

November 21, 2006

The Honorable George V. Voinovich  
Chairman, Subcommittee on Clean Air,  
Climate Change, and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

The Fiscal Year (FY) 2006 Energy and Water Development Appropriations Act, House Reports 109-86 and 109-275, directed the U.S. Nuclear Regulatory Commission (NRC) to provide a quarterly report on the status of its licensing and other regulatory activities. The initial reporting requirement arose in the FY 1999 Energy and Water Development Appropriations Act, Senate Report 105-206. On behalf of the Commission, I am pleased to submit this report, which covers the quarter July through September 2006. I am also providing in this cover letter additional information in order to keep you fully and currently informed of NRC's regulatory activities.

During the oversight hearing on March 9, 2006, the Commission informed you that we were developing a team to review the inadvertent tritium releases that occurred at some U.S. commercial nuclear power plants. On October 4, 2006, the NRC issued the findings of the task force of experts from throughout the agency, as well as the State of Illinois, concerning inadvertent, unmonitored releases of radioactive liquids containing primarily tritium from U.S. commercial nuclear power plants. The task force found no impact on public health from these events. The task force produced 26 recommendations that apply to the NRC, nuclear power plant operators, or both. For instance, the task force recommended updating NRC regulations on monitoring radioactive releases and the environment in and around a plant to take into account state-of-the-art technology and practices. The task force also recommended that nuclear power plant operators work with local and State agencies to report voluntarily information on radioactive liquid releases that otherwise fall below NRC reporting requirements. Each of the NRC's program offices will address the recommendations relevant to their mission. In addition, the nuclear industry has responded with an "Industry Initiative on Groundwater Protection" requiring that each nuclear power plant site have a site-specific plan to improve management of inadvertent radiological releases to the groundwater; prevent migration of licensed radioactive materials off site; quantify the impacts on decommissioning; and enhance the trust and confidence of the local communities, the States, and the NRC.

In the NRC's 2004 Mid-Cycle Assessment letters for Salem and Hope Creek, the NRC notified PSEG Nuclear, LLC, that it had identified a substantive cross-cutting issue, an issue that affects multiple areas of plant performance, in the area of Safety Conscious Work Environment. The finding was based on numerous indications of weaknesses in corrective actions and management efforts to establish an environment in which employees were consistently willing to raise safety concerns. That finding led the NRC to devote additional inspection resources to the facility. Recent inspections and assessment have confirmed that substantial, sustainable progress has been achieved as documented in the NRC inspection report dated July 31, 2006, and the 2006 Mid-Cycle Assessment letter dated August 31, 2006. Therefore, the plants will now receive oversight that consists of the standard baseline inspections. The NRC held a public meeting on September 14, 2006, at a location close to the sites to provide the local public the opportunity to engage the staff about the numerous inspections performed and the kinds of information gathered before the NRC arrived at its decision.

The NRC approved the Tennessee Valley Authority's (TVA) request to terminate the construction permits for the unfinished Bellefonte Nuclear Plant, Units 1 and 2, on September 15, 2006. TVA requested the termination of the construction permits in a letter dated April 6, 2006. The NRC granted the construction permits for Bellefonte, a dual-unit pressurized water reactor plant, in 1974. By 1988, when construction was deferred, Unit 1 was approximately 88 percent complete, and Unit 2 was approximately 58 percent complete. The Bellefonte site is located on approximately 1,600 acres adjacent to the Tennessee River near Hollywood, Alabama. On July 17, 2006, NuStart Energy informed the NRC that they intend to submit a Combined License (COL) application to build two Westinghouse designed AP1000 reactors at the Bellefonte site.

On October 17, 2006, the NRC published a supplement to its proposed rule entitled "Licenses, Certifications, and Approvals for Nuclear Power Plants," in the *Federal Register* (71FR61330). The proposed supplement would amend the NRC's rulemaking to revise Part 52 of the agency's regulations regarding the issuance of limited work authorizations (LWA), which allow limited construction activities at nuclear power plants to begin before a construction permit or COL is issued. This supplemental proposed rule would revise the definition of "construction" that requires either an LWA, a Part 50 construction permit, or a COL. Under the proposed rule, no LWA would be required for activities such as site clearing, transmission line routing, road building, and construction of buildings not required to be described in safety analysis reports for the nuclear power plant. An LWA, construction permit, or COL would be required, however, for activities including excavation, pile-driving, and foundation work for any structure, system, or component required to be described in a safety analysis report. The proposed rule would also allow LWA applications to be submitted before submission of an application for a construction permit or COL. For a site where a construction permit was issued but no plant was built, the LWA application could reference an existing environmental impact statement for the site, taking into account the possible need for updated information. These changes would enhance the efficiency of the NRC licensing and approval process for new nuclear reactors. The NRC held a public meeting to engage stakeholders on the supplement on November 1, 2006. The public comment period on the supplement closed on November 16, 2006.

The NRC issued the Final Environmental Impact Statement (EIS) for the Early Site Permit (ESP) for the Clinton site on July 20, 2006, and the supplemental draft EIS and supplemental Final Safety Evaluation Report (FSER) for the North Anna site ESP on July 6 and August 15, 2006, respectively. Subsequently, the supplemental FSER for the North Anna site ESP was issued as Supplement 1 to NUREG-1835, "Safety Evaluation Report for North Anna ESP Site," on November 13, 2006, which was ahead of the scheduled issuance date. Publication of the FSER as a NUREG is a major milestone in the ESP licensing process. The ESP process allows an applicant to address site-related issues, such as environmental impacts, for possible future construction and operation of a nuclear power plant at the site. The NRC's formal review addresses site safety, environmental protection, and emergency planning issues. Following the issuance of an FSER and an EIS, the application is referred to the Atomic Safety and Licensing Board (ASLB) for a mandatory hearing. The ASLB held the Clinton site ESP hearing on November 7 and 8, 2006, and has scheduled the hearing for the Grand Gulf site in late November 2006. This is the last step in the process before final review by the Commission. If an application is approved, a licensee could reference the permit at any time for up to 20 years in an application to the NRC for approval to begin construction of one or more nuclear reactors at the site. On August 15, 2006, the NRC received a new ESP application from the Southern Nuclear Operating Company for the Vogtle Electric Generating Plant site, located near Waynesboro, Georgia.

On October 13, 2006, NRC staff met with U.S. Department of Energy (DOE) representatives to discuss the status of the Next Generation Nuclear Plant (NGNP) Project Memorandum of Understanding (MOU) and the path forward for developing a joint licensing strategy for the NGNP. The NGNP MOU was signed on October 12, 2006, and once funding is provided, NRC and DOE will begin development of the NGNP joint licensing strategy.

In the area of new reactor licensing activities, the industry continues to express interest in the construction of new reactors. The NRC staff expects to receive a significant number of new reactor COL applications over the next several years and is developing the infrastructure necessary to support the application reviews. At this time, the staff has received letters of intent from potential applicants for a total of 20 COLs for at least 29 nuclear units. During this quarter, Exelon notified the NRC that it intends to apply for a COL for an unspecified location in late 2008.

With the increase in staff needed to support the new licensing activities, NRC headquarters has exceeded the capacity of its White Flint Complex in Rockville, Maryland. Operational efficiency at headquarters will be essential to the success of the design-centered approach for licensing new reactors. This includes a contiguous organizational structure and availability of conference rooms for frequent meetings with applicants, vendors, and support contractors. In October 2006, the NRC relocated the NRC Professional Development Center (PDC) to an off-site location, freeing up some space in the headquarters complex that will be converted into workstations. However, the space recovered by relocating the PDC is not sufficient to meet our space requirements. NRC is continuing to work with the General Services Administration and the Office of Management and Budget to acquire permanent new space that would be in close proximity to the White Flint Complex.

The NRC completed two significant activities in this quarter in the area of nuclear materials licensing. On September 11, 2006, the NRC issued its Safety Evaluation Report for the American Centrifuge Plant, a gas centrifuge enrichment plant, to USEC Inc. (USEC). USEC plans to build the American Centrifuge Plant in Piketon, Ohio. USEC submitted its license application for the American Centrifuge Plant on August 23, 2004. The Safety Evaluation Report documents the NRC staff's review and safety and safeguards evaluation of USEC's application. The report concludes that the plant, as described, would operate safely and would not pose an undue risk to the health and safety of workers or the public. The review evaluates the facility's potential adverse impacts on worker and public health and safety under both normal operating and accident conditions. The review also considers physical protection of special nuclear material and classified matter, material control and accounting of special nuclear material, as well as the management organization, administrative programs, and financial qualifications provided to ensure the facility's safe design and operation. The staff previously issued an Environmental Impact Statement (NUREG-1834) in April 2006, which concluded that there would be no significant adverse impacts that would preclude granting a license. It is anticipated that the license review process will be completed in February 2007, following an adjudicatory hearing by the ASLB.

