

September 21, 2007

The Honorable Thomas R. Carper
Chairman, Subcommittee on Clean Air
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 second quarter of 2007, April through June. I am also providing in this cover letter additional information in order to keep you fully and currently informed of NRC's regulatory activities.

Before discussing regulatory activities, I would like to mention a more personal matter. You may already know that on September 2, 2007, Commissioner Edward McGaffigan, Jr. passed away after a long battle with melanoma. Commissioner McGaffigan served for 11 years, longer than any other Commissioner. He was an outstanding regulator and a great colleague, and his dedication to the agency and the Nation will be missed.

On April 17, 2007, the Commission directed the staff to complete preparation of the final rule on 10 CFR Part 26, "Fitness-for-Duty Programs," for publication in the *Federal Register*. The staff currently expects to publish the final rule in March 2008. The rule updates NRC's current requirements for drug and alcohol testing and enhances the consistency of Part 26 with advances in relevant Federal rules and guidelines, including the U.S. Department of Health and Human Services' Mandatory Guidelines for Federal Workplace Drug Testing programs (HHS Guidelines) and other Federal drug and alcohol testing programs that impose similar requirements on the private sector.

On May 15, 2007, the NRC staff completed extensive inspection and licensing actions and authorized the restart of the Browns Ferry Unit 1 nuclear power plant in Alabama. The unit was synchronized to the grid on June 2, 2007, and is currently operating at 100% capacity.

On July 1, 2007, the NRC updated its Reactor Oversight Process by implementing the Unplanned Scrams with Complications (USWC) Performance Indicator. The USWC Performance Indicator tracks events that can increase the risk associated with a reactor's unplanned manual or automatic shutdowns, which are called scrams.

On July 3, 2007, the NRC dispatched a Special Inspection Team to the North Anna nuclear power plant located near Mineral, Virginia; and operated by Dominion Resources. The team was sent to the plant to inspect and assess circumstances associated with a June 29 unplanned actuation of a Unit 2 safety injection system. Although the event appeared to be of low safety significance, the three-person Special Inspection Team was established to confirm this independently through a review of facts surrounding the event to assess the company's response and investigation, and to identify any generic issues. The final report documenting the results of this inspection should be issued in September.

On July 13, 2007, as supplemented on July 16 and August 2, 2007, UniStar Nuclear (UniStar) submitted a partial combined license (COL) application for a U.S. Evolutionary Power Reactor to be located adjacent to the Calvert Cliffs Nuclear Power Plant, Units 1 and 2, in Lusby, Maryland. The partial application included the Environmental Report (ER) required by 10 CFR 50.30(f), which is intended to disclose the environmental impacts of construction and operation of the new reactor. The staff is performing an acceptance review of the application. Certain issues in the application have not yet been addressed to the level of detail expected by the staff. If the application is found to be acceptable, the staff will assign a docket number to the application. The NRC staff conducted a public outreach meeting in the vicinity of Calvert Cliffs on August 14, 2007, to discuss the COL application review process with interested members of the public.

On August 28, 2007, the NRC published 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," as a final rule in the *Federal Register* (72 FR 49351). The rule becomes effective on September 27, 2007. These amendments to Part 52 provide applicants with greater flexibility by allowing them to submit license applications in phases, provide processes to facilitate a design-centered review approach, and facilitate amendments to design certification rules after completion of the initial certification.

The NRC continues to monitor the installation of sirens at the Indian Point Nuclear Generating Station, Units 2 and 3 (Indian Point), located in Westchester County, New York, and operated by Entergy Nuclear Operations, Inc. (Entergy). Section 651(b) of the Energy Policy Act of 2005 (EPAc) directed the NRC to require nuclear power plants located within certain population densities to have back-up power for their alert and notification systems (ANS), including sirens. In January 2006, the NRC issued a Confirmatory Order to Entergy to implement Section 651(b) of EPAc by January 30, 2007. In April 2007, the NRC denied Entergy's request to extend the deadline a second time and issued a Notice of Violation and a \$130,000 fine for failing to meet the deadline to achieve operability of a new alert and notification system. On July 30, 2007, the NRC issued another Order that required that, prior to declaring the new ANS operable and using it as the primary system, Entergy needed to receive, by August 24, 2007, approval from the Federal Emergency Management Agency (FEMA). FEMA's approval requires that the system, as installed, meet the design criterion of the approved ANS Design Report and be in compliance with all applicable FEMA regulations and guidance. In a letter to the NRC dated August 23, 2007, Entergy wrote that it had completed all pre-operability activities required by NRC's Order for the new ANS but had not received FEMA's approval. On August 30, 2007, the NRC issued a second Notice of Violation to Entergy and

stated that the NRC will determine an appropriate enforcement action after Entergy comes into compliance with the July 30, 2007 Order and will consider Entergy's due diligence in resolving this matter with FEMA. The NRC believes that Entergy's primary focus at this time should be on supporting the FEMA review of the new ANS.

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, April - June 2007

cc: Senator George V. Voinovich

Identical letters sent to:

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

The Honorable Barbara Boxer
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510
cc: Senator James M. Inhofe

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

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

The Honorable Peter J. Visclosky
Chairman, Subcommittee on Energy
and Water Development
Committee on Appropriations
United States House of Representatives
Washington, D.C. 20515
cc: Representative David L. Hobson

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



Protecting People and the Environment

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

APRIL - JUNE 2007

Note: The period of performance covered by this report includes activities occurring between the first day of April and last day of June 2007. 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.

TABLE OF CONTENTS

I	Implementing Risk-Informed Regulations	2
II	Reactor Oversight Process	3
III	Status of Issues in the Reactor Generic Issues Program	4
IV	Licensing Actions and Other Licensing Tasks	5
V	Status of License Renewal Activities	11
VI	Summary of Reactor Enforcement Actions	12
VII	Power Reactor Security Regulations	18
VIII	Power Upgrades	20
IX	New Reactor Licensing	20

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, Title 10 to the *Code of Federal Regulations* (10 CFR) Part 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 that this regulation would be properly implemented, the NRC published Revision 1 to Regulatory Guide (RG) 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 system 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.

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 on 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. During September 14-15, 2006, NRC staff held a public workshop on the ANPR.

The comment period on the ANPR closed December 29, 2006. The staff completed a preliminary review of the stakeholder's comments and determined that, while stakeholder's views are generally favorable toward risk-informing reactor requirements for advanced reactors, there is a general desire that a set of draft requirements be developed and applied to a non-light water reactor as a pilot test. Stakeholders also expressed concern that the effort to risk-inform the requirements should not adversely impact the licensing of new reactors in the near term. The NRC staff is evaluating the comments received and plans to summarize the stakeholder's views in a recommendation to the Commission.

On March 22, 2007, the staff issued Regulatory Issue Summary (RIS) 2007-06, "RG 1.200 Implementation," to inform licensees of how the NRC will implement its technical adequacy review of plant-specific probabilistic risk assessments (PRAs) used to support risk-informed licensing actions after the issuance of national consensus PRA standards and the issuance of RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities."

Beginning April 26, 2007, the Risk-Informed Regulatory Improvement Program is now referred to as the Risk-Informed and Performance-Based Plan (RPP). Under this plan, the staff has committed to complete development of the RPP database, inform the Commission in periodic reports of any potential issues associated with achieving a risk-informed and performance-based regulatory structure, and develop final objectives for each regulatory arena.

