November 22, 2005

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) 2005 Energy and Water Development Appropriations Act, House Reports 108-554 and 108-792, directed the U.S. Nuclear Regulatory Commission (NRC) to continue to provide a monthly 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 transmit the eighty-second report, which covers the month of September 2005. I am also providing more recent information in this cover letter in order to keep you fully and currently informed of NRC's licensing and regulatory activities.

The NRC's Executive Director for Operations has approved a plan to increase NRC's inspection activities at the Indian Point Energy Center in Buchanan, New York. This plan provides a formal vehicle for the staff to assess Entergy's efforts to address leakage from the Unit 2 spent fuel pool as well as reliability issues with the site's alert and notification system. The approval for increased inspection activities at Indian Point follows the initiation of a special inspection in late September into apparent leakage from the Unit 2 spent fuel pool and the detection of tritium in six of nine on-site locations. The spent fuel pool leakage is small and does not pose any immediate health or safety concern for members of the public or plant workers. In addition, no tritium has been detected off site. The NRC has also been overseeing Entergy's actions to address recent siren issues and improve overall system reliability. The Indian Point siren system in the recent past has experienced performance problems, including primary and back-up actuation system problems, siren monitoring system failures, and some actual siren failures. Entergy has indicated that it plans to replace the entire siren system in response to the new requirement for backup power that was included in the Energy Policy Act of 2005.

The NRC monitored Hurricane Wilma from its Headquarters Operations Center in Rockville, Maryland, and its regional Incident Response Center in Atlanta, Georgia. Two nuclear power plants near Wilma's path through Florida -- St. Lucie, near Ft. Pierce, and Turkey Point, 25 miles south of Miami -- shut down as a result of the storm, although St. Lucie's Unit 1 reactor was already shut down for a refueling outage. Regional inspectors were dispatched to both sites to supplement existing NRC inspection staff at the sites. An NRC senior executive service manager was also sent to the Florida Emergency Operations Center in Tallahassee to

help with coordination. The NRC received continuous status updates from the nuclear power plants and maintained close contact with plant personnel and NRC inspection staff throughout the storm. In addition, the NRC coordinated with the State of Florida to monitor licensees possessing radioactive materials to ensure they took adequate hurricane preparations. As with previous hurricanes Katrina and Rita, NRC worked with its licensees, as well as Federal, State and local authorities, to ensure proper preparedness and response to Hurricane Wilma.

The NRC has issued the first revision of its Generic Aging Lessons Learned (GALL) Report, a key document in the agency's process for reviewing applications to renew reactor operating licenses. The report's revisions stem from experience gained since 1998 from reviewing more than 15 license renewal applications, which covered more than 30 reactors. The original report, issued in July 2001, included 48 examples of aging management programs. Almost all of the 48 examples are updated in the revised report, and an additional 9 programs have been added. The revised GALL Report also includes a new chapter on standardized aging-management terminology. The GALL Report catalogs the structures and components found in a nuclear power plant. NRC reviewers use the report's matrix of materials and environments, as well as aging effects and mechanisms, to judge whether a plant's aging management program is acceptable. The revised GALL Report's two volumes, dated September 27, 2005, and September 30, 2005, respectively, are available by ADAMS, the NRC's electronic document database.

The NRC has amended the operating license of the Maine Yankee Atomic Power Co. to release the majority of land from the decommissioned Maine Yankee power plant site for unrestricted public use as it meets all NRC and Environmental Protection Agency requirements. Maine Yankee's amended license will still apply to the site's dry cask storage facility, where the spent nuclear fuel from the plant's 23 years of operation is stored, plus a small parcel of land adjacent to this facility that was used as a loading area for soil excavated during the decommissioning of the plant; this soil is awaiting off-site shipment and disposal. This small parcel will also be used for future cask-handling operations. The total land remaining under the license is approximately 12 acres. Maine Yankee remains responsible for the security and protection of this land and the dry cask storage facility, and is required to maintain a radiation monitoring program at the site.

On October 21, 2005, the NRC issued the final safety evaluation report for an Early Site Permit (ESP) for the Grand Gulf site, located about 25 miles south of Vicksburg, Mississippi. On April 21, 2005, the staff issued the Draft Environmental Impact Statement for the Grand Gulf early site permit application. The Grand Gulf application was filed on October 21, 2003, by System Energy Resources, Inc., a subsidiary of Entergy. If approved, the permit would give the company up to 20 years to decide whether to build one or more additional nuclear power plants on the site and to file an application with the NRC for approval to begin construction.

