licensing process, the staff continues to consult with DHS on matters relating to emergency planning and preparedness and security. There are two distinct, yet related, areas of interactions with DHS in support of new reactor licensing. These are (1)

the emergency planning and preparedness requirements, which are essentially the same as those for the existing LWR fleet, and (2) the security-related requirements following September 11—some of which relate directly to emergency planning and response.

Emergency Planning and Preparedness

The NRC and DHS share the responsibility for evaluating and approving emergency plans in support of new reactor licensing. DHS is the Federal agency with the lead responsibility for oversight of offsite emergency planning and preparedness. The Radiological Emergency Preparedness (REP) Program within DHS executes these responsibilities. Pursuant to the Safe Port Act of 2006 (H.R. 4954), Section 612, "FEMA Programs," effective April 1, 2007, the management of the REP Program will transfer from the Preparedness Directorate to the FEMA Directorate within DHS. The NRC staff will continue to work with appropriate contacts at DHS to ensure continuity of activities during this change. While DHS and the NRC share the responsibility for evaluating the emergency plans and procedures under an MOU, which is reflected in 44 CFR Part 353, the NRC has the final decision making authority on the overall adequacy of emergency planning and preparedness.

In preparation for the new reactor license applications, various regulatory infrastructure work has been completed pertaining to DHS offsite emergency planning reviews, along with discussions relating to DHS preparation for the necessary staff and contractors to perform the reviews (i.e., resource implications). The regulatory infrastructure work consists of the 10 CFR Part 52 rulemaking project, updating Section 13.3 (Emergency Planning) of the SRP, developing a related Section 13.3 in DG-1145, and creating an emergency planning COL review template for use by the NRC and DHS to ensure consistent and comprehensive application reviews. The NRC staff and industry representatives share a common concern regarding the absence of DHS-specific planning references and limited guidance on the review of emergency response plans.

On July 7, 2006, the Director of NSIR, along with representatives from NRR and OGC, met with the DHS Assistant Secretary for Infrastructure Protection to discuss areas of mutual interest, including licensing of new reactors, their schedules, resource implications, and shared responsibilities for implementing the national energy policy. DHS had planned to hire 40 additional personnel to address new reactor licensing beginning in FY 2007. As a result of the meeting, the DHS Assistant Secretary indicated that DHS would need to reevaluate the additional resources that would be necessary for DHS to support required reviews and implement the mandates of the Energy Policy Act of 2005, in light of the increasing number of anticipated applications for ESPs and COLs. He agreed to evaluate the matter within DHS and would rely on the continued support of NRC management and staff in supplying DHS with information on anticipated applications. Subsequently, the NRC staff has learned that the initial 40 personnel that DHS planned to hire in FY 2007 would not be dedicated to new reactor licensing activities. They would instead be used to augment existing DHS staff in established field offices and headquarters. In response to this staffing issue, DHS is currently in the process of hiring an additional 40 personnel solely tasked to support the new reactors effort.

Hiring and Training Strategies
February 2007

INTRODUCTION

While the increased workload related to new reactors is affecting staffing throughout the agency, the greatest impact has been on the Office of Nuclear Reactor Regulation (NRR). With significant resources needed to guide the reorganization of NRR into NRR and the Office of New Reactors (NRO), the hiring process has been a major challenge. To accommodate the increased staffing requirements, NRR and NRO have developed strategies for recruiting, hiring, training, supervising, and providing physical and information technology infrastructure support. This enclosure outlines the strategies that NRO is implementing. During this fiscal year (FY), the Office of Human Resources (HR) and NRO/NRR have hired a large number of employees to prepare for new reactor licensing activities. This enclosure describes how the U.S. Nuclear Regulatory Commission (NRC) staff is continuing to work cooperatively to hire, train, and support new employees.

IDENTIFYING NECESSARY TALENT AND EXPERTISE

For FY 2006 and FY 2007, NRO identified the positions and expertise needed for near-term activities and is working to identify the positions and expertise needed to meet the projected workload demands for new reactor licensing activities in FY 2008. To address these staffing and hiring challenges, NRO managers and the Human Resources Services and Operations (HRSO) team leader servicing NRO participate in a monthly human capital meeting. Additionally, HRSO and NRO human capital staff meet frequently to discuss ongoing needs. The New Reactor Planning and Scheduling Branch (NPLS) continues to inform the projections for staffing levels for new reactor licensing activities and the areas of expertise needed to meet the increased demand to create projected FY 2008 staffing plans. The budget adjustment proposals for FY 2007 and FY 2008 will reflect the impact of the NRO staffing increases. As part of the HR annual request for workforce skill gaps and training needs, offices identified the critical skill areas where gaps exist or were projected to exist in the coming year. Gap closure strategies included hiring, training, rehiring annuitants, and using knowledge transfer activities. The offices are using the identified workforce skill gaps as guidance for identifying recruitment and hiring needs.