II Reactor Oversight Process

The NRC continues to implement the Reactor Oversight Process (ROP) at all nuclear power plants. The NRC staff 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 Working Group public meetings on April 11, May 16, and June 13, 2007. The ROP Working Group is made up of industry, Nuclear Energy Institute, and NRC staff with a goal of continuously improving the ROP and improving reactor safety. The meetings provide a forum for external feedback on staff initiatives. During the three meetings, attendees discussed mitigating systems performance index implementation, safety culture integration into the ROP, performance indicator issues, and open and new frequently asked questions.
- On April 3, 2007, the staff provided to the Commission SECY-07-0063, "FY 2006 Results of the Industry Trends Program." The report documents the results and analysis of the FY 2006 industry-level performance indicators and summarizes the status of the ongoing development of the Industry Trends Program. No statistically significant adverse industry trends were identified through FY 2006. In addition, no issues that warranted further analysis or significant program adjustments were identified by short-term trending of the FY 2006 data.
- On April 18, 2007, NRC senior management reviewed agency actions taken for those plants having significant performance problems as determined by the ROP, agency actions for those fuel cycle and other materials facilities with significant safety or safeguards issues, trends in industry and licensee performance, and the results of the ROP self-assessment. The results of this Agency Action Review Meeting were discussed with the Commission on May 30 and 31, 2007.
- From April 21 to 27, 2007, NRC staff participated in the Nuclear Energy Agency Working Group on Inspection Practices meeting in Busan, Republic of Korea. The NRC representative at the meeting led the working group in the development of best inspection practices in the area of fire protection and interacted with member countries in continued discussion on assessment of licensee safety culture, inspection of fire protection programs, and digital instrumentation and control inspections to develop commendable inspection practices. These inspection practices will be evaluated for incorporation into NRC inspection procedures.
- On May 9, 2007, the NRC staff conducted a Category 2 public meeting to discuss a licensee's appeal of the staff's decision to count an emergency diesel generator failure in the Mitigating Systems Performance Index (MSPI). The licensee questioned whether a post-maintenance failure of the emergency diesel generator constituted a failure in the MSPI. The MSPI is a risk-informed performance indicator in the ROP.

III Status of Issues in the Reactor Generic Issues Program

Generic Issues (GIs) Closed During 3rd Quarter FY 2007:

- GI-202, "Spent Fuel Pool Leakage Impacts"

The staff closed this issue in May 2007 with no new requirements for licensees and no changes to existing regulations or guidance. Closure is based on the screening analysis review panel conclusion that the issue of spent fuel pool (SFP) leakage impacts should be addressed as an individual licensee compliance issue and eliminated from further review or assessment under the Generic Issues Program (GIP).

Specific reasons for the panel's recommendation included the following: (1) The existing regulatory framework of 10 CFR Part 50, Appendices A and B, governs the condition described in GI-202, making this a regulatory compliance issue. (2) The plant specific conditions described have been addressed as documented in applicable NRC inspection reports (i.e., per the reactor oversight process). (3) There is no apparent decrease in licensed design capability or reliability of SFP structures, systems, or components due to leakage of borated water. (4) Maintenance rule requirements would apply if the condition were risk-significant. (5) Recent generic communications inform licensees of the potential for adverse impacts on structural integrity of reinforced concrete due to leaking borated water sources (See Information Notice (IN) 2004-05 and IN 2006-13).

Generic Issues With Significant Schedule Adjustments During 3rd Quarter FY 2007:

- GI-186, "Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants"

The issuance of Supplement 1 to RIS 2005-025 was delayed to notify industry of changes to regulatory positions included in a revision to standard review plan Section 9.1.5 and to communicate regulatory expectations associated with 10 CFR 50.59 and 50.71(e), as these requirements relate to the safe handling of heavy loads and load drop analyses. The staff issued RIS 2005-25, Supplement 1, on May 29, 2007. The Advisory Committee on Reactor Safeguards (ACRS) briefing on this issue is rescheduled for October 2007 to accommodate the ACRS meeting schedule and allow time for enhancements to heavy load handling inspection procedures.

- GI-189, "Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident"

The staff received initial industry proposals for modifications that incorporate security insights in late February and early March 2007. The staff reviewed the industry proposals and concluded that the proposed modifications would resolve GI-189 and provide benefit for some security scenarios. On April 23, 2007, the Executive Director for Operations issued a memorandum informing the Commission of the staff's intent to accept the commitments and perform verification inspections at the affected sites. On June 15, 2007, the NRC staff issued letters to affected licensees accepting the commitments. The NRC staff also notified licensees of its intent to perform verification inspections at the affected sites and clarified the scope of the inspection relative to the

commitments. Based on industry proposals, the staff expects full implementation of the modifications to be completed by June 2008 at nearly all affected units, with two units delayed as late as early 2010 for more complex modifications.

- GI-191, "Assessment of Debris Accumulation on PWR Sump"

The staff expects to complete its review of licensees' responses to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors," in July 2008. The staff also expects to complete inspection reports for Temporary Instruction-2515/166 in the summer of 2008, followed by ACRS and management reviews to support closure of GI-191 in October 2008.

Complexities associated with the impact of chemical effects on sump strainer performance continue to be challenging. With chemical effects testing ongoing, there is the possibility that additional time may be needed to address fully this aspect of the GI-191. The need for any schedule adjustments should become clearer in the next three months.

The remaining open GIs are on track to complete according to (or close to) schedules previously submitted.

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 FY 2007 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 GLs or bulletins, NRC responses to 10 CFR 2.206 petitions, NRC review of generic topical reports, responses by NRR 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 2007 NRC Performance Plan incorporates one output measure related to the number of other licensing tasks completed.