I also want to inform you of the agency's progress in implementing the Energy Policy Act of 2005. Some of the agency's recent actions include:

- Section 651 (d)(1) - Radiation Source Protection, Task Force on Radiation Source Protection and Security: On October 3, 2005, I wrote to the heads of the 11 Federal member agencies specified in the Act requesting their participation in an initial meeting of a new task force to evaluate and provide recommendations to the Congress and the President on security of radiation sources in the United States from potential terrorist threats. In addition, I have asked the President's Science Advisor and the Secretary of Health and Human Services to appoint task force members. This first meeting will focus on development of a charter, review of past work in this area, and outlining a schedule for completion of the group's work and preparation of the report to Congress.

- Section 651 (d)(1) - Radiation Source Protection, National Academy of Sciences (NAS) Study: The NRC is currently in negotiations with NAS regarding a study of industrial, research, and commercial uses for radiation sources, as defined in the ACT. The purpose of the study is to determine whether there are other processes that can either replace radiation sources with economically and technically appropriate alternatives or use radiation sources that pose a lower risk.

Please do not hesitate to contact me if I may provide additional information.

Commissioner Jaczko did not participate in the development of this letter to the extent it deals with the Yucca Mountain project.

Sincerely,

/RA/

Nils J. Diaz

Enclosure:
Monthly Status Report on the Licensing Activities
and Regulatory Duties of the U.S. NRC, September 2005

cc: Senator Thomas R. Carper

Identical 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, Chairman
Subcommittee on Energy and Water Development
Committee on Appropriations
United States House of Representatives
Washington, D.C. 20515
cc: Representative Peter Visclosky

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

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

SEPTEMBER 2005

Enclosure

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[1]Note: The period of performance covered by this report includes activities occurring between the first and last day of September 2005. 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) has made significant progress toward risk-informing its regulations for nuclear power reactors. In July 1998, the NRC issued Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis." This guidance allowed licensees to support requests to change the design and licensing basis of reactor facilities using risk information. In late summer 1998, NRC issued three more regulatory guides allowing licensees to request NRC approval of risk-informed alternatives to existing requirements on in-service inspection, in-service testing, and technical specifications. Since that time, several rulemakings have been completed to risk-inform NRC regulations. These rulemakings included revisions to the maintenance rule for nuclear power plants (10 CFR 50.65) in November 2000, combustible gas control requirements for reactor containment buildings (10 CFR 50.44) in September 2003, and nuclear reactor fire protection regulations (10 CFR 50.48) in June 2004.

More recently, 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 structures, systems, and components and maintain these structures, systems, and components in a manner commensurate with their safety significance. To ensure that the new regulation is properly implemented, the NRC developed Regulatory Guide 1.201, "Guidelines for Categorizing Structures, Systems and Components in Nuclear Power Plants According to Their Safety Significance." The NRC plans to release Regulatory Guide 1.201 for trial use for pilot applications shortly. After the pilot period closes, the NRC will incorporate lessons learned from the pilot program and finalize the Regulatory Guide.

Risk-informed requirements for emergency core cooling systems are also being developed. The NRC expects to publish a proposed rule for these requirements in November 2005, with a 90-day public comment period. Final rules are usually issued about nine months after a proposed 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 which would result in risk-informed, technology-neutral regulations for licensing of future nuclear power reactor designs. The staff expects the first part of the program, developing the guidance and criteria for establishing the regulations, to be ready for stakeholder review in mid-2006. NRC is also investigating whether this risk-informed, technology-neutral regulatory structure should apply or be available to risk-inform the current regulations on light water reactors in 10 CFR Part 50.

II Revised 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 efficacy of the process and to consider the feedback for future ROP refinements. Recent activities include the following:

- On September 21, 2005, NRC staff held a public meeting with the Nuclear Energy Institute (NEI) and industry representatives to discuss issues related to inspection, tests, analysis, and acceptance criteria inspections for new reactors licensed and constructed under 10 CFR Part 52.

- On September 21, 2005, NRC staff hosted the monthly public meeting on the Mitigating Systems Performance Index (MSPI) at NRC Headquarters. Meeting attendees discussed a July 27, 2005 letter from NEI regarding MSPI Probabilistic Risk Assessment quality commitments. Industry representatives discussed the status of a related industry study and MSPI Basis Documents that were submitted to the NRC.

- On September 22, 2005, NRC staff hosted the monthly ROP public meeting at NRC Headquarters. Meeting participants discussed fire protection and other Significance Determination Process issues and provided status updates on the Scrams with Loss of Normal Heat Removal and Reactor Cooling System Leakage Performance Indicator Task Forces. Meeting participants also discussed general ROP issues and performance indicator Frequently Asked Questions.

III Status of Issues in the Reactor Generic Issue Program

On September 23, 2005, the staff closed GSI-185, “Control of Recriticality Following Small-Break Loss-of-Coolant Accidents (LOCA) in Pressurized Water Reactors (PWR).” GSI-185 addressed a concern about the likelihood and effects of a small break LOCA in PWRs, which could create a potential for criticality. The postulated scenario involves steam generation in the core with subsequent condensation in the steam generators, causing de-borated water to accumulate and allowing it to be transported into the core through either natural circulation or restart of a recirculation coolant pump (RCP). The concern evaluated by the staff was related to the potential for recriticality leading to fuel damage.