On September 19, 2006, NRC terminated the Heritage Minerals Incorporated (HMI) source material license and released the NRC-licensed areas of the site for unrestricted use. The HMI site is a former minerals mining and processing facility on a 7,000 acre site in Manchester Township, New Jersey, although NRC-licensed areas comprised less than one acre. The facility was used in the 1970s and 1980s for the mechanical processing of dredged native sand, which also contained natural uranium and thorium that were later concentrated in the process waste tailings. These waste tailings contained concentrations of uranium and thorium requiring NRC regulation. In March 2005, HMI completed decommissioning activities and requested termination of its NRC license. The decommissioning activities included disposal of the mill buildings and equipment at a licensed low-level waste disposal facility, and transfer of the waste tailings to an authorized recipient. The Commission approved the license termination after the NRC staff completed a detailed review of HMI's final site survey, conducted confirmatory radiological surveys, and performed an independent dose assessment. Prior to issuing the termination, the NRC held a public meeting in Manchester Township.

Please contact me for any additional information you may need.

Sincerely,

/RA/

Dale E. Klein

Enclosure:  
Quarterly Status Report on the Licensing  
Activities and Regulatory Duties of the  
U.S. NRC, July - September 2006

cc: Senator Thomas R. Carper

Similar letter sent to:

The Honorable George V. Voinovich  
Chairman, Subcommittee on Clean Air,  
Climate Change, and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator Thomas R. Carper

The Honorable Ralph M. Hall  
Chairman, Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Rick Boucher

The Honorable Pete V. Domenici  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510  
cc: Senator Harry Reid

The Honorable David L. Hobson  
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cc: Representative Peter J. Visclosky

The Honorable James M. Inhofe  
Chairman, Committee on Environment  
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cc: Senator James Jeffords

The Honorable Joe Barton  
Chairman, Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative John D. Dingell

QUARTERLY STATUS REPORT ON THE  
LICENSING ACTIVITIES AND REGULATORY DUTIES OF THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

**JULY - SEPTEMBER 2006**

Enclosure

## TABLE OF CONTENTS<sup>1</sup>

I	Implementing Risk-Informed Regulations . . . . .	2
II	Reactor Oversight Process . . . . .	2
III	Status of Issues in the Reactor Generic Issues Program . . . . .	3
IV	Licensing Actions and Other Licensing Tasks . . . . .	4
V	Status of License Renewal Activities . . . . .	9
VI	Enforcement Process and Summary of Reactor Enforcement by Region . . . . .	10
VII	Power Reactor Security Regulations . . . . .	15
VIII	Power Upgrades . . . . .	17
IX	New Reactor Licensing . . . . .	17

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<sup>1</sup>Note: The period of performance covered by this report includes activities occurring between the first day of July and last day of September 2006. The transmittal letter to Congress accompanying this report may provide more recent information in order to keep Congress fully and currently informed of NRC's licensing and regulatory activities.

## **I Implementing Risk-Informed Regulations**

The U.S. Nuclear Regulatory Commission (NRC) continues to make significant progress toward risk-informing its regulations for nuclear power reactors. On November 22, 2004, the NRC published a final rule, 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors." This risk-informed regulation establishes an alternate set of requirements incorporating up-to-date analytic tools and risk insights to enhance plant safety by enabling nuclear power plant licensees to determine more precisely the safety significance of reactor systems, structures, and components and maintain these structures, systems, and components in a manner commensurate with their safety significance. To ensure the new regulation is properly implemented, the NRC published Revision 1 to Regulatory Guide 1.201, "Guidelines for Categorizing Structures, Systems and Components in Nuclear Power Plants According to Their Safety Significance," in May 2006.

Risk-informed requirements for emergency core cooling systems are also being developed. The NRC published a proposed rule for risk-informing these requirements on November 7, 2005. The NRC is resolving open issues related to this rulemaking as it develops the final rule.

Broad efforts to transform the overall deterministic structure of NRC regulations into a new format based on the use of risk information are also in progress. Since 2003, the NRC has been working on a regulatory structure for new plant licensing that would result in risk-informed, technology-neutral regulations for licensing of future nuclear power reactor designs. The NRC is also investigating whether this risk-informed, technology-neutral regulatory structure could apply or be available to risk-inform the current regulations on light water reactors in 10 CFR Part 50.

In March 2006, the Commission approved the NRC staff's recommendation to issue an Advanced Notice of Proposed Rulemaking (ANPR) on approaches for making technical requirements for power reactors risk-informed, performance-based, and technology neutral (10 CFR Part 53). The ANPR was published in the *Federal Register* on May 4, 2006, (71 FR 26267) with a public comment period open until December 2006. The staff held a public meeting June 15, 2006, to discuss with stakeholders the questions on the topics in the ANPR and to inform stakeholders of the changes made to the technology neutral framework document. On September 14-15, 2006, NRC staff held a public workshop on the ANPR.

## **II Reactor Oversight Process**

The NRC continues to implement the Reactor Oversight Process (ROP) at all nuclear power plants. The NRC continues to meet with interested stakeholders on a periodic basis to collect feedback on the effectiveness of the process and to consider feedback for future ROP refinements. Recent activities include the following:

- The staff hosted monthly ROP public meetings on July 19, August 16, and September 14, 2006. The meeting attendees discussed ROP Mitigating Systems Performance Index implementation, the integration of safety culture into the ROP, performance indicator (PI) improvements, and open/new



frequently asked questions on the PIs, and other inspection program issues, such as a proposed revision to the definition of licensee performance deficiency.

- NRC staff participated at the Region II and IV Utility Group safety culture workshops in September 2006. The workshops covered the recent ROP safety culture changes and how the operating reactor licensees will be affected by those changes.
- During the week of August 2, 2006, headquarters' staff participated in the NRC regional offices' mid-cycle review meetings. The licensee's performance at each reactor site was assessed by utilizing the most recent quarterly performance indicators and inspection findings compiled over the previous twelve months. The output of these meetings was a mid-cycle letter that communicates to the licensee which column of the Action Matrix the licensee is in during the assessment period, any substantive cross-cutting issues, and the inspection plan consisting of approximately 18 months of activities.
- On July 13-14, the staff provided a briefing on the ROP to managers of Japanese Nuclear Energy Safety Organization, members of Japan Society of Mechanical Engineers, and Japanese academia. The group visited the U.S. as part of their ongoing study of foreign nuclear regulatory processes to improve Japanese regulations related to maintenance and inspection of nuclear power plants.
- On July 24, 2006, the staff briefed senior staff members of the United Kingdom's Health and Safety Executive/Nuclear Installation Inspectorate on the ROP. The staff provided information on improvements made to the ROP to address lessons learned from the 2002 Davis-Besse boric acid event and how the ROP was improved to enhance the treatment of cross-cutting and safety culture issues.
- On September 18 and 19, 2006, NRC staff provided an overview of the ROP to staff members of the Consejo de Seguridad Nuclear, the Spanish regulatory agency.

### **III Status of Issues in the Reactor Generic Issues Program**

During the reporting period, the staff has achieved progress in resolving the following generic issues (GI):

#### Generic Issue 191, "Assessment of Debris Accumulation on PWR Sump Performance"

The NRC completed multiple research activities in support of resolving this generic issue. The activities included a thermodynamic simulation of containment sump pool chemical constituents to predict the chemical reactions/byproducts in the pools and research on the pressure loss across containment sump screens due to fiber insulation, chemical precipitates, and coating debris. Additionally, the staff completed a literature

survey to summarize the knowledge base to date on the potential contribution of material leached from containment coatings to the chemical products formed in the containment sump pool after a loss-of-coolant accident.

#### Generic Issue 196, "Boral Degradation"

The NRC staff completed the technical assessment of GI-196 in August 2006 and submitted it to the Advisory Committee on Nuclear Waste (ACNW) for review. The objective of GI-196 is to determine the safety/criticality implications of Boral blistering in spent fuel dry storage casks, in the event of water intrusion. Boral has been widely used as a neutron absorber for dry cask storage of spent nuclear fuel, and several instances of Boral blistering and deformation have been reported. The blisters are usually located at the site of corrosion pits or impurities, and the root cause of blistering has been attributed to escaping hydrogen and steam. The staff proposes to close the issue with no new requirements for licensees, and is expected to discuss its findings with the ACNW in December 2006.

All other GIs continue to be on track in accordance with the schedules previously established.