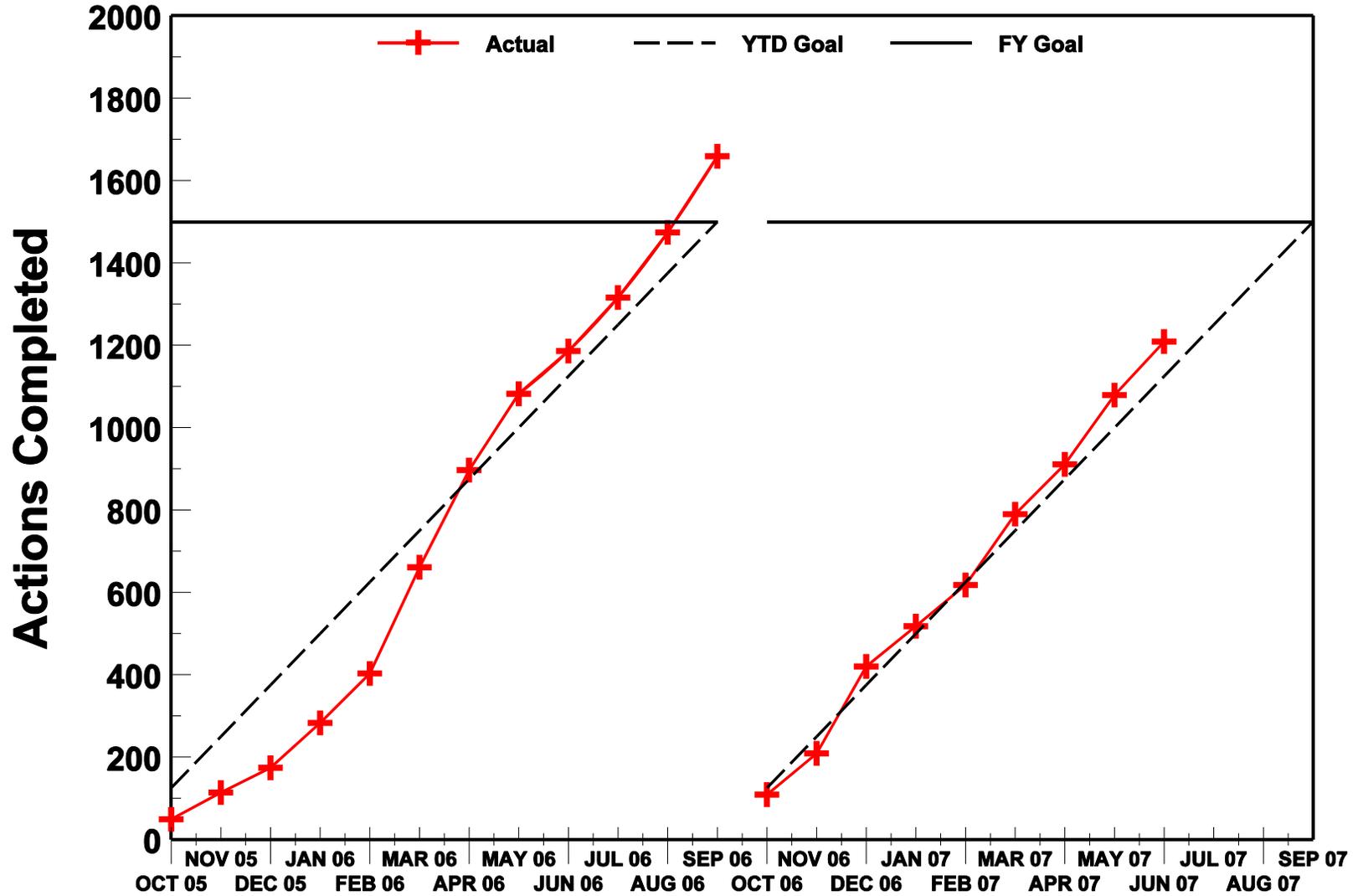
The actual FY 2005 and FY 2006 results, the FY 2007 goals, and the actual to-date FY 2007 results for the three NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the following table.

PERFORMANCE PLAN				
Output Measure	FY 2005 Actual	FY 2006 Actual	FY 2007 Goals	FY 2007 Actual (thru 06/30/2007)
Licensing actions completed/year	1609	1659	≥ 1500	1209
Age of licensing action inventory	92.6% ≤ 1 year; and 99.9% ≤ 2 years	97.8% ≤ 1 year; and 99.9% ≤ 2 years	96% ≤ 1 year; and 100% ≤ 2 years old	96.3% ≤ 1 year; and 99.6% ≤ 2 years
Other licensing tasks completed/year	715	676	≥ 500	894

The charts on the following pages show NRC's FY 2007 trends for the three operating power reactor licensing action and other licensing task output measure goals:

Nuclear Reactor Safety - Reactor Licensing

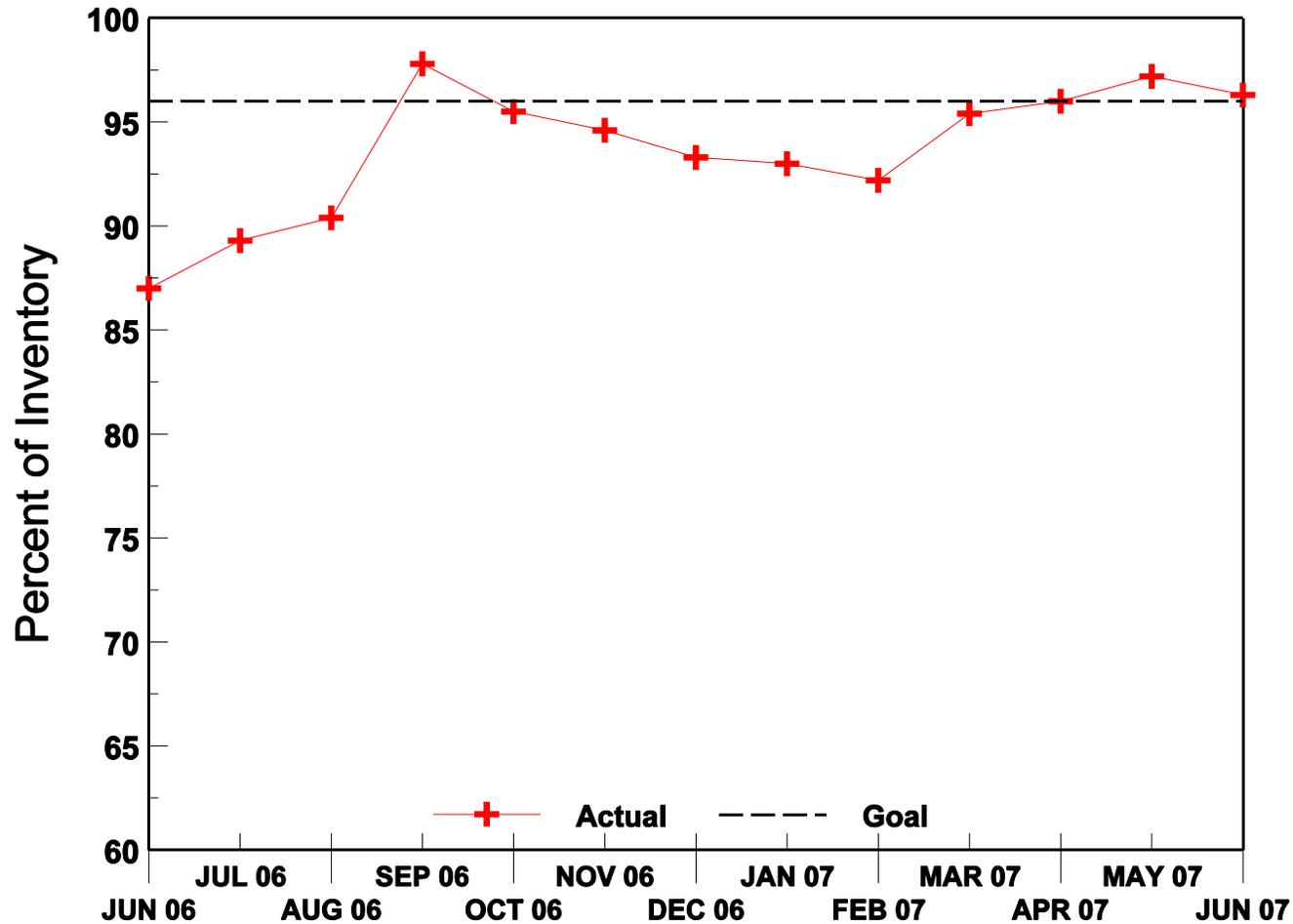
Performance Plan Target: Completed Licensing Actions