The staff conducted a technical assessment and determined that: (1) boron dilution with restart of natural circulation is not a significant event; and (2) boron dilution with restart of an RCP is not a significant event at most PWRs and is of sufficiently low likelihood to be outside the design basis envelope for other PWRs. Consequently, the staff determined that this issue was not a generic safety concern, and GSI-185 was closed with no changes to existing regulations or guidance.

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) 2005 NRC Performance Plan incorporates three output measures related to licensing actions -- number of licensing actions completed per year, age of the licensing action inventory, and size of 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 10 CFR 2.206 petitions, NRC review of generic topical reports, responses by the Office of Nuclear Reactor Regulation to regional 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 2005 NRC Performance Plan incorporates one output measure related to other licensing tasks -- number of other licensing tasks completed.

In FY 2004, several high priority activities, such as power grid reliability, changes to nuclear facility security plans, safeguards contingency plans, and guard force training and qualification plans, resulted in the NRC reprogramming resources to accommodate the additional work. One of the programs affected by the reprogramming of resources was operating power reactor licensing actions. As a result, at the end of FY 2004, the size of the licensing action inventory exceeded the goal of less than or equal to 1000 and the goal of competing at least 96 percent of the licensing actions in one year or less was not met. The effects of the reprogramming continued into FY 2005 and will continue into FY 2006. The licensing actions inventory and timeliness goals for FY 2005 were changed. Additional resources will be allocated in FY 2006 to reduce the inventory and improve timeliness to meet the original timeliness and inventory goals.

The NRC did not meet its timeliness goal at the end of FY 2005 for completing 100 percent of its reactor licensing actions within 2 years because the scheduled review of the Vermont Yankee extended power uprate was extended to allow a thorough review of key technical issues associated with safe operation at higher power levels. The NRC met the other output measure goals.

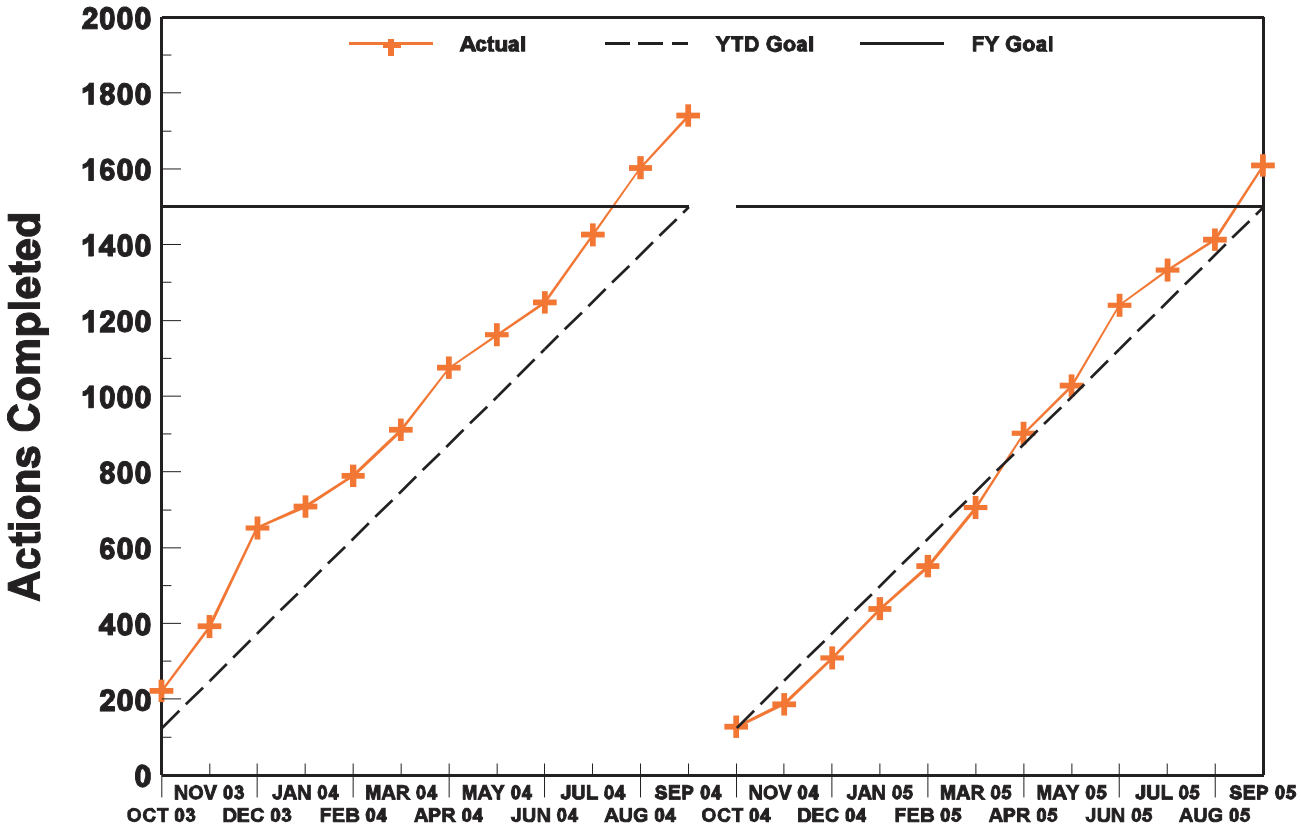
The actual FY 2003 and FY 2004 results, the FY 2005 goals, and the actual FY 2005 results for the four NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the table on the following page.