#### **IV Licensing Actions and Other Licensing Tasks**

Operating power reactor licensing actions are defined as orders, license amendments, exemptions from regulations, relief from inspection or surveillance requirements, topical reports submitted on a plant-specific basis, notices of enforcement discretion, or other actions requiring NRC review and approval before they can be implemented by licensees. The Fiscal Year (FY) 2006 NRC Performance Plan incorporates two output measures related to licensing actions -- number of licensing actions completed per year and age of the licensing action inventory.

Other licensing tasks for operating power reactors are defined as licensee responses to NRC requests for information through generic letters or bulletins, NRC responses to 2.206 petitions, NRC review of generic topical reports, responses by the Office of Nuclear Reactor Regulation to regional office requests for assistance, NRC review of licensee 10 CFR 50.59 analyses and final safety analysis report updates, or other licensee requests not requiring NRC review and approval before they can be implemented by licensees. The FY 2006 NRC Performance Plan incorporates one output measure related to other licensing tasks -- the number of other licensing tasks completed.

The actual FY 2004 and FY 2005 results, the FY 2006 goals, and the actual FY 2006 results for the three NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the following table.

PERFORMANCE PLAN				
Output Measure	FY 2004 Actual	FY 2005 Actual	FY 2006 Goals	FY 2006 Actual (thru 09/30/2006)
Licensing actions completed/year	1741	1609	$\geq 1500$	1659
Age of licensing action inventory	91% $\leq$ 1 year; and 100% $\leq$ 2 years	92.6% $\leq$ 1 year; and 99.9% $\leq$ 2 years	96% $\leq$ 1 year and 100% $\leq$ 2 years old	97.8% $\leq$ 1 year; 99.9% $\leq$ 2 years <sup>2</sup>
Other licensing tasks completed/year	671	715	$\geq 500$	676

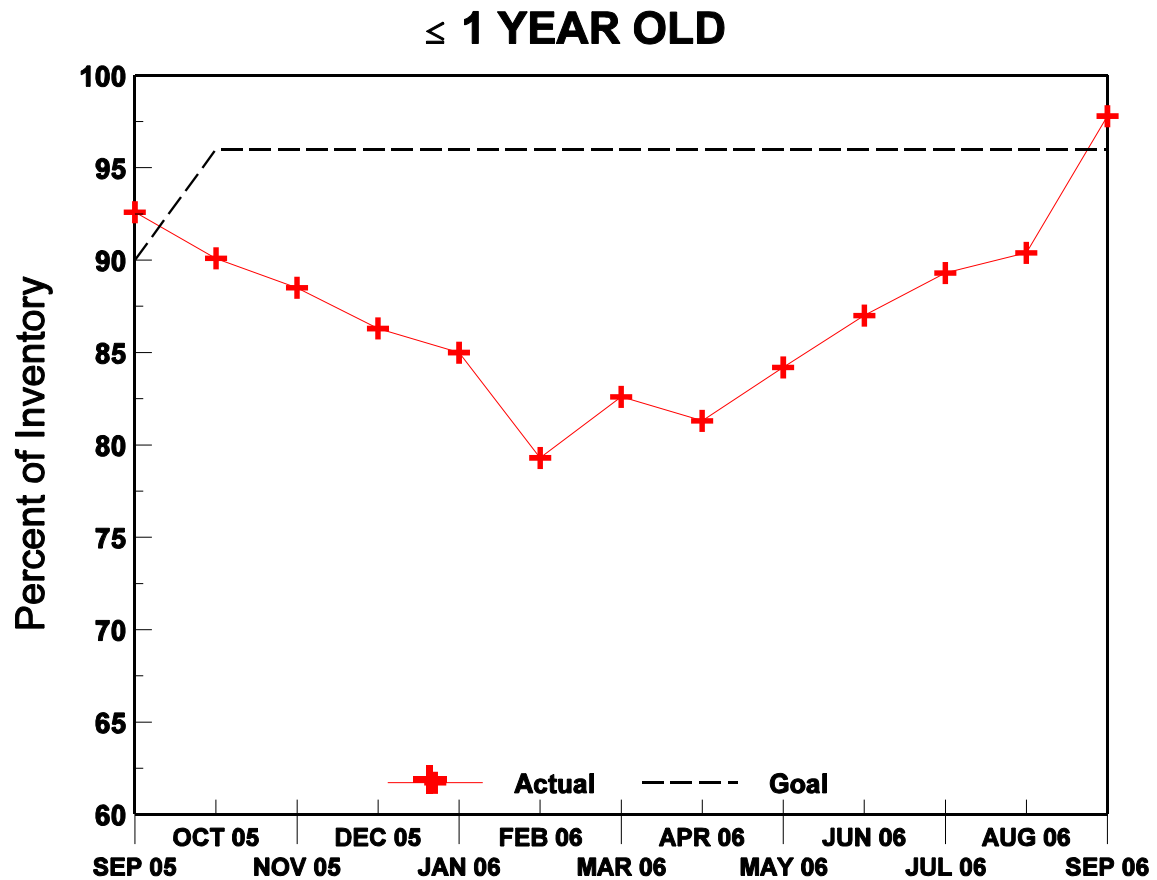
The charts on the following pages show NRC's FY 2006 trends for the three operating power reactor licensing action and other licensing task output measure goals:

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<sup>2</sup>The licensing action inventory age goal of 100%  $\leq$  2 years old was not met because of the complexity of the staff's review of Columbia Generating Station's Alternate Source Term amendment request. Technical issues associated with the review, including continued efforts to resolve differing staff opinions, allowed this licensing action to exceed 2 years of age on 9/30/2006. The staff intends to devote resources to resolve these issues and complete the review by 10/30/2006.

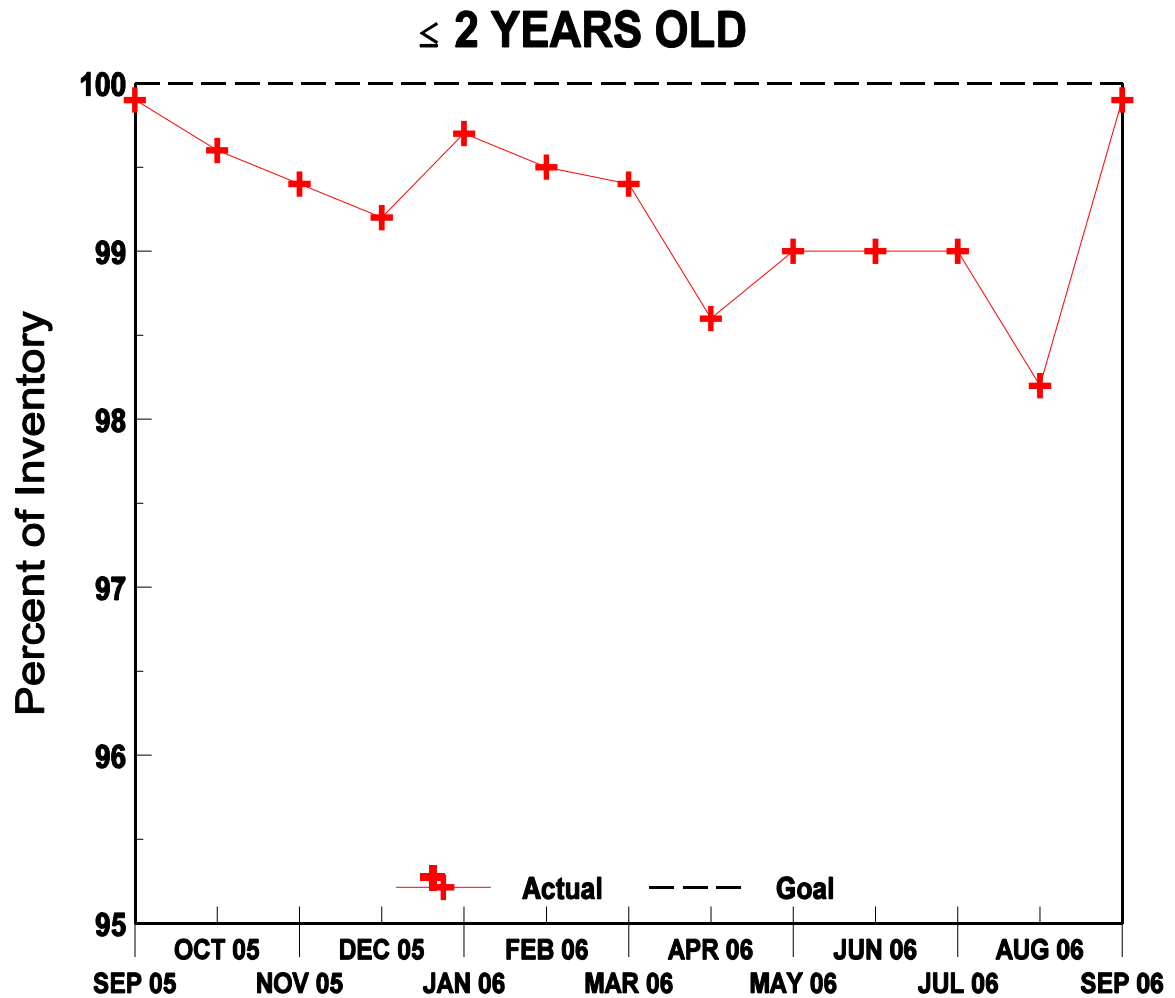
# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