Nuclear Reactor Safety - Reactor Licensing

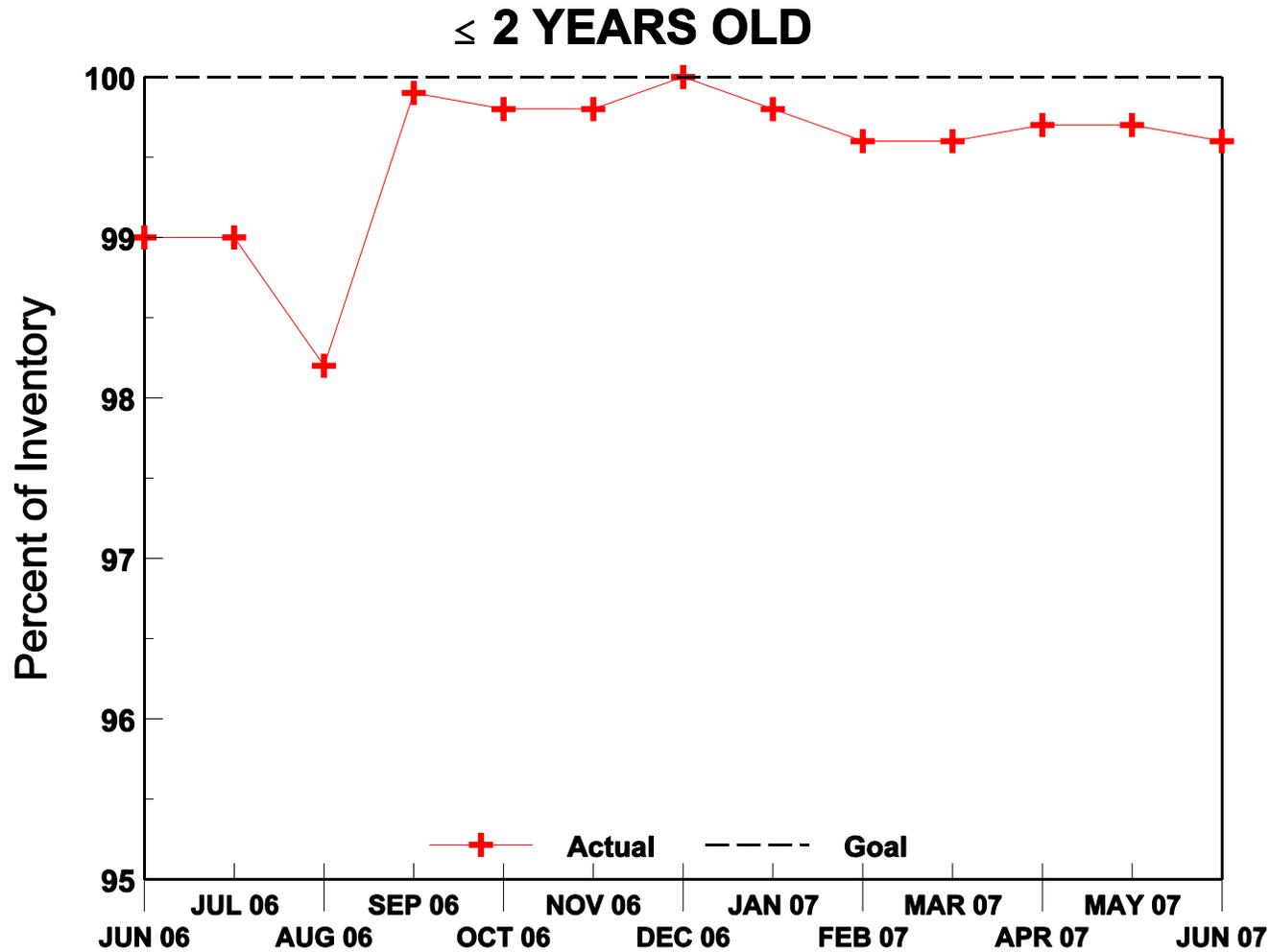
Performance Plan Target: Age of Licensing Action Inventory

≤ 1 YEAR OLD



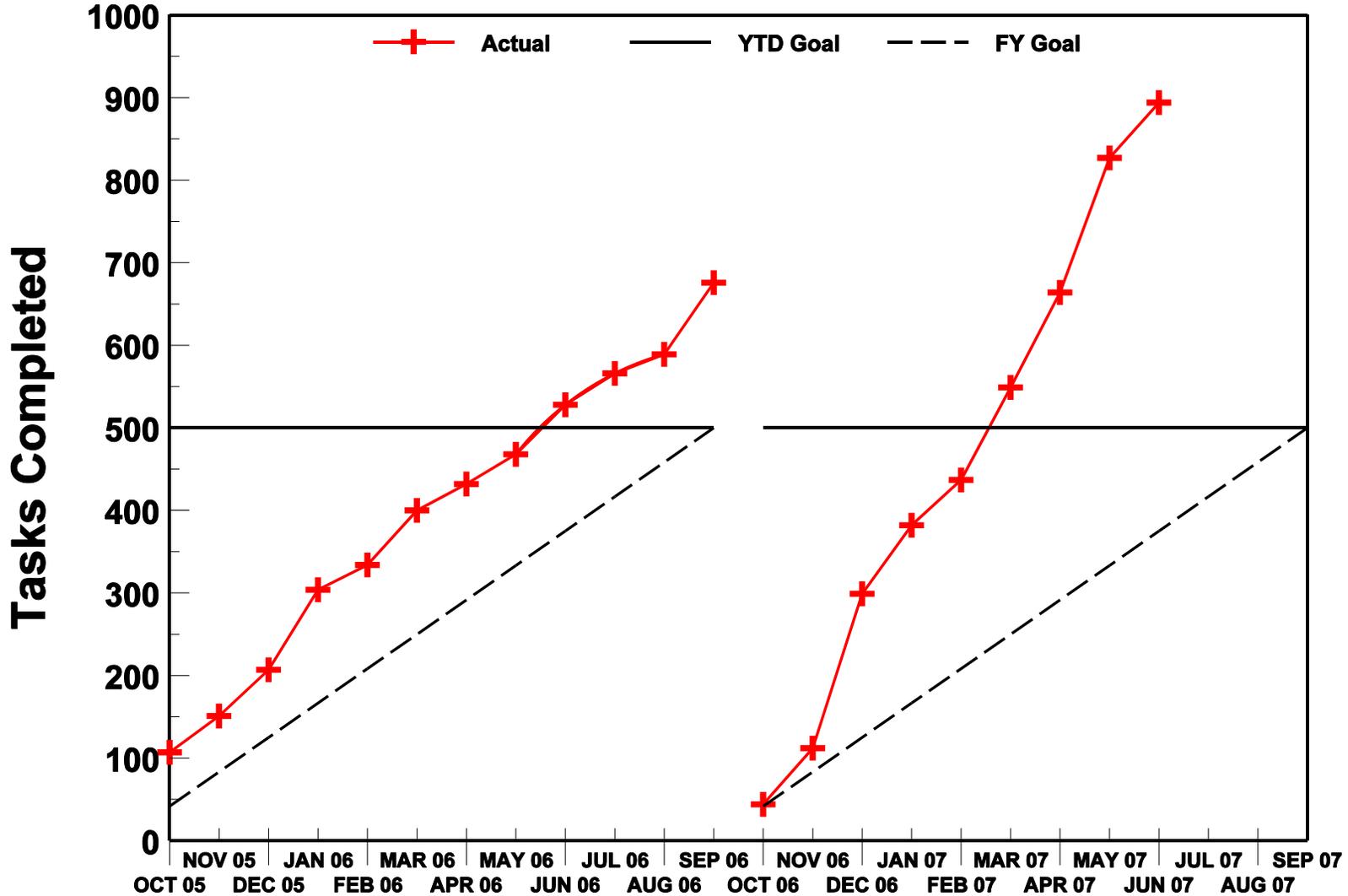
Nuclear Reactor Safety - Reactor Licensing

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 48 of the 104 units licensed to operate.