PERFORMANCE PLAN				
Output Measure	**FY 2003 Actual**	**FY 2004 Actual**	**FY 2005 Goals**	**FY 2005 Actual**
Licensing actions completed/year	1774	1741	$ 1500	1609
Age of licensing action inventory	96% # 1 year; and 100% # 2 years	91%# 1 year; and 100% # 2 years	90% # 1 year; and 100% # 2 years	92.6%# 1 year; and 99.9% # 2 years
Size of licensing action inventory	1296	1135	# 1200	1041
Other licensing tasks completed/year	500	671	$ 500	715

The charts on the following pages show NRC's FY 2005 trends for the four operating power reactor licensing action and other licensing task output measure goals:

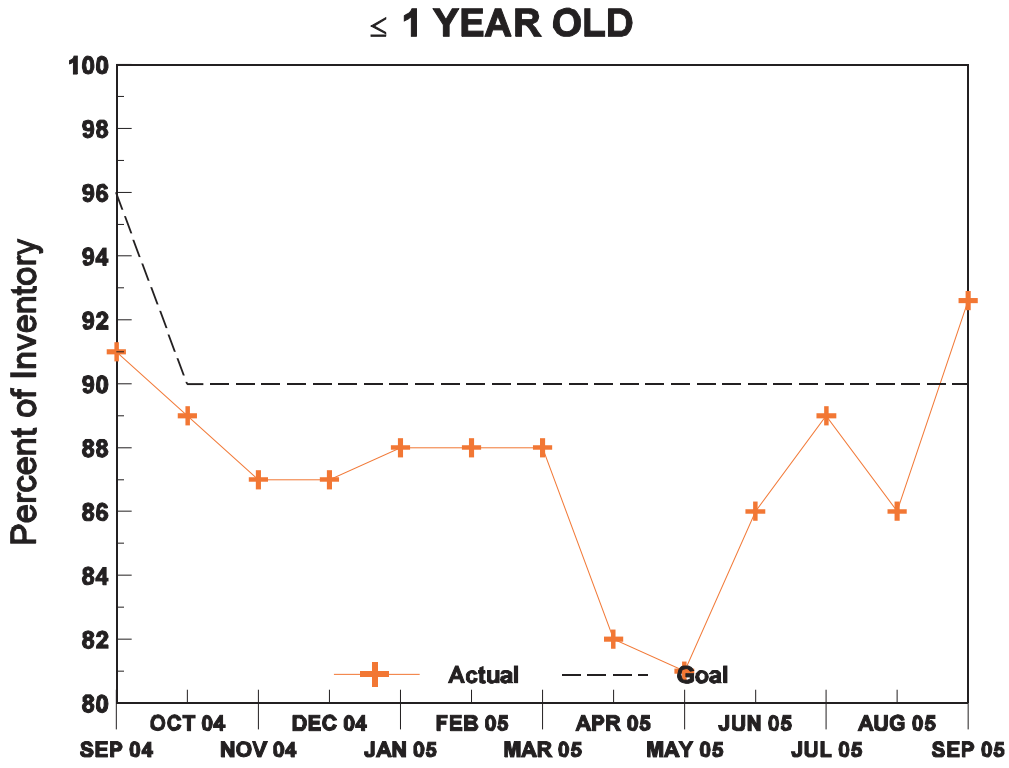
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Licensing Actions