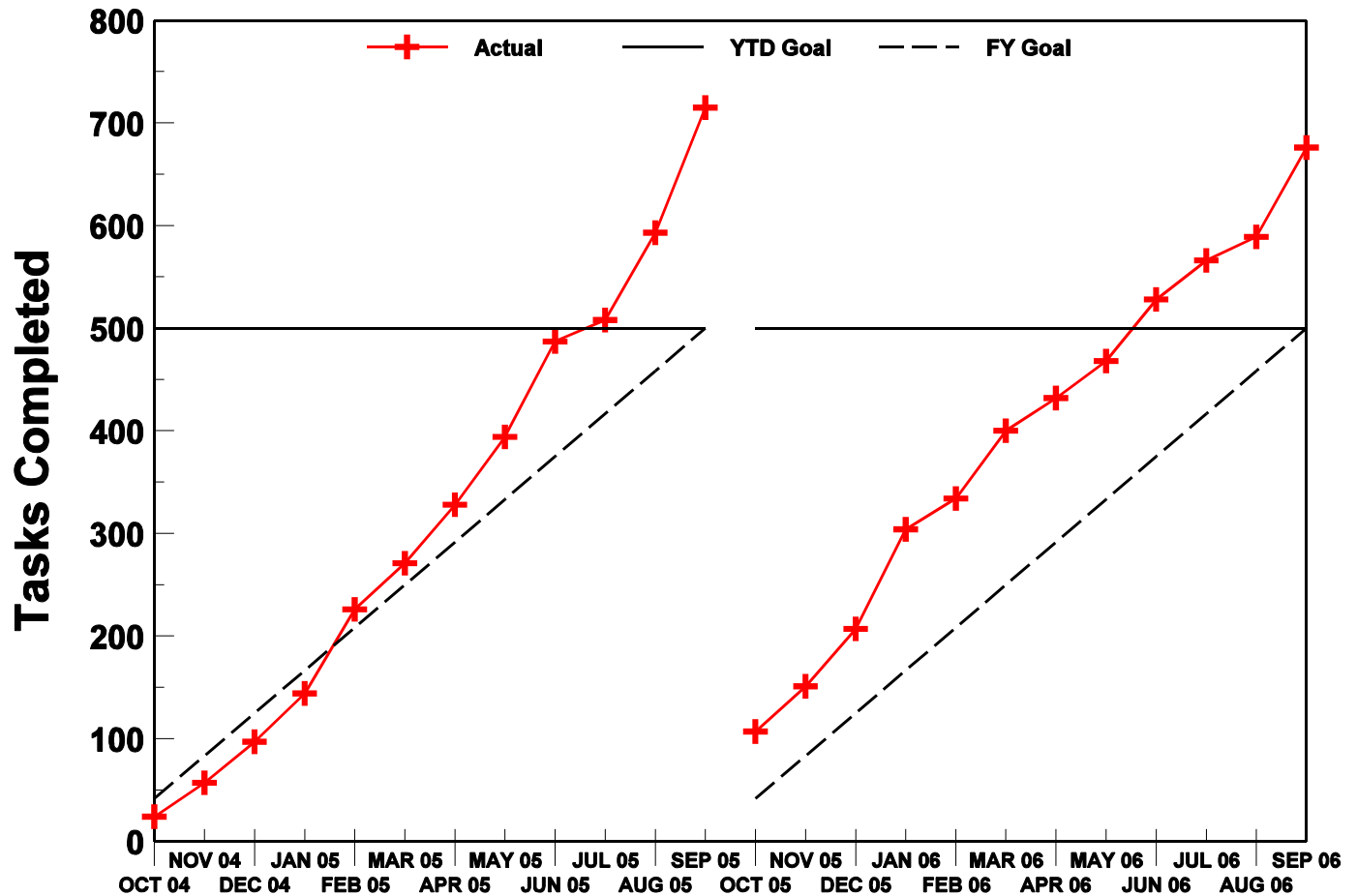
# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



# Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Other Licensing Tasks



## **V      Status of License Renewal Activities**

The NRC has completed the review of license renewal applications for 44 of the 104 units licensed to operate.

### Nine Mile Point, Units 1 and 2, License Renewal Application

The staff issued the final supplemental environmental impact statement (SEIS) on May 19, 2006, and the Safety Evaluation Report (SER) on June 1, 2006. The staff briefed the ACRS on July 12, 2006, and anticipates a decision on the renewed licenses in October 2006.

### Monticello License Renewal Application

The staff issued the SER on July 28, 2006, and the Final SEIS was issued on September 19, 2006. The staff briefed the ACRS on September 7, 2006, and anticipates a decision on the renewed license in November 2006.

### Palisades License Renewal Application

The draft SEIS was issued in February 2006, and the draft SER, identifying remaining open items, was issued on June 1, 2006. A request for hearing was received in response to the NRC's notice of opportunity for hearing, and an Atomic Safety and Licensing Board (ASLB) was established. The ASLB determined that the petitioner did not submit an admissible contention and terminated the proceeding. The petitioner has appealed the ASLB's decision to the Commission. On June 23, 2006, the Commission affirmed the ASLB's decision. The staff issued the SER on September 28, 2006. The Final SEIS is scheduled to be issued in October 2006, and a briefing of the ACRS is scheduled for November 2006.

### Oyster Creek License Renewal Application

The Oyster Creek license renewal application is currently under review. The draft SEIS was issued on June 8, 2006, and the draft SER, with open items, was issued on August 18, 2006. A request for hearing was received in response to the NRC's notice of opportunity for hearing, and an ASLB was established.

### Pilgrim License Renewal Application

On January 27, 2006, the NRC received an application for renewal of the operating license for Pilgrim Nuclear Power Station. The staff has completed its acceptance review and has found the application acceptable for docketing and review. The staff received two contentions in response to the publication of opportunity for hearing, one from a group called Pilgrim Watch, and another from the Attorney General, State of Massachusetts.

### Vermont Yankee License Renewal Application

On January 27, 2006, the NRC received an application for renewal of the operating license for Vermont Yankee Nuclear Power Station. The staff has completed its acceptance review and has found the application acceptable for docketing and review. The staff received contentions in response to the publication of opportunity for hearing from the New England Coalition, the State of Vermont, the State of Massachusetts, and the Town of Marlboro, Massachusetts. On September 22, 2006, the ASLB admitted several contentions, and the hearing process is proceeding.

### James A. FitzPatrick License Renewal Application

On August 1, 2006, the NRC received an application for renewal of the operating license for the James A. FitzPatrick Nuclear Power Station. The staff has completed its acceptance review and has found the application acceptable for docketing and review. Until it is determined whether a hearing will be conducted, a 30-month review schedule has been established with a final decision on issuance of the renewed license scheduled for January 2009.

### Susquehanna License Renewal Application

On September 13, 2006, the NRC received an application for renewal of the operating license for Susquehanna Steam Electric Station. The staff is currently conducting an acceptance review to determine if the application is acceptable for docketing and review.

### Wolf Creek License Renewal Application

On October 4, 2006, the NRC received an application for renewal of the operating license for Wolf Creek Generating Station. The staff is currently conducting an acceptance review to determine if the application is acceptable for docketing and review.

## **VI Enforcement Process and Summary of Reactor Enforcement by Region**

### **Reactor Enforcement by Region**

The reactor enforcement statistics below are arranged by Region, most recent calendar quarter, fiscal year to date, and two previous fiscal years for comparison purposes. The statistics are also depicted in separate tables for the non-escalated and escalated reactor enforcement data as well as separate tables for the escalated enforcement data associated with traditional enforcement and the reactor oversight process. These tables are then followed by brief descriptions of the escalated reactor enforcement actions associated with both traditional enforcement and the reactor oversight process (as well as any other significant actions) taken during the applicable calendar quarter.