Oyster Creek License Renewal Application

The final supplemental environmental impact statement (SEIS) was issued in January 2007 and the final safety evaluation report (FSER) was issued in March 2007. A request for hearing was received in response to the NRC's notice of opportunity for hearing, an Atomic Safety and Licensing Board (ASLB) was established, and the hearing is proceeding.

On May 31, 2007, the State of New Jersey Department of Environmental Protection (NJDEP) issued its decision on the Oyster Creek Generating Station Federal Consistency Request. Consistency with the Coastal Zone Management Act is required before the renewed operating license can be issued by the NRC. The NJDEP stated that it could not make a positive consistency determination for the applicant's (Amergen) request for the consistency certification. The NJDEP cited a lack of definitive information concerning a three-year fish study that has not been completed by the applicant. Amergen plans to file an appeal with the Secretary of the U.S. Department of Commerce.

Pilgrim License Renewal Application

The draft SEIS was issued in January 2007, and the FSER was issued in June 2007. A request for hearing was received in response to the NRC's notice of opportunity for hearing, an ASLB was established, and the hearing is proceeding.

Vermont Yankee License Renewal Application

The draft SEIS was issued in December 2006, and the safety evaluation report (SER), identifying remaining confirmatory items, was issued in March 2007. A request for hearing was received in response to the NRC's notice of opportunity for hearing, an ASLB was established, and the hearing is proceeding.

James A. FitzPatrick License Renewal Application

The FitzPatrick license renewal application is currently under review. The NRC staff has issued requests for additional information (RAI) and is reviewing the licensee's responses. The draft SEIS was issued in June 2007, and the SER, identifying any remaining open items, is scheduled to be issued in July 2007.

Susquehanna License Renewal Application

On September 13, 2006, the NRC received an application for renewal of the operating licenses for Susquehanna Units 1 and 2. The NRC completed its acceptance review and found the application acceptable for docketing and review. A request for hearing was submitted in

response to the notice of an opportunity to request a hearing, and an ASLB was established.

ASLB subsequently determined that the petitioner's contentions were not admissible and terminated the proceeding.

The licensee submitted the license renewal application concurrent with a request for extended power uprate (EPU), which will require the licensee to supplement the renewal application in the future. Because of the potential impact of the EPU supplement on the license renewal review, the licensee agreed that the license renewal schedule will be established after approval of the EPU and submittal of the supplement to the renewal application.

Wolf Creek License Renewal Application

The Wolf Creek license renewal application is currently under review. The NRC staff has issued RAIs and is reviewing the licensee's responses. The draft SEIS is scheduled to be issued in September 2007, and the SER, identifying any remaining open items, is scheduled to be issued in February 2008.

Shearon Harris License Renewal Application

The Shearon Harris license renewal application is currently under review. The NRC staff has issued RAIs and is reviewing the licensee's responses. The draft SEIS is scheduled to be issued in December 2007, and the SER, identifying any remaining open items, is scheduled to be issued in March 2008.

Indian Point License Renewal Application

On April 30, 2007, the NRC received an application for renewal of the operating licenses for Indian Point Units 2 and 3. The staff is currently conducting an acceptance review to determine if the application is acceptable for docketing.

Vogtle License Renewal Application

On June 29, 2007, the NRC received an application for renewal of the operating licenses for Vogtle Units 1 and 2. The staff is currently conducting an acceptance review to determine if the application is acceptable for docketing.

VI Summary of Reactor Enforcement Actions

Reactor Enforcement by Region

The reactor enforcement statistics below are arranged by Region, most recent calendar quarter, and FY 2007 to date. FY 2006 and FY 2005 statistics are provided 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 ROP. These tables are then followed by brief descriptions of the escalated reactor enforcement actions associated with both traditional enforcement ROP (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 3 FY 07	1	0	0	2	3
	FY 07 YTD Total	2	0	0	4	6
	FY 06 Total	10	0	1	3	14
	FY 05 Total	6	0	4	0	10
Non-Cited Severity Level IV or GREEN	Quarter 3 FY 07	50	25	92	71	238
	FY 07 YTD Total	139 7 ¹	102	220	221	682 7
	FY 06 Total	224	154	256	259	893
	FY 05 Total	239	197	300	282	1018
TOTAL Cited and Non-Cited Severity Level IV or GREEN	Quarter 3 FY 07	51	25	92	73	241
	FY 07 YTD Total	141	102	220	225	688
	FY 06 Total	234	154	257	262	907
	FY 05 Total	245	197	304	282	1028

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 number of cited violations based on enforcement action tracking system 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.

¹ The FY 07 YTD Total for Region I and the overall FY 07 YTD Total for Region I were both increased by seven to reflect the addition of Severity Level IV or GREEN Non-Cited Violations included in several reports issued during March 2007. These reports were not available in the agency's document control system (ADAMS) at the time the Second Quarter Fiscal Year 2007 report was prepared.

ESCALATED REACTOR ENFORCEMENT ACTIONS ASSOCIATED WITH TRADITIONAL ENFORCEMENT						
		Region I	Region II	Region III	Region IV	TOTAL
Severity Level I	Quarter 3 FY 07	0	0	0	0	0
	FY 07 YTD Total	0	0	0	0	0
	FY 06 Total	0	0	0	0	0
	FY 05 Total	0	0	2	0	2
Severity Level II	Quarter 3 FY 07	0	0	0	0	0
	FY 07 YTD Total	0	1	0	0	1
	FY 06 Total	0	0	0	0	0
	FY 05 Total	0	1	2	0	3
Severity Level III	Quarter 3 FY 07	1	2	0	0	3
	FY 07 YTD Total	2	2	2	0	6
	FY 06 Total	2	1	7	1	11
	FY 05 Total	2	1	3	2	8
TOTAL Violations Cited at Severity Level I, II, or III	Quarter 3 FY 07	1	2	0	0	3
	FY 07 YTD Total	2	3	2	0	7
	FY 06 Total	2	1	7	1	11
	FY 05 Total	2	2	7	2	13

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

ESCALATED REACTOR ENFORCEMENT ACTIONS ASSOCIATED WITH THE REACTOR OVERSIGHT PROCESS						
		Region I	Region II	Region III	Region IV	TOTAL
Violations Related to RED Findings	Quarter 3 FY 07	0	0	0	0	0
	FY 07 YTD Total	0	0	0	0	0
	FY 06 Total	0	0	0	0	0
	FY 05 Total	0	0	3	0	3
Violations Related to YELLOW Findings	Quarter 3 FY 07	0	0	1	0	1
	FY 07 YTD Total	0	0	1	0	1
	FY 06 Total	0	0	1	0	1
	FY 05 Total	0	0	0	1	1
Violations Related to WHITE Findings	Quarter 3 FY 07	0	2	1	1	4
	FY 07 YTD Total	4	5	2	3	14
	FY 06 Total	3	6	3	2	14
	FY 05 Total	5	5	5	1	16
TOTAL Related to RED, YELLOW, or WHITE Findings	Quarter 3 FY 07	0	2	2	1	5
	FY 07 YTD Total	4	5	3	3	15
	FY 06 Total	3	6	4	2	15
	FY 05 Total	5	5	8	2	20

NOTE: The escalated enforcement data above reflects the violations or problems cited during the referenced time periods that 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.