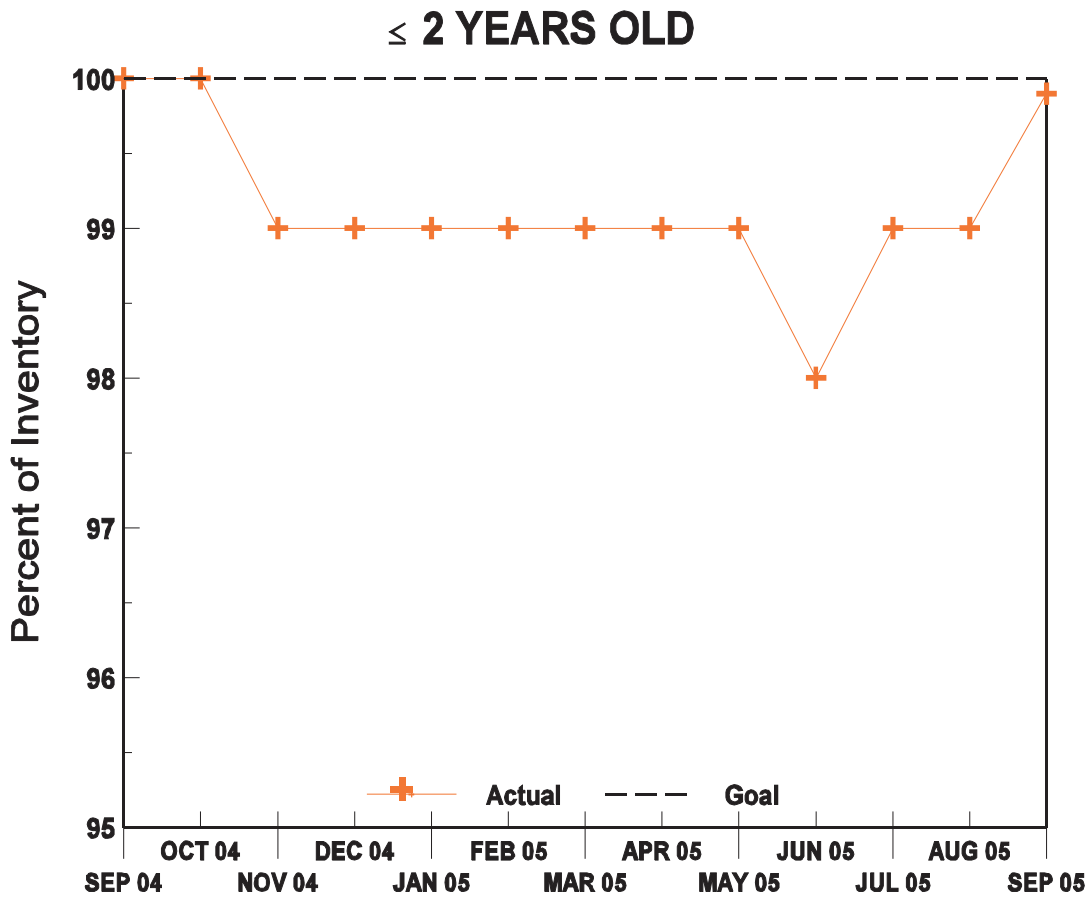
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



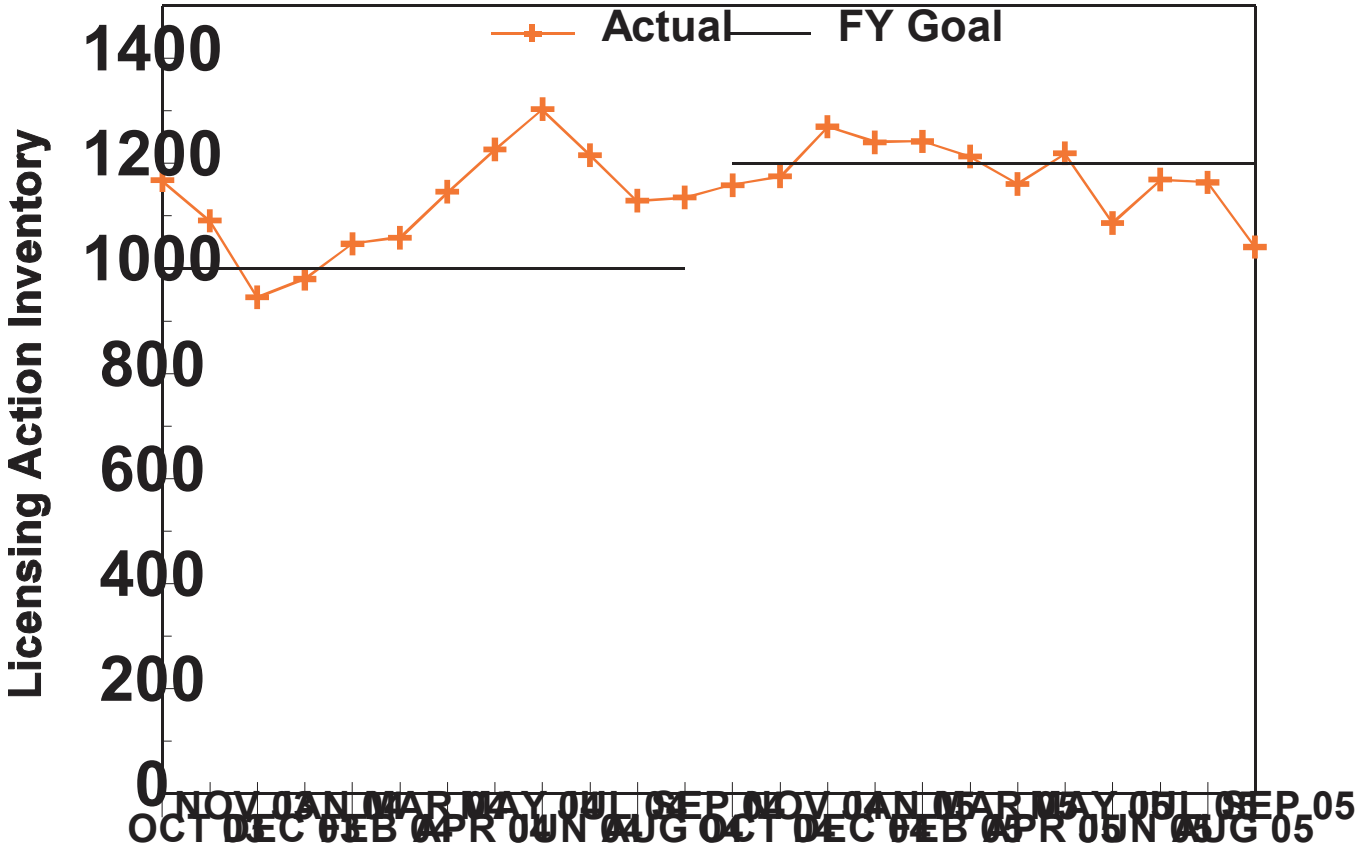
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory

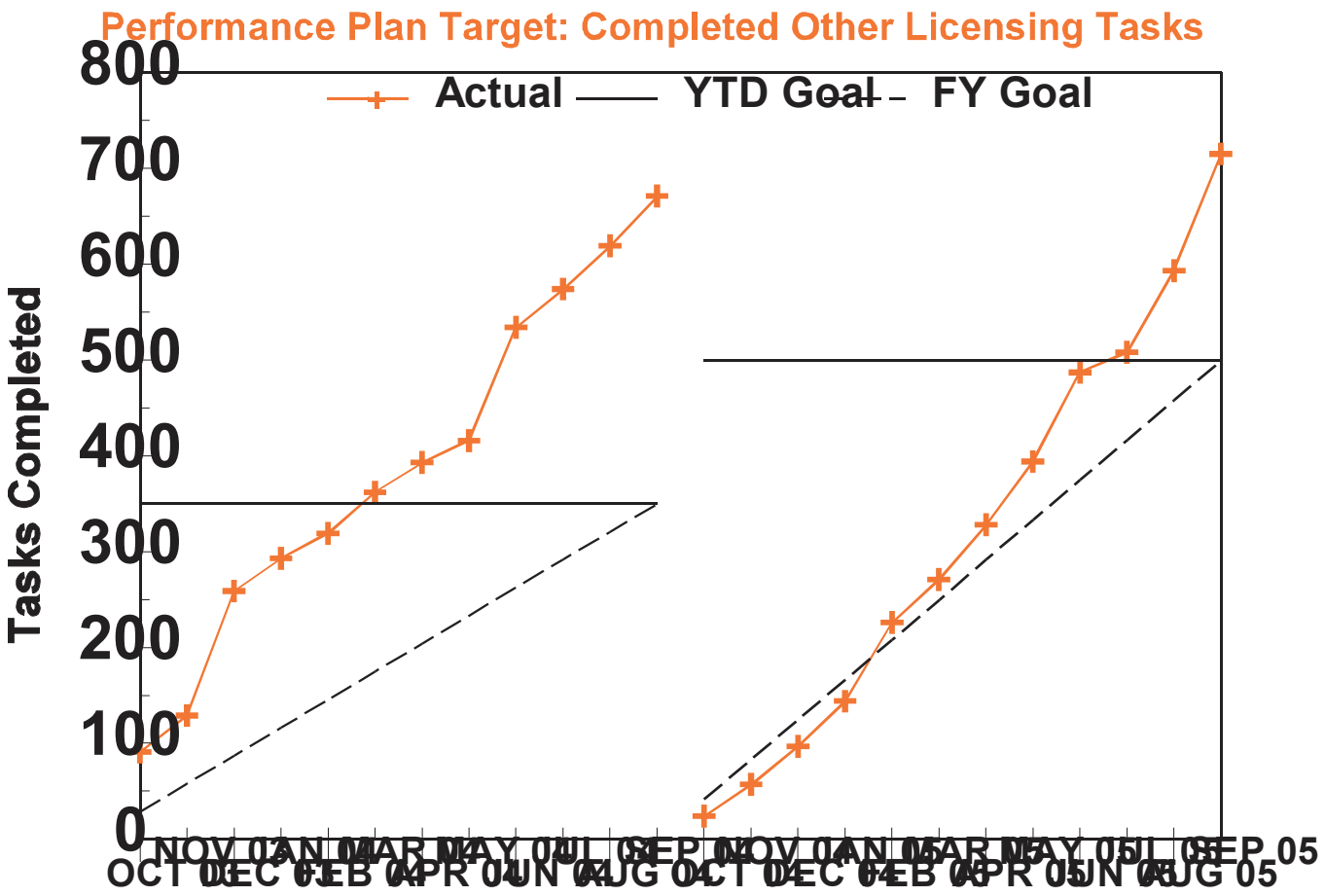


Nuclear Reactor Safety - Reac

Performance Plan: Size of Licensing Action Inventory



Nuclear Reactor Safety - Reac



V Status of License Renewal Activities

Browns Ferry, Units 1, 2, and 3, License Renewal Application

The staff issued the final supplemental environmental impact statement (SEIS) in June 2005 and the draft safety evaluation report (SER), identifying remaining open items, in August 2005. The applicant's responses to the open items were received in September 2005. The staff is reviewing the applicant's responses and anticipates issuing the final SER in January 2006.

Millstone, Units 2 and 3, License Renewal Application

The staff issued the final SEIS in July 2005 and the final SER in August 2005. A petition for late intervention and request for hearing was submitted in February 2005, and in July 2005, the Atomic Safety and Licensing Board (ASLB) certified the issue to the Commission for resolution.

Point Beach, Units 1 and 2, License Renewal Application

The final SEIS was issued in August 2005. The draft SER, identifying remaining open items, was issued in May 2005. The applicant's responses to the open items were received in July 2005. The staff is reviewing the applicant's open item responses and anticipates issuing the final SER in December 2005.

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

The Nine Mile Point license renewal application was submitted in May 2004, and the staff had been reviewing the application. The NRC staff informed the applicant that the responses to the staff's requests for additional information and the applicant's level of support were not adequate. Subsequently, the applicant requested that the review be placed on hold in order to address the issues. The applicant submitted an amended application in July 2005, and the staff has resumed its review of the application. The staff is assessing the information provided and will issue a revised review schedule taking into account the duration of the hold and the additional time needed to complete the review of the application. The draft SEIS was issued in September 2005.

Brunswick, Units 1 and 2, License Renewal Application