NON-ESCALATED REACTOR ENFORCEMENT ACTIONS						
		Region I	Region II	Region III	Region IV	TOTAL
Cited Severity Level IV or GREEN	Quarter 4 FY 06	3	0	0	2	5
	FY 06 YTD Total	10	0	1	3	14
	FY 05 Total	6	0	4	0	10
	FY 04 Total	1	0	2	3	6
Non-Cited Severity Level IV or GREEN	Quarter 4 FY 06	48	44	79	70	241
	FY 06 YTD Total	224 <sup>3</sup>	154	256	259	893
	FY 05 Total	239	197	300	282	1018
	FY 04 Total	271	175	290	301	1037
<b>TOTAL Cited and Non-Cited Severity Level IV or GREEN</b>	Quarter 4 FY 06	51	44	79	72	246
	FY 06 YTD Total	234	154	257	262	907
	FY 05 Total	245	197	304	282	1028
	FY 04 Total	272	175	292	304	1043

**NOTE:** The non-escalated enforcement data above reflects the cited and non-cited violations either categorized at Severity Level IV or associated with GREEN findings during the referenced time periods. The numbers of cited violations are based on enforcement action tracking system (EATS) data that may be subject to minor changes following verification. The monthly totals generally lag by 30 days due to inspection report and enforcement development. GREEN findings that do not have associated violations are not included in this data.

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<sup>3</sup> The "Non-Cited" and "TOTAL Cited and Non-Cited" FY 06 YTD Totals for Region I were increased by one in order to include one non-cited violation from an inspection report that was not counted during June 2006.

ESCALATED REACTOR ENFORCEMENT ACTIONS ASSOCIATED WITH TRADITIONAL ENFORCEMENT						
		Region I	Region II	Region III	Region IV	TOTAL
Severity Level I	Quarter 4 FY 06	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	0	0	2	0	2
	FY 04 Total	0	0	0	0	0
Severity Level II	Quarter 4 FY 06	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	0	1	2	0	3
	FY 04 Total	0	1	0	0	1
Severity Level III	Quarter 4 FY 06	1 <sup>4</sup>	0	1	1	3
	FY 06 YTD Total	2	1	7	1	11
	FY 05 Total	2	1	3	2	8
	FY 04 Total	1	2	5	0	8
<b>TOTAL Violations Cited at Severity Level I, II, or III</b>	Quarter 4 FY 06	1	0	1	1	3
	FY 06 YTD Total	2	1	7	1	11
	FY 05 Total	2	2	7	2	13
	FY 04 Total	1	3	5	0	9

NOTE: The escalated enforcement data above reflects the Severity Level I, II, or III violations or problems cited during the referenced time periods.

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<sup>4</sup> One Severity Level III violation in Region I will not be described because it is related to security.

<b>ESCALATED REACTOR ENFORCEMENT ACTIONS ASSOCIATED WITH THE REACTOR OVERSIGHT PROCESS</b>						
		Region I	Region II	Region III	Region IV	TOTAL
Violations Related to RED Findings	Quarter 4 FY 06	0	0	0	0	0
	FY 06 YTD Total	0	0	0	0	0
	FY 05 Total	0	0	3	0	3
	FY 04 Total	0	0	1	0	1
Violations Related to YELLOW Findings	Quarter 4 FY 06	0	0	0	0	0
	FY 06 YTD Total	0	0	1	0	1
	FY 05 Total	0	0	0	1	1
	FY 04 Total	0	0	3	0	3
Violations Related to WHITE Findings	Quarter 4 FY 06	1 <sup>5</sup>	3 <sup>6</sup>	0	1 <sup>7</sup>	5
	FY 06 YTD Total	3	6	3	2	14
	FY 05 Total	5	5	5	1	16
	FY 04 Total	3	4	3	6	16
<b>TOTAL Related to RED, YELLOW, or WHITE Findings</b>	Quarter 4 FY 06	1	3	0	1	5
	FY 06 YTD Total	3	6	4	2	15
	FY 05 Total	5	5	8	2	20
	FY 04 Total	3	4	7	6	20

**NOTE:** The escalated enforcement data above reflects the violations or problems cited during the referenced time periods which were associated with either RED, YELLOW, or WHITE findings. RED, YELLOW, or WHITE findings that do not have associated violations are not included in this data.

<sup>5</sup> One violation associated with a WHITE significance determination process finding in Region I will not be described because it is related to security.

<sup>6</sup> One violation associated with a WHITE significance determination process finding in Region II will not be described because it is related to security.

<sup>7</sup> One violation associated with a WHITE significance determination process finding in Region IV will not be described because it is related to security.

**Description of Escalated Reactor Enforcement Actions Associated with Both Traditional Enforcement and the Reactor Oversight Process (as Well as Any Other Significant Actions) Taken During the Fourth Quarter of Fiscal Year 2006**

Virginia Electric and Power Company (Surry Power Station) EA-06-071

On July 25, 2006, a Notice of Violation was issued for a violation associated with a White Significance Determination Process (SDP) finding involving the failure of the licensee's full-scale exercise critique to identify a weakness associated with a risk-significant planning standard, which was determined to be a drill/exercise performance - performance indicator opportunity failure. The violation was cited against emergency preparedness planning standards 10 CFR 50.47(b)(4) and 10 CFR 50.47(b)(14) as well as the requirements of 10 CFR Part 50, Appendix E, Section IV.F.2.g, because the licensee failed to identify the above weakness during its emergency exercise critique.

Southern California Edison Company (San Onofre Nuclear Generating Station Unit 1) EA-06-149, NMED 060138

On September 13, 2006, a Notice of Violation was issued for a Severity Level III violation involving a transportation event in which a shipment of low specific activity liquid radioactive waste from San Onofre Unit 1 leaked from its transport container in Utah. The actual safety consequences of this event were low because the release was limited to a small quantity of low specific activity material that was discovered and removed shortly after the release occurred. Consequently, there was no significant risk of exposure to any member of the public. The significance of the violations lies in the fact that the licensee did not take the required actions to ensure there would be no leakage of the radioactive contents from the tanker. The violations involved failures to ensure by examination or appropriate tests that the top discharge valve of the tanker was properly closed and sealed; load the tanker to the required fill density; and maintain, fill, and close the tanker so that, under conditions normally incident to transportation, there would be no identifiable release of materials to the environment. In recognition of the absence of previous escalated enforcement action and the licensee's prompt and comprehensive correction of violations, a civil penalty was not proposed.

Southern Nuclear Operating Company, Inc. (Vogtle Electric Generating Plant) EA-06-132

On September 18, 2006, a Notice of Violation was issued for a violation associated with a WHITE SDP finding involving the failure of the licensee's full-scale exercise critique to identify a weakness associated with a risk-significant planning standard, which was determined to be a drill/exercise performance - performance indicator opportunity failure. The violation cited emergency preparedness planning standards 10 CFR 50.47(b)(14) and 10 CFR 50.47(b)(4) as well as the requirements of 10 CFR Part 50, Appendix E, Section IV.F.2.g, because the licensee failed to identify weak or deficient areas during its formal critique of an emergency preparedness exercise conducted on March 22, 2006. Specifically, the exercise critique failed to identify that the Emergency Director's Site Area Emergency event classification was an incorrect classification.

On September 28, 2006, a Notice of Violation was issued for a Severity Level III violation involving a violation of 10 CFR 50.9, "Completeness and Accuracy of Information," associated with information that the licensee provided to the NRC on July 21, 2005, in two applications for reactor operator licenses at the Prairie Island facility. Specifically, the facility licensee provided information on each application indicating that the applicant performed reactivity control manipulations on the Prairie Island plant simulator on January 18, 2005, and that the simulator had a current core model that replicated the plant as verified by performance testing. However, the licensee failed to retain records for simulator performance testing associated with reactivity control manipulations.

## **VII Power Reactor Security Regulations**

In response to the terrorist attacks on September 11, 2001, the NRC and the nuclear industry have taken many actions to ensure security at nuclear power plants. A series of Advisories, Orders, and Regulatory Issue Summaries have been and, as needed, will continue to be issued to strengthen further the security of NRC-licensed facilities and control of nuclear materials.

The NRC is codifying through rulemaking the actions taken to enhance security of NRC power reactor licensees. On March 29, 2006, NRC held a public meeting to receive comments on the proposed rule on fitness-for-duty (10 CFR Part 26), which will update the drug and alcohol testing provisions and establish enforceable requirements of the management of worker fatigue. In response to public comments, NRC is preparing revisions to the proposed rule in those two areas. The public comment period for a proposed rule on the Design Basis Threat (DBT) (10 CFR 73.1) ended February 27, 2006. The DBT rulemaking specifies the adversary characteristics that nuclear power plants and certain related facilities must be able to defend against with high assurance and would amend the NRC's regulations to include, among other things, the supplemental security requirements previously imposed by the Commission's DBT Orders of April 29, 2003. This rulemaking also addresses specific threat attributes identified in Section 651 of the Energy Policy Act of 2005. Resolution of public comments on the proposed DBT rule is in process. A comprehensive proposed rule on Requirements for Physical Protection (10 CFR 73.55) incorporating safety/security interface requirements is scheduled to be published for public comment in October 2006.