Reactor Escalated Enforcement and Other Significant Actions²

Florida Power and Light Energy (Duane Arnold Energy Center) EA-07-017

On April 2, 2007, 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 2006 full-scale exercise critique to identify a weakness associated with a risk significant planning standard that was also a drill and exercise participation performance indicator. The NRC has determined that this failure is a performance deficiency and is also a violation of emergency preparedness planning standard 10 CFR 50.47(b)(14) and associated risk significant planning standard 10 CFR 50.54(b)(4).

Dominion Energy Kewaunee (Kewaunee Power Station) EA-07-058

On April 3, 2007, a Notice of Violation was issued for a violation associated with a YELLOW SDP finding involving the failure of licensee personnel to follow procedural requirements and enter a record of a fuel leak on the "A" emergency diesel generator into the corrective action program on June 28, 2006, when the leak was first identified. This failure resulted in the leak not being appropriately evaluated and repaired until August 17, 2006. The NRC has determined that this failure is a performance deficiency and is also a violation of the licensee's technical specifications, which state, in part, that written procedures and administrative policies shall be established, implemented, and maintained.

Indiana Michigan Power Company (D.C. Cook Nuclear Power Plant) EA-06-295

On April 4, 2007, a Confirmatory Order (Effective Immediately) was issued to the Indiana Michigan Power Company (I&M) as part of a settlement agreement between I&M and the NRC regarding an apparent violation of 10 CFR 50.7, "Employee Protection," issued by the NRC to I&M. In response to an NRC choice letter, I&M requested Alternative Dispute Resolution (ADR) to resolve the apparent violation. As part of the settlement agreement that resulted from the ADR session, I&M agreed to complete a number of actions, including the completion of the training of all non-supervisory plant workforce and long-term contractors on the subject of a safety-conscious work environment (SCWE), the completion of a Nuclear Safety Culture (including SCWE) survey, the reinforcement of I&M's policy and expectation of its management relating to an SCWE as communicated by an executive level manager, and the implementation of a periodic assessment of I&M's compliance with its hours of work limitation program and evaluation of the results for trends. In exchange for I&M's actions, the NRC agreed to not pursue further enforcement action; however, the NRC will evaluate the implementation of the Confirmatory Order during future inspections.

² Two Severity Level III violations and one violation associated with a WHITE significance determination process finding in Region II will not be described because they are related to security.

Carolina Power and Light Company (Brunswick Steam Electric Plant) EA-07-024

On April 20, 2007, a Notice of Violation was issued for a violation associated with a WHITE SDP finding involving (1) inadequate corrective actions to prevent a repeat failure of the #9 main crankshaft bearing on emergency diesel generator (EDG) #1, (2) the failure to follow the foreign material exclusion procedure during maintenance performed on EDG #1, and (3) the failure to identify and implement adequate actions promptly to prevent EDG #1 from tripping on low lubricating oil pressure. These conditions ultimately contributed to an EDG #1 trip and a bearing failure during a Unit 2 loss-of-offsite-power event on November 2, 2006, as well as the Unit 1 failure to satisfy the requirements of a 7-day technical specification limiting condition for operation because only three of four EDGs were operable from October 30, 2006, until the condition was corrected on November 7, 2006. The violation was cited against Technical Specification 3.8.1, "AC Sources-Operating," because EDG #1 was inoperable from October 30 to November 7, 2006. As a result, while Unit 1 was operating in Mode 1, only three of four EDGs were operable for a period in excess of seven days.

Entergy Nuclear Operations, Inc. (Indian Point Nuclear Generation Station) EA-07-092

On April 23, 2007, a Severity Level III Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$130,000 was issued to Entergy Nuclear Operations, Inc., for failure to meet the requirements of a Confirmatory Order (EA-05-190) issued on January 31, 2006. The Order required that the licensee provide and maintain a backup power supply for the Indian Point Emergency Notification System (ENS). Specifically, the "radio only activation" feature, the portion of the ENS for which the backup power capability was provided, was required to meet its test acceptance criteria by April 15, 2007. The licensee did not meet its test acceptance criteria, resulting in the ENS not being fully operable by April 15, 2007.

FirstEnergy Nuclear Operating Company (Davis-Besse Nuclear Plant, Perry Nuclear Power Plant, Beaver Valley Nuclear Plant, Units 1 and 2) EA-07-123

On May 14, 2007, a Demand for Information (DFI) was issued to FirstEnergy Nuclear Operating Company (FENOC) in response to information provided by FENOC in a report dated December 15, 2006, prepared by its contractor, Exponent Failure Analysis Associates and Altran Solutions Corporation (Exponent), associated with the root causes and time line for the 2002 Davis-Besse reactor pressure vessel head degradation event. In particular, the DFI required FENOC to provide detailed and specific information relative to the timing of FENOC's review of the Exponent Report and the factors FENOC considered when determining whether the conclusions in the report should be communicated to the NRC. The DFI also required FENOC to provide information in order for the NRC to understand the depth and completeness of FENOC's evaluation of the assumptions, methods, and conclusions of the Exponent Report and to understand the differences between the Exponent Report and the technical and programmatic root cause reports previously developed by FENOC relative to the 2002 Davis-Besse event. In addition, the DFI required information in order for the NRC to understand FENOC's position regarding a second contractor report prepared for FENOC, "Report of Reactor Pressure Vessel Wastage at the Davis-Besse Nuclear Power Plant," dated December 2006. Regarding the second report, the DFI required specific information relative to FENOC's endorsement of the report's conclusions and the implications of any new positions

taken by FENOC compared to those previously communicated to the NRC in response to the Notice of Violation and Proposed Imposition of Civil Penalty dated April 21, 2005. After reviewing FENOC's response to the DFI, the NRC will determine whether further action is necessary to ensure compliance with regulatory requirements.

Omaha Public Power District (Fort Calhoun Station) EA-07-047

On May 29, 2007, a Notice of Violation was issued for a violation associated with a White Significance Determination Finding involving the improper installation of the valve disk of a Containment Spray Header Isolation Valve. The improper installation resulted in a condition in which the actual position of the valve was nearly opposite of the indicated position. This condition resulted in an inoperable train of the containment spray system for an entire operating cycle and also provided a reactor coolant system diversion flow path if shutdown cooling was initiated following certain postulated accident conditions. The violation was cited against 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for conducting maintenance activities without procedures that were appropriate to the circumstances. Specifically, the maintenance and post-maintenance procedures did not require actions to verify the correct orientation of the valve.

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 issued and, as needed, will continue to be issued to strengthen further the security of NRC-licensed facilities and control of nuclear materials.

In April 2007, the Commission approved proceeding with the publication of the final rule to amend existing 10 CFR Part 26 requirements for security force personnel at reactor facilities and to engage the industry and stakeholders to complete the associated guidance for the rule. The NRC is scheduled to visit a limited number of reactor facilities in July and August 2007 to collect information to address an issue associated with the fatigue language that requires additional data. The publication date of the final rule will reflect these additional tasks.