The Brunswick license renewal application is currently under review and the staff is preparing requests for additional information. The draft SEIS was issued in August 2005, and the draft SER, identifying any remaining open items, is scheduled to be issued in December 2005.

Monticello License Renewal Application

The Monticello license renewal application is currently under review, and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in February 2006, and the draft SER, identifying any remaining open items, is scheduled to be issued in April 2006. A request for hearing has been received in response to the NRC's notice of opportunity for hearing and an ASLB has been established.

Palisades License Renewal Application

The Palisades license renewal application is currently under review, and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in February 2006, and the draft SER, identifying any remaining open items, is scheduled to be issued in June 2006. A request for hearing has been received in response to the NRC's notice of opportunity for hearing, and an ASLB has been established.

Oyster Creek License Renewal Application

On July 22, 2005, the NRC received an application for renewal of the operating license for Oyster Creek. 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 2008.

VI Status of Review of Private Fuel Storage, Limited Liability Corporation's Application for a License to Operate an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians

This proceeding involves the application of Private Fuel Storage, L.L.C. (PFS) to construct and operate an independent spent fuel storage installation on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah. On September 9, 2005, the Commission issued a Memorandum and Order, CLI-05-19, in which it (a) denied the State of Utah's petition for review of ASLB's February 24, 2005 Final Partial Initial Decision (Final PID) and other decisions on aircraft crash issues, and (b) authorized the NRC staff, upon making the requisite findings on all non-contested issues, to issue a license to PFS to construct and operate its proposed facility. The staff is reviewing the administrative and adjudicatory record to identify all necessary terms and conditions, including matters related to completion of an interagency Memorandum of Agreement concerning historic preservation, and anticipates issuance of a license in the near future.