The NRC is now conducting full force-on-force exercises at each site on a normal, three-year cycle using the expanded adversary characteristics that were developed as a result of the increased post-9/11 threat. The purpose of the force-on-force exercises is to assess and improve, as necessary, performance of defensive strategies at licensed facilities. On May 1, 2006, NRC issued interim guidance on making cover letters for security-related inspection reports, including force-on-force inspections, publicly available. Final guidance will be incorporated into IMC-0612, "Reactor Inspection Reports." On July 20, 2006, NRC conducted a public meeting to obtain feedback on proposed changes to the NRC Inspection Procedure on the emergency preparedness portion of the Force-on-Force Exercise Evaluation. The proposed changes are based on industry voluntary implementation of security-initiated emergency preparedness drills at each site over a 3-year period as described in Attachment 5 to an Industry White Paper on "Enhancements to Emergency Preparedness Programs for Hostile Actions."

The NRC continues to support the U.S. Department of Homeland Security (DHS)/Homeland Security Council (HSC) initiative to enhance integrated response planning for power reactor facilities. The staff is continuing to work with HSC, DHS, the Federal Bureau of Investigation, and others to develop plans to address recommended actions. Working closely with licensees and DHS, the staff also developed Emergency Action Levels (EAL) specifically for events involving credible imminent threats. An emergency preparedness, industry-identified, frequently-asked questions (FAQ) process was implemented in September 2005, and in January 2006, NRC held the initial public meeting with industry representatives to discuss FAQs and proposed resolutions dealing with EAL guidance. On May 4, 2006, NRC conducted a public meeting to discuss the EAL FAQs submitted by the Nuclear Energy Institute and the industry, and NRC EAL guidance endorsed by Regulatory Guide 1.101. Earlier this year, NRC issued the summary and analysis of more than 700 comments received during the August 31-September 1, 2005 emergency preparedness public meeting held to obtain stakeholder input to enhance emergency preparedness regulations and guidance. On July 19, 2006, NRC conducted a public meeting with the Nuclear Energy Institute and the industry on the review of emergency preparedness regulation and guidance for commercial nuclear power plants. Topics of discussion included security-based emergency action levels, security-based drill and exercise scenarios, off-site protective action recommendations, and alert and notification system. This was a followup to the August 31, 2005 meeting. NRC conducted similar meetings with State and local governments on March 27, 2006, and with non-government organizations on May 19, 2006.

On September 14, 2006, the NRC staff held a facilitated public meeting on security issues at NRC headquarters. Representatives from industry as well as from a number of non-governmental organizations were present. The status of NRC security operations, security policy initiatives, and other related security topics were discussed. The presentations and subsequent dialogue were recorded and will be transcribed and made publicly available on the NRC's Web site.

From August 28 through September 13, 2006, NRC conducted a second round of imminent threat walk-throughs with a sample of 12 licensees (three per region) to identify any additional necessary enhancements since last year's drills. Safeguards Advisory 05-02 (January 26, 2005) provides an outline of considerations for airborne threats, and Supplement One to Regulatory Issue Summary 2004-15 (May 26, 2006) conveys lessons learned from the 2005 imminent threat walk-throughs to the industry.

The NRC has completed the site-specific spent fuel pool assessments that were begun on July 5, 2005, and issued the last of the assessment reports on December 16, 2005. NRC conducted these assessments to identify additional mitigation strategies to enhance the spent fuel pool cooling safety function under severe circumstances challenging the functional capabilities of the plant. In January 2006, the industry responded with generic strategies that could be used at all plants. After evaluating the safety benefit of the proposed strategies, the NRC accepted the strategies in June 2006, contingent upon licensees providing adequate means to implement them. In addition, the NRC has completed structural analyses of two additional spent fuel pools to provide further insight into spent fuel pool structural safety margin.

In a series of recent meetings, the NRC staff has discussed various new reactor security topics with the industry's New Plants Task Force (NPTF). On July 25, 2006, the staff conducted both a public and a closed meeting with NPTF and industry representatives at NRC headquarters.

During the public meeting, the draft proposed rule and concept for security assessments were discussed, and the NPTF presented a security assessment concept for combined operating license applicants. During the closed meeting, the NRC staff and NPTF discussed security considerations for new reactor construction sites. On August 31, 2006, the NRC conducted a public meeting with NPTF to discuss agenda items regarding security measures during new construction (access authorization and physical security), a presentation by NPTF on industry's draft Topical Report Outline, and the status of action items from previous meetings. In a closed meeting on September 26, 2006, the NRC staff discussed new reactor security topics with NPTF.

## **VIII Power Uprates**

There are three types of power uprates. A measurement uncertainty recapture (MUR) power uprate is a power uprate of less than 2 percent and is based on the use of more accurate feedwater flow measurement techniques. Stretch power uprates (SPU) are power uprates that are typically on the order of less than 7 percent and are within the design capacity of the plant. SPUs require only minor plant modification. Extended power uprates (EPU) are power uprates beyond the design capacity of the plant and, thus, require major plant modification.

Licensees have been applying for and implementing power uprates since the 1970s as a way to increase the power output of their plants. The NRC staff has been conducting power uprate reviews since then and has completed 112 such reviews to date. Approximately 14,535 megawatts-thermal (MWt) or 4,845 megawatts-electric (MWe) in electric generating capacity or an equivalent of about 4.8 nuclear power plant units has been gained through implementation of power uprates at existing plants. The NRC staff currently has eight plant-specific power uprate applications under review. The eight applications under review include three MUR power uprates, one SPU, and four EPUs.

On July 11, 2006, the NRC staff completed its review of the Ginna EPU application and approved the 16.8 percent power uprate. On July 19, 2006, the NRC staff completed its review of the Beaver Valley 1 and 2 EPU applications and approved the 8 percent power uprate for both units.

Regarding the Calvert Cliffs 1 and 2 and Fort Calhoun MUR power uprates, which were submitted on January 31 and March 31, 2005, respectively, the NRC did not complete the reviews within six months. This is the timeliness goal for MUR power uprates that are based on the use of NRC-approved methodologies for feedwater flow measurement. The scheduled reviews have been extended because the licensees chose not to use NRC-approved methodologies resulting in a more challenging review process.

Based on a survey taken in March 2006 and information provided voluntarily by licensees subsequent to the survey, licensees plan to request power uprates for 22 nuclear power plant units over the next 5 years. If approved, these power uprates will result in an increase of about 3,294 MWt or approximately 1,098 MWe.

## **IX New Reactor Licensing**

The NRC expects to license the next generation of nuclear power plants using Part 52 to Title 10 of the *Code of Federal Regulations*, (10 CFR Part 52). 10 CFR Part 52 governs the issuance of standard design certifications, early site permits (ESPs), and combined licenses (COL) for nuclear power plants. The anticipated new reactor licensing activities are outlined in the table at the end of this section of the report.

### Design Certifications and Pre-Application Meetings

On January 27, 2006, the AP1000 final design certification rule was issued 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 design certification rule. A revised final design approval based on Revision 15 of Westinghouse's design control document was issued on March 10, 2006. The staff is currently reviewing AP1000 design technical reports. As of September 30, 2006, Westinghouse has submitted 34 of the expected 49 technical reports for the staff's review.

On August 24, 2005, General Electric (GE) submitted its design certification application for the Economic Simplified Boiling Water Reactor (ESBWR) design. By letter dated December 1, 2005, the NRC staff informed GE that the ESBWR design certification application, as supplemented by GE on October 24, 2005, was sufficiently complete to be formally accepted as a docketed application for design certification. The NRC staff also informed GE that a schedule had been established for the design certification review. Based on GE's commitments to provide additional supporting information, a milestone of October 11, 2007, was established for issuance of the SER with open items. The staff review of the application continues, with the staff recently completing a quality assurance audit at the GE facilities related to the containment structural design. On July 26-27, 2006, the staff met with GE to discuss the design instrumentation and control systems. On August 9 and October 5, 2006, NRC informed GE that some schedule milestones had been extended and that new schedule milestones were developed in response to late submittals from GE and proposed changes to the design. NRC also informed GE that NRC intended to meet its published schedule for completing an SER with open items; however, the continued late or incomplete submittals from GE will result in additional open items in the SER.

On August 31, 2006, the staff met with AREVA representatives to discuss the instrumentation and control (I&C) systems design for the Evolutionary Power Reactor (EPR). This design will use digital I&C for safety and control functions. This meeting provided an overview of two specific I&C systems and the control room displays. AREVA also presented an overview of several technical reports that AREVA plans to submit for the staff's review.