On May 21, 2007, NRC met with industry representatives to discuss the impending issuance of Regulatory Guide 5.69, "Guidance for the Application of the Radiological Sabotage Design-Basis Threat in the Design, Development, and Implementation of a Physical Security Program that meets 10 CFR, Section 73.55 Requirements." For some licensees, provisions in Regulatory Guide 5.69 may require additional analysis and implementing actions; discussions are underway to resolve issues and to determine how many sites may be impacted.

The NRC is conducting full force-on-force exercises at each site on a normal, 3-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 April 20, 2007, with appropriate revisions, the NRC endorsed the Controller Guidance document to facilitate control and execution of exercises for the remainder of the current force-on-force inspection cycle, which ends in December 2007. The NRC remains committed to working with the industry to continue to improve the realism and effectiveness of the force-on-force inspection program and continues to pursue methods to improve simulations.

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.

NRC and the DHS continued to conduct monthly coordination meetings with a primary focus on categorization of, and action on, certain gaps identified during the Comprehensive Review process. The Comprehensive Review Outcomes Working Network was established to address gaps and potential enhancements identified during the Comprehensive Review program with representatives from DHS Risk Management Division, DHS Chemical and Nuclear Preparedness and Protection Division, U.S. Coast Guard, and the NRC.

In January and March 2007, NRC met with DHS to discuss a potential grid vulnerability that, under certain postulated conditions, could disable power generation and some equipment at electrical generating stations, including nuclear power plants. The DHS Office of Cyber Security and Telecommunications and Office of Infrastructure Protection are co-leading a "Tiger Team" to determine the impact, if any, on the nuclear sector and to assess the potential impact and consequences from a Federal perspective. NRC has established an interoffice Grid Security Special Project Working Group to address the potential vulnerability identified by DHS. The working group has developed a draft action plan to address NRC actions to deal with the vulnerability. NRC is working with DHS to assist in the Federal inter-agency effort.

On February 21, 2007, the Memorandum of Understanding (MOU) for new reactors was signed by the DHS Assistant Secretary for Infrastructure Protection. The MOU establishes a process to implement the provisions of Section 657 of the Energy Policy Act of 2005 for the NRC to consult with DHS on security issues concerning the locations of proposed new reactor facilities. On June 14, NRC met with DHS to discuss implementation of the MOU, including the status of previously developed action-items, DHS efforts in establishing priorities for funding and support in the timely review of new reactor applications, and related concepts with respect to the scope and content of the final report to be provided to the NRC at the conclusion of its analyses.

In a series of recent meetings, the NRC staff has discussed various new reactor security topics with the industry's New Plants Security Task Force (NPSTF). On April 4 and May 15, NRC met with the NPSTF to discuss security issues pertaining to new reactor applications, including industry technical (topical) reports, the April 2007 information security workshop, the implementation schedule of operational programs for the combined license application (COLA), the time sequence for security plan changes related to construction work and COLA, Nuclear Energy Institute 03-12 Appendices E and F (security plan templates for new reactor construction), a generic implementation schedule for security operational programs, and an update/status of future activities.

VIII Power Upgrades

There are three types of power upgrades. A measurement uncertainty recapture (MUR) power upgrade is a power upgrade of less than 2 percent and is based on the use of more accurate feedwater flow measurement techniques. Stretch power upgrades (SPU) are power upgrades 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. EPUs are power upgrades beyond the design capacity of the plant and, thus, require major plant modification.

Licensees have applied for and implemented power upgrades since the 1970s as a way to increase the power output of their plants. The NRC staff has conducted power upgrade reviews since then and has completed 113 such reviews to date. Approximately 14,700 megawatts-thermal (MWt) or 4,900 megawatts-electric (MWe) in electric generating capacity (an equivalent of about 4.9 nuclear power plant units) has been gained through implementation of power upgrades at existing plants. The NRC currently has 11 plant-specific power upgrade applications under review. The 11 applications include five MUR power upgrades and six EPUs.

The NRC staff is currently reviewing the Calvert Cliffs Units 1 and 2, and Fort Calhoun MUR power upgrades, which were submitted on January 31 and March 31, 2005, respectively. The NRC did not complete these reviews within six months, which is the timeliness goal for MUR power upgrades that are based on the use of NRC-approved methodologies for feedwater flow measurement. Additionally, the staff is working to resolve complex steam dryer issues related to the EPU applications for Browns Ferry Units 1, 2, and 3; Hope Creek; and Susquehanna Units 1 and 2.

In April 2007, the NRC staff conducted a survey of all nuclear power plant licensees to obtain information on whether they planned to submit power upgrade applications over the next 5 years. Based on this survey, licensees plan to request power upgrades for 27 nuclear power plants over the next 5 years. If approved, these power upgrades will result in an increase of about 4,377 MWt or approximately 1,459 MWe in generating capacity.

IX New Reactor Licensing

The NRC expects to license the next generation of nuclear power plants using 10 CFR Part 52. Part 52 governs the issuance of standard design certifications, early site permits (ESPs), and combined licenses (COLs) for nuclear power plants. These activities are summarized in the table at the end of this section.

The staff is engaged in numerous ongoing interactions with vendors and utilities regarding prospective new reactor applications and licensing activities. Based on these interactions, the staff expects to receive a significant number of new reactor COL applications over the next several years and is currently developing the infrastructure necessary to support the application reviews. As of July 2007, the staff is preparing to receive up to 19 COL applications for a total of 28 new nuclear units over the next few years.

Design Certifications and Pre-Application Activities

The staff has issued design certifications for four reactor designs that can be referenced in an application for a nuclear power plant: General Electric (GE) Nuclear Energy's Advanced Boiling Water Reactor (ABWR) design, Westinghouse's System 80+ design, Westinghouse's AP600 design, and Westinghouse's AP1000 design. COL applications referencing the ABWR and the AP1000 designs are expected during the next 12 months.

The ESBWR design certification application was submitted on August 24, 2005. On June 1, 2007, GE submitted its schedule for submitting major deliverables to support the ESBWR design certification. The staff is currently preparing its safety evaluation input for the ESBWR Design Control Document (DCD) Revision 3. DCD Revision 4 will be submitted by September 28, 2007, and DCD Revision 5 will be submitted by March 31, 2008. GE also provided the schedule for milestones for new topical reports, revised topical reports, and the remaining sections of Revision 2 of the probabilistic risk assessment. The staff is developing a detailed schedule for completion of the ESBWR design certification.

By letter dated May 26, 2007, Westinghouse submitted an application to amend the AP1000 Design Certification Rule and also submitted Revision 16 to the AP1000 DCD. As of July 3, 2007, Westinghouse has submitted 104 technical reports for staff review. Although submitted as part of the Bellefonte COL pre-application phase, these technical reports apply generically to the remaining COL applications that intend to reference the AP1000 design through Revision 16 to the AP1000 DCD. The current schedule for issuance of the amendment to the AP1000 Design Certification calls for issuance of a Safety Evaluation by the third calendar quarter of 2008 and completion of the Rulemaking by the fourth calendar quarter of 2009.

The staff is currently conducting design certification preapplication activities for AREVA's Evolutionary Power Reactor (EPR) and Mitsubishi's U.S. Advanced Pressurized Water Reactor (APWR).