VII Enforcement Process and Summary of Reactor Enforcement by Region

Reactor Enforcement Actions						
		Region I	Region II	Region III	Region IV	TOTAL
Severity Level I	September 05	0	0	0	0	0
	FY 05 YTD Total	0	0	2	0	2
	FY 04 Total	0	0	0	0	0
	FY 03 Total	0	0	0	0	0
Severity Level II	September 05	0	0	0	0	0
	FY 05 YTD Total	0	0	2	0	2
	FY 04 Total	0	1	0	0	1
	FY 03 Total	0	0	0	0	0
Severity Level III	September 05	0	0	0	0	0
	FY 05 YTD Total	2	1	3	2	8
	FY 04 Total	1	2	4	0	7
	FY 03 Total	2	0	4	0	6
Cited Severity Level IV or GREEN	September 05	0	0	0	0	0
	FY 05 YTD Total	6[2]	0	4[2]	0	10
	FY 04 Total	1	0	2	3	6
	FY 03 Total	1	0	2	1	4
Non-Cited Severity Level IV or GREEN	September 05	0	9	6	5	20
	FY 05 YTD Total	239	197	300[3]	282	1018
	FY 04 Total	271	175	290	301	1037
	FY 03 Total	211	164	253	184	812

* Numbers of violations are based on enforcement action tracking system data that may be subject to minor changes following verification. The numbers shown as Severity Level I, II, III or IV refer to the number of Severity Level I, II, III, and IV violations or problems. The monthly totals generally lag by 30 days due to inspection report and enforcement development.

[2]The Cited Severity Level IV or Green FY05 YTD Total has been increased by 2 for Region I (1 in November 2004 and 1 in January 2005) and 1 for Region III to reflect corrections in the FY05 data.

[3]The Non-Cited Severity Level IV or Green FY05 YTD Total has been increased by 37 for Region III to reflect corrections in the January through August 2005 data.

Escalated Reactor Enforcement Actions Associated with the Reactor Oversight Process						
		Region I	Region II	Region III	Region IV	Total
Notices of Violation Related to RED, YELLOW, or WHITE Findings	September 05 RED	0	0	0	0	0
	September 05 YELLOW	0	0	0	0	0
	September 05 WHITE	0	2	2	0	4
	FY 05 YTD Total	5	4[4]	5[4]	1	15
	FY 04 Total	3	4	7	6	20
	FY 03 Total	6	1	7	1	15

Description of Significant Actions Taken During September 2005

Florida Power Corporation (Crystal River Nuclear Plant) EA-05-114 - On September 21, 2005, a Notice of Violation was issued for a violation associated with a White significance determination process (SDP) finding involving unprotected post-fire safe shutdown cables and related non-feasible local manual operator actions. The violation cited the licensee's failure to ensure that one of the redundant trains of systems necessary to achieve and maintain hot shutdown conditions would be free of fire damage by one of the three means specified in 10 CFR Part 50, Appendix R, Section III.G.2.

Southern Nuclear Operating Company, Inc. (Hatch Nuclear Plant) EA-05-134 - On September 19, 2005, a Notice of Violation was issued for a violation associated with a White SDP finding involving the removal of the Technical Support Center from service for more than 7 days, which represented a loss of a planning standard function. The violation cited the licensee's failure to provide and maintain facilities and equipment to support emergency response pursuant to 10 CFR 50.54(q) and 10 CFR 50.47(b)(8).

Dominion Energy Kewaunee (Kewaunee Nuclear Power Plant) EA-05-157 - On September 16, 2005, a Notice of Violation was issued for a violation associated with a White SDP finding involving the licensee's failure to implement design control measures to verify and check the adequacy of the auxiliary feedwater (AFW) system design to mitigate postulated accidents. Specifically, the AFW pump discharge pressure trip switches would not have protected the AFW pumps from air ingestion during natural events, such as a tornado and seismic events. In addition, the AFW system design would not have protected the pumps from "runout" conditions that may be encountered during other design and license basis scenarios.

[4]The FY05 YTD Totals have been increased by 1 for Region II and 3 for Region III to reflect corrections in FY05 Data. The corrections are needed because of incorrect reporting of a White finding in February 2005 in Region II, a White finding in March 2005 in Region III, and two White findings in May 2005 in Region III. An internal audit identified errors in the FY05 YTD totals.

Exelon Nuclear (LaSalle County Station, Units 1 & 2) EA-05-103 - On September 7, 2005, a Notice of Violation was issued for a violation associated with a White SDP finding involving a single point vulnerability that could result in a loss of all on-site and off-site power sources to both 4160 Volt ac Division 1 and Division 2 safety-related buses at either of the LaSalle County Station units. The violation cited the licensee's failure to assure that applicable regulatory requirements and the design basis for safety-related systems were correctly maintained and controlled in accordance with the applicable standards when the licensee made modifications to the emergency diesel generator output circuit breakers.

VIII 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 the security at nuclear power plants. A series of Advisories, Orders, and Regulatory Issue Summaries have been and, as needed, continue to be issued to strengthen further the security of NRC-licensed facilities and control of nuclear materials.

In March 2003, the NRC initiated a pilot program for full force-on-force exercises, which used expanded adversary characteristics that were developed as a result of the increased post 9/11 threat. The pilot was completed, and NRC is now implementing exercises at each site on a three-year cycle. The purpose of the force-on-force exercises is to assess and improve, as necessary, performance of defensive strategies at licensed facilities. The NRC retains responsibility for oversight of the mock adversary force and evaluation of licensee performance