RECRUITMENT AND HIRING PROCESS

NRR and NRO, in partnership with HR, continue to evaluate job markets and professional conferences in various geographical locations to determine if advertising or recruitment activities would attract candidates with the skills and knowledge needed by the Agency. In addition to improving the hiring process, the HRSO group in HR is evaluating and improving recruitment strategies to attract highly qualified candidates to the Agency. The NRC staff finalized the policy of offering referral awards. The referral award provides employees with a monetary thank you if candidates they refer to the Agency are hired. Finally, the NRC staff request for direct-hire authority from the Office of Personnel Management (OPM) was not approved. OPM opined that the law which authorizes direct-hire authority applies to the competitive service, not the excepted service, and therefore OPM could not approve the NRC's request. NRC is exploring the possibility of obtaining direct-hire authority via direct legislation.

As of January 31, 2007, NRR and NRO have selected 351 employees in both technical and support areas. Of the 351 employees selected, 283 are on board and personnel are categorized as follows: 30 Nuclear Safety Professional Development Program (NSPD) candidates, 54 administrative and 199 technical. The 68 remaining employees selected are going through the security clearance process. The table below details activities in the hiring plan for NRO/NRR employees.

Table 1 - Hiring Plan for NRO/NRR Employees

Hiring Plan for NRO/NRR employees			
	Task	**Status**	**Responsible Group**
1	Review the existing recruitment locations and identify events and locations for additional recruitment events	initial review completed; ongoing	NRR/ PMAS
2	Identify opportunities and create advertisements for targeted material in local newspapers as well as national publications, trade journals, etc.	initial effort completed; on-going as needed	HR/HRSO, NRR/PMAS
3	Evaluate and improve recruitment and hiring strategies, including the following: • revise the generic open vacancy announcement for midcareer engineers and scientists to provide additional flexibilities to offer relocation and recruitment incentives. • streamline the request and approval process for a standard incentive (i.e., a cash incentive for a predetermined percentage of the offered salary) • create the Government version of referral award	ongoing, completed completed completed	HR/HRSO
4	Hold monthly human capital meetings to discuss staffing challenges	completed; ongoing	NRR/NRO management
5	Identify technical expertise and infrastructure support staff to meet FY 2007 staffing projections Identify technical expertise and infrastructure support staff to meet FY 2008 staffing projections	completed completed	NRR/NPLS, NRR/PMAS NRO/NPLS, NRR/PMAS

Finally, while the staff continues to focus on recruiting new employees as the principal vehicle for preparing for future challenges, it also is using other staffing options to bridge the gap while

new hires are being brought on board. Most notably, reemployed annuitants are being offered pension offset waivers when no other reasonable staffing option exists to accomplish critical tasks. These individuals with unique or specialized skills perform a variety of tasks, such as development of a construction inspection program, inspection support, and safety culture, as well as significant knowledge management/knowledge transfer activities, including the completion of Standard Review Plan sections and mentoring and training of new staff.

TRAINING AND KNOWLEDGE MANAGEMENT/TRANSFER

The rapid integration and training of many new employees are major challenges but are essential to the future success and productivity of the agency and the employees. To address this, NRO/NRR is expanding the use of existing training tools, including mentoring, on-the-job training, formal classroom and online training, and self-study activities. The NRO/NRR updated training plan appears below. Similar activities are underway in the Office of Nuclear Regulatory Research at a scope commensurate with its expected growth and turnover. To help new employees succeed, NRO/NRR has developed and is using a new employee orientation and training guide.

In September 2006, the professional development center began offering the new course on the licensing process under Title 10, Part 52, of the *Code of Federal Regulations* (10 CFR Part 52). In addition, in October 2006, NRO/NRR established a qualification program to certify employees' knowledge for licensing and regulating nuclear power plants. The qualification program is detailed in NRR Office Instruction ADM-504. The NRC has been developing these two initiatives during the year and completed them on schedule to meet the agency needs to ensure readiness of new reactor licensing and continued safe regulation of operating nuclear power plants.

Table 2 - Training Plan

Training Plan			
	Task	**Status**	**Responsible Group**
1	Identify training needs for new employees and for support of the new reactor licensing process	February 2006; HR interviews complete; ongoing	NRO/NRR/ PMAS
2	Assess existing training based on needs assessment	2nd qtr FY 2006 preliminary courses identified; others ongoing	OHR/HRTD
3	Develop training or modify existing training	3rd qtr FY 2006; ongoing	HR/ HRTD,

Training Plan			
	Task	**Status**	**Responsible Group**
4	Fill an administrative lead position for assisting new employees, coordinating office seminars, and tracking the completion of new employee training	Completed	NRO/NRR/ PMAS
5	Qualification plans for technical staff (NRR Office Instruction ADM-504, Qualification Program)	Completed	NRO/NRR/ PMAS

SUMMARY

The NRC staff is working aggressively to meet the demand for the recruitment, hiring, training, and support of new engineers, scientists, and other support staff. The staff continues to use staffing models from the NRPB and identified workforce skill gaps to assess the need for additional positions for engineers, scientists, and support staff for new reactor licensing activities. NRR/NRO is currently hiring staff to meet the projected full-time equivalent need for FY 2007 and is working on the projections for FY 2008 staffing. NRR and NRO have selected more than 351 employees in both technical and support areas. In October 2006 and January 2007, NRR and NRO, respectively established their qualification programs for training and certifying that employees have obtained sufficient regulatory knowledge for regulating and licensing nuclear power plants. The staff is dedicated to meeting the challenge of recruiting, hiring, training, and integrating new employees into the agency with the necessary infrastructure to support all activities.