On May 15, 2006, the staff received a letter of intent from Mitsubishi Heavy Industries, Ltd., (MHI) informing the staff of its intent to submit a Design Certification application in the 1<sup>st</sup> quarter of 2008. This application will be for the U.S. APWR design. This letter was initially submitted under 10 CFR 2.390 as proprietary, but was subsequently made public by Mitsubishi on June 20, 2006. On July 13, 2006, the MHI representatives met with the NRC staff to share information about MHI and an overview of the U.S. APWR design. MHI currently plans to submit a design certification application for the U.S. APWR in March 2008. Currently, no domestic interest has been expressed in this design; however, a similar APWR is under



construction permitting review in Japan for eventual construction at the Tsuruga site. This meeting is expected to be the first in a series of pre-application discussions.

### Early Site Permits

The staff is currently reviewing four ESP applications. Dominion Nuclear North Anna, LLC, (Dominion) submitted an ESP application in September 2003 for its North Anna site, located in Louisa County, Virginia. The final SER for the North Anna ESP was issued on June 16, 2005. On October 25, 2005, Dominion notified the staff that it was changing the design of the cooling system for proposed Unit 3 from a once through cooling system to a closed cooling system.

The change was made to address the water usage concerns expressed by the Commonwealth of Virginia and local citizens. The change requires revisions to the application, the Environmental Impact Statement (EIS), and the final SER. On April 14, 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 issued Revision 7 of the North Anna ESP application on June 21, 2006, and Revision 8 on July 31, 2006. The staff issued the Supplemental Final SER on August 15, 2006, and expects to issue the final EIS on December 29, 2006, for the North Anna ESP.

On September 25, 2003, Exelon Generation Company, LLC, submitted an ESP application for its Clinton site, located in Harp Township, DeWitt County, Illinois. The NRC staff issued the draft SER for the Exelon ESP application for the Clinton site on February 10, 2005. The staff issued the supplemental draft SER with open items on August 26, 2005. On February 17, 2006, the staff issued its final SER for the Clinton ESP application, and on May 1, 2006, the staff issued its final SER for the Clinton ESP application as NUREG-1844. On August 2, 2006, the ASLB issued an Order establishing a preliminary schedule for the associated mandatory hearing with a goal of issuance of its final Order in December 2006.

System Energy Resources, Inc., submitted an ESP application in October 2003 for its Grand Gulf site located in Claiborne County, Mississippi. On October 21, 2005, the staff issued the Final SER for the Grand Gulf ESP application. On April 14, 2006, the staff published the Grand Gulf ESP Final SER as NUREG-1840. This NUREG incorporates changes made to the Final SER Chapter 2 due to concerns previously raised by the Advisory Committee on Reactor Safeguards regarding potential hazards along the Mississippi River. On August 1, 2006, the ASLB issued an Order establishing a preliminary schedule for the associated mandatory hearing with a goal of issuance of its final Order no later than November 30, 2006. On August 28, 2006, the ASLB held a limited appearance session in Port Gibson, Mississippi. The limited appearance session allowed the public to make statements and provide documents to the Board. The Board will consider the statements and documents in their deliberations.

On August 15, 2006, Southern Nuclear Operating Company (SNC) submitted an ESP application for the Vogtle Electric Generating Plant site, located near Waynesboro, Georgia. By letter dated September 19, 2006, the NRC staff informed SNC that the Vogtle ESP application was sufficiently complete to be accepted and docketed. An enclosure to the letter informed SNC of the staff's 20-month review schedule for issuance of the Final Safety Evaluation Report and the Final Environmental Impact Statement. On September 29, 2006, SNC notified the staff of its intent to provide a revision to the Vogtle ESP application to modify the location of the

proposed Units 3 and 4 so that they are in parallel with the existing units. The staff is currently evaluating whether this modification will impact the review schedule.

All four ESP applications require an EIS. The North Anna draft EIS was issued on December 10, 2004, and a supplemental draft EIS was issued on July 6, 2006. The Clinton draft EIS was issued on March 2, 2005, and the Grand Gulf draft EIS was issued on April 21, 2005. The staff issued the Final EIS for the Grand Gulf site on April 7, 2006, and issued the Final EIS for the Clinton site on July 20, 2006.

### Combined License

AREVA and Constellation Energy announced on September 15, 2005, the formation of UniStar Nuclear. This joint enterprise is intended to provide a single source for design, construction, and operation of new nuclear plants. UniStar Nuclear will market the EPR reactor design. AREVA and Constellation each own half of UniStar Nuclear. By letter dated November 4, 2005, Constellation Energy and Framatome notified the NRC staff that an application for certification of the EPR was planned at the end of 2007, with a COL application referencing the EPR following about 6 months later. An additional COL application was planned about 6 months after the first application. On May 2, 2006, the staff held a public meeting with UniStar Nuclear to discuss early submittal of portions of their COL application. UniStar Nuclear discussed their interest in the early submittal of their Quality Assurance Program, Security, and Emergency Plans -- the information necessary to support limited work authorizations. UniStar Nuclear and staff will continue to dialogue to resolve any identified issues associated with this approach. On June 21, 2006, UniStar Nuclear submitted a letter of intent notifying the NRC of their plans to submit a COL application in the fourth quarter of 2007 for the Calvert Cliffs site (if the site is selected). UniStar Nuclear also estimated that three additional COL applications would be submitted during the first half of 2008. Finally, UniStar projects that a COL application for the Nine Mile Point site could be submitted in the third quarter of 2008 (if the site is selected). All applications are for the EPR design.

On March 13, 2006, the NRC staff received a letter of intent from Amarillo Power stating their intent to submit a COL application for an Advanced Boiling Water Reactor (ABWR). Amarillo Power intends to submit an ESP application before the last quarter of 2007 and a COL application as soon thereafter as practicable. The letter contained proprietary information and was submitted under 10 CFR 2.390. On July 27, 2006, Amarillo Power publically stated their intentions.

On September 7, 2006, the NRC received a letter of intent from TXU Power notifying the NRC of its plans to submit a Combined License application in late 2008. TXU Power has not yet selected a site or technology. This information was previously submitted by TXU Power in a June 27, 2006 proprietary letter in accordance with 10 CFR 2.390.

By letter dated September 29, 2006, Exelon informed the NRC of its intent to submit a COL application in November 2008. Exelon is currently in the process of selecting both a technology and a site. They are currently evaluating both the GE ESBWR and the Westinghouse AP1000, and are considering various site locations within the state of Texas.

On July 10 and 11, 2006, NRC staff from headquarters accompanied a Region II inspector to the Bellefonte pre-COL site to observe geophysics testing. The NRC staff and the applicant

discussed site specific attributes that will be of interest during review of the COL application. The inspector implemented pre-COL inspection procedures to ascertain whether the applicant was implementing a quality assurance program during performance of geophysics data collection to support a COL application. No issues were identified.

### Regulatory Infrastructure

A reorganization of the Office of Nuclear Reactor Regulation (NRR) and the creation of the Office of New Reactors (NRO) will become effective on October 29, 2006. The reorganization will ensure that the safe operation of existing plants will remain a priority while dedicating resources for the licensing of new nuclear power plants. NRR will continue licensing, oversight, rulemaking, and incident response program activities for currently operating reactors. NRO will focus on licensing of new nuclear power plants, including; planning and scheduling, infrastructure development, environmental reviews, and project management of new reactor activities. These organizational changes reflect the growth in anticipated new reactor applications and continue to align the organization towards a design centered review approach. It is expected that additional organizational changes will be needed in the future consistent with evolving new reactor licensing activities.

On July 21, 2006, the Commission approved the creation of the Construction Inspection Organization in the Region II office in Atlanta, Georgia, which will implement the Construction Inspection Program (CIP) for all new reactors. This organization will have total responsibility for all construction inspection activities across the country, including both the day-to-day on-site inspections and the specialized inspection resources needed to support NRC oversight of the construction of any new nuclear power plants. The Regional Administrator will ensure appropriate management oversight of the initial CIP efforts while maintaining focus on the NRC mission in the safety oversight of Region II operating facilities. This approach is intended to ensure consistency in implementing the new inspection program and quickly incorporate ongoing lessons learned into this entire program. The new Construction Inspection Organization will become effective on October 1, 2006.