Early Site Permit Reviews

The staff has issued two ESPs: the Clinton ESP on March 15, 2007, and the Grand Gulf ESP on April 5, 2007. ESP reviews that are in progress are addressed below.

The staff has completed its safety and environmental reviews for the North Anna ESP application and has issued the FSER and Environmental Impact Statement (EIS) for this review. The ASLB has conducted hearings for the North Anna ESP application and issued the initial decision for this ESP on June 29, 2007. The Commission is currently considering the ASLB's initial decision.

The staff received the Vogtle ESP application in August 2006 and completed its acceptance review in September 2006. The staff has completed the safety and environmental site audits and submitted the environmental RAIs. The staff submitted the safety RAIs in March 2007. The staff plans to issue both the FSER and Final EIS for the Vogtle ESP in May 2008.

Construction Inspection Program Developments

Several milestones were achieved regarding the development of the vendor inspection program. In April, the staff traveled to Japan Steel Works (JSW) in Muroran, Japan, to pilot the process for relating vendor inspection results to the verification of the completion of inspections, tests, analyses, and acceptance criteria. The staff also obtained an understanding of the scope of products and services being provided by JSW for construction of new reactors in the U.S. and insights into the quality assurance and control processes and procedures used by JSW for fabricating components for the U.S. commercial market. In May, Headquarter's Quality and Vendor Branches and Region II staff, in support of the agency's acceptance review, conducted a first-of-a-kind pre-application audit of quality activities and quality assurance controls that are part of the South Texas Project COL application.

Regulatory Infrastructure

The staff continues to perform activities to ensure that it is prepared to review new applications. These activities include completing a COL application regulatory guide (Regulatory Guide 1.206) on June 20, 2007, developing strategies for optimizing the review of the applications to be received, developing a construction inspection program framework and subsequent inspection program for new construction activities, and continuing activities in the pre-application and design certification review processes. In addition, the NRC has updated NUREG-0800, "Standard Review Plan," and associated regulatory guides.

The staff has undertaken several activities associated with rulemaking. The staff completed the final rule amending 10 CFR Part 52, subject to changes and comments noted by the Commission. The Office of Management and Budget (OMB) approved the Part 52 final rule for publication. The Part 52 final rule is currently in the process of being published. The final rule enhances effectiveness and efficiency of the Part 52 licensing processes and clarifies the applicability of requirements to each of the processes: ESP, standard design approval, standard design certification, COL, and manufacturing license.

The staff completed the rule amending 10 CFR Parts 2, 50 and 52 to revise requirements for limited work authorizations and site preparation activities and will send that rule to OMB for its review. The Commission directed the staff to work with external stakeholders to develop and publish the necessary implementation guidance and to give this activity a high priority.

The NRC staff is preparing a proposed rulemaking on aircraft impact assessments following the issuance of a Staff Requirements Memorandum (SRM) directing the staff to incorporate the requirement into 10 CFR Part 52. The proposed rule is expected to be published for public comment in mid-September 2007. The SRM also directed the staff to share sensitive information related to aircraft impact with new plant designers. Orders requiring vendors to establish programs for control of Safeguards Information will be issued by July 31, 2007. It is expected that all vendors will be supplied the aircraft impact characteristics by mid-September 2007.

**New Reactor Licensing Activities - Letters of Intent Received
As of July 10, 2007**

Organization/Design*	Sites under Consideration **	Planned Applications	Date	Basis
AP1000 (52-006) Certified Design				
Duke (742)	William S. Lee III Nuclear Station (2) (Cherokee)	COL	10/2007	Letters 3/4/05, 10/25/05, 3/16/06 7/17/06 (RIS), and 5/31/07 (RIS)
NuStart Energy (TVA) (740)	Bellefonte (2)	R-COL	10/2007	Letters 12/7/2004, 11/17/2005, 7/17/06 (RIS), and 5/31/07 (RIS)
Progress Energy (738)	Harris (2)	COL	1/2008	Letters 8/24/05 and 2/1/06; 11/1/05 Mtg Letter 7/12/06 (RIS), 5/31/07 (RIS)
Progress Energy (756)	Levy County, Fla (2)	COL	7/2008	Letters 8/24/05 and 2/1/06; 11/1/05 Mtg Letter 7/12/06 (RIS), 5/31/07 (RIS)
South Carolina Electric and Gas (743)	Summer (2)	COL	10/2007	Letters 12/5/05, 2/10/06, 7/13/06 (RIS), and 5/30/07 (RIS)
Southern Nuclear Operating Co. (755)	Vogtle (2)	COL	3/2008	Letters 7/26/05, 8/17/05, 7/17/06 (RIS), and 5/30/07 (RIS); Mtg Summary (ML052710018)
ESBWR (52-010) Design Certification Application submitted 8/24/05				
Dominion (741)	North Anna	COL	11/2007	Letter 11/22/05, 7/17/06 (RIS), 5/31/07 (RIS)
Entergy (745)	River Bend	COL	5/2008	Letter 12/5/05, 7/17/06 (RIS), and 5/31/07 (RIS)
NuStart Energy (Entergy) (744)	Grand Gulf	COL	11/2007	Letters 12/7/2004, 11/17/2005, 7/17/06 (RIS), and 5/31/07 (RIS)
EPR (733) Design Certification Application to be submitted 12/2007				
Amarillo Power (752)	TBD (2)	COL	4th Qtr 2008	Letter 3/13/06, 7/27/06, 3/15/07, and 5/31/07 (RIS)
AmerenUE (750)	Callaway	COL	3 rd Qtr 2008	Letter 7/12/06, 12/15/06, 4/5/07, 6/1/07, and 5/31/07 (RIS)
PPL Generation	Susquehanna	COL	3 rd Qtr 2008	Letters 5/24/07 and 6/13/07

**New Reactor Licensing Activities - Letters of Intent Received
As of July 10, 2007**

Organization/Design*	Sites under Consideration **	Planned Applications	Date	Basis
Unistar Nuclear (746)	Calvert Cliffs	R-COL	1 st Qtr 2008	Press Release; 11/2/05 Mtg; Letters 11/4/05, 6/8/06, 6/21/06, 7/13/06 (RIS), and 5/31/07 (RIS)
	Nine Mile Point	COL	3 rd Qtr 2008	
ABWR (52-001) Certified Design				
NRG Energy (749)	South Texas Project (2)	R-COL	Late 2007	Letters 6/19/06 and 5/29/07 (RIS)
US APWR (751) Design Certification Application to be submitted 12/2007				
TXU Power (754)	Comanche Peak (2)	R-COL	7/2008	Letter 6/27/06, 9/7/06, 1/18/07, 3/9/07, 4/9/07, and 5/30/07 (RIS)
Unannounced Technology				
DTE Energy	Fermi	COL	10/2008	Letters 2/15/07 and 5/31/07 (RIS)
Duke	Davie County, NC	ESP	TBD	Letter 3/16/06
	Oconee County, SC	ESP	TBD	
Exelon	Texas	COL	11/2008	Letter 9/29/06, and 5/31/07 (RIS)
Florida Power & Light	TBD	COL	2009	Letters 4/3/06
Unannounced Applicant	TBD	ESP	6/2010 - 6/2012	Letter 4/5/07

* Numbers in parentheses are Docket Number or Project Number

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