On November 3, 2005, the Executive Director for Operations issued SECY-05-0203, "Revised Proposed Rule to Update 10 CFR Part 52, Licenses, Certifications, and Approvals for Nuclear Power Plants." SECY-05-0203 requests Commission approval to publish in the *Federal Register* revised proposed revisions to 10 CFR Part 52, as well as changes throughout the NRC's regulations, to enhance the NRC's regulatory effectiveness and efficiency in implementing the licensing and approval processes in Part 52 and to clarify the applicability of various requirements to each of the regulatory processes in Part 52. This rulemaking to enhance 10 CFR Part 52 is based on lessons learned during design certification and ESP reviews and on discussions with stakeholders about the ESP, design certification, and combined license review processes. This revised proposed rule would withdraw and supersede the Commission's July 3, 2003 (68 FR 40026) proposed rule on 10 CFR Part 52. On January 30, 2006, the Commission issued an SRM approving the withdrawal of the previously proposed rule and publication of the revised notice of proposed rulemaking. The Commission directed the staff to give high priority to completing this rulemaking activity on schedule and to provide the draft final rule to the Commission no later than October 2006. The proposed 10 CFR Part 52 rule was published in the *Federal Register* on March 13, 2006 (71 FR 12781). On September 28, 2006, the staff posted draft final rule language for 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," on the NRC's rulemaking website to

assist the public in preparing for a Commission meeting on the Part 52 rule on November 9, 2006. The proposed final rule reflects the NRC staff's consideration of comments received during the public comment period.

The NRC staff is developing a COL application regulatory guide based, in part, on Regulatory Guide 1.70, "Standard Form and Content of Safety Analysis Reports for Nuclear Power Plants." On September 1, 2006, the staff posted draft Regulatory Guide (DG-1145), "Combined License Applications for Nuclear Power Plants (LWR Edition)" on the NRC public Web site to facilitate public comments. The draft Regulatory Guide was published in the *Federal Register* on September 7, 2006. On September 22, 2006, the NRC staff held a public meeting with stakeholders to discuss the DG-1145 and its contents. The public comment period on the draft Regulatory Guide ends on October 21, 2006. Users can currently access DG-1145 using the following link: <http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/draft-index.html>.

On March 29, 2006, the New Reactor Infrastructure Planning Branch posted a sources sought notice on the FedBizOpps Web site. The listing, "Technical Assistance for New Reactor Licensing Application Reviews for Reactor Design Certifications, ESPs, COL Applications, and New Reactor Pre-application Activities," provides references to the details associated with agency needs in FY 2007 and FY 2008. Forty-eight responses from commercial vendors and laboratories were received. The staff evaluated these sources to identify specific capabilities and potential conflicts of interest.

On May 15, 2006, the U.S. Department of Energy (DOE) published their interim final rule and request for comment on "Standby Support for Certain Nuclear Plant Delays" in the *Federal Register*. NRC staff from the Division of New Reactor Licensing and the Office of the General Counsel worked with the Office of Management and Budget and DOE staff to ensure that NRC concerns were addressed by changes to the rule. The final rule was published on August 11, 2006, and became effective on September 11, 2006.

On July 27, 2006, the NRC staff met with DHS representatives to discuss DHS's role and resource needs for new reactor licensing activities. The NRC staff shared a draft proposal on the scope of DHS consultation needed to meet the requirements of the Energy Policy Act of 2005. The staff will continue to work with DHS to establish the process and procedures needed to ensure consistent and comprehensive reviews. DHS conducts NRC's safety evaluation of the off-site emergency plans.

On September 14, 2005, the Commission directed the staff to develop an 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. On May 4, 2006, the Commission published an ANPR seeking public input on ways to make the technical requirements for power reactors more risk-informed and performance-based. The ANPR proposes to develop a comprehensive set of risk-informed and performance-based requirements as an alternative to current reactor licensing requirements in 10 CFR Part 50. NRC staff also issued the Technology Neutral Framework that could potentially serve as the technical basis to support development of a new rule. On September 14-15, 2006, NRC staff conducted a public workshop in support of the ANPR to gain early insight into possible stakeholder input. The public comment period closes December 29, 2006.

On August 11, 2006, staff briefed the Counsel to the House Committee on Energy and Commerce regarding the NRR reorganization and creation of NRO.

On August 30, 2006, staff briefed a member of the staff of the House Appropriations Committee's Subcommittee on Homeland Security on new reactors. The purpose of the briefing was to explain the new reactor licensing process and the number of applications expected, in addition to the projected schedule for completing them. The Committee is trying to determine the level of DHS staffing that will be needed to support NRC's work.

#### Interactions with DOE on Next Generation Nuclear Plants

The Energy Policy Act of 2005 (EPAct), Subtitle C, Section 641, required that the DOE establish the Next Generation Nuclear Plant (NGNP) Project. The NGNP Project consists of research, development design, construction, licensing, and operation of a prototype plant, including a very high temperature nuclear reactor, that can be used to generate electricity and/or hydrogen. The NRC has licensing and regulatory authority for any reactor that is authorized under Subtitle C. Within 3 years of the date of enactment of EPAct (August 8, 2005), the Secretary of DOE and the Chairman of the NRC are required jointly to submit to Congress a licensing strategy for the NGNP. Since November 2005, NRC and DOE staff have initiated activities to develop the joint licensing strategy. To that end, NRC provided the draft Memorandum of Understanding (MOU) between DOE and NRC to DOE in May 2006 for comment. The MOU establishes the guiding principles for interactions between NRC and DOE for developing and documenting the joint licensing strategy for the NGNP. NRC is working closely with DOE to ensure that the MOU is in place shortly so that the efforts toward the development of the joint licensing strategy can begin in earnest in FY 2006.

## New Reactor Licensing Activities As of October 13, 2006

Organization/Design*	Sites under Consideration **	Planned Applications	Date	Basis
<b>AP1000 (52-006) Certified Design</b>				
Duke (742)	William S. Lee III Nuclear Station (2) (Cherokee)	COL	10/2007	Letters 3/4, 10/25/05, and 3/16/06 7/17/06 (RIS)
NuStart Energy (740)	Bellefonte (2)	COL	10/2007	Letters 12/7/2004 and 11/17/2005, Letter 7/17/06 (RIS)
Progress Energy (738)	Harris (2)	COL	10/2007	Letters 8/24/05 and 2/1/06; 11/1/05 Mtg Letter 7/12/06 (RIS)
	Florida (2)	COL	7/2008	
South Carolina Electric and Gas (743)	Summer (2)	COL	10/2007	Letters 12/5/05 and 2/10/06, 7/13/06 (RIS)
Southern Nuclear Operating Company (737)	Vogtle (2)	ESP and COL	8/2006: ESP 3/2008: COL	Letters 7/26/05, 8/17/05, 7/17/06 (RIS) Mtg Summary (ML052710018)
<b>ESBWR (52-010) Design Certification Application submitted 8/24/05</b>				
Dominion (741)	North Anna	COL	11/2007	Letter 11/22/05 7/17/06 (RIS)
Entergy (745)	River Bend	COL	5/2008	Letter 12/5/05, 7/17/06 (RIS)
NuStart Energy (744)	Grand Gulf	COL	11/2007	Letters 12/7/2004 and 11/17/2005, 7/17/06 (RIS)
<b>EPR (733) Design Certification Application to be submitted 12/2007</b>				
Unistar Nuclear (746)	Calvert Cliffs TBD Nine Mile Point	COL COLs (3) COL	4 <sup>th</sup> Qtr 2007 1 <sup>st</sup> half of 2008 3 <sup>rd</sup> Qtr 2008	Press Release; 11/2/05 Mtg; Letters 11/4/05, 6/8/06, 6/21/06

\* Numbers in parentheses are Docket Number or Project Number

\*\* Numbers in parentheses are the announced number of units to be built at the site

## New Reactor Licensing Activities As of October 13, 2006

Organization/Design*	Sites under Consideration **	Planned Applications	Date	Basis
ABWR (52-001) Certified Design				
Amarillo Power	TBD (2)	ESP and COL	3 <sup>rd</sup> Qtr 2007:ESP (COL: soon after)	Letter 3/13/06, 7/27/06
NRG Energy	South Texas Project (2)	COL	Late 2007	Letter 6/19/06
Unannounced Technology				
Florida Power & Light	TBD	COL	2009	Letter 4/3/06
TXU Power	TBD (2)	COL	Late 2008	Letter 6/27/06, 9/7/06
Unannounced Applicant	TBD	COL	3 <sup>rd</sup> Qtr 2008	Letter 7/12/06
Exelon	TBD	COL	Nov 2008	Letter 9/29/06
Duke	Davie County, NC  Oconee County, SC	ESP  ESP	TBD  TBD	Letter 3/16/06
US APWR Design				
Mitsubishi Heavy Industries, LTD.	N/A	Design Certification	12/2007	Letters 5/15/06, 6/20/06, 8/31/06

\* Numbers in parentheses are Docket Number or Project Number

\*\* Numbers in parentheses are the announced number of units to be built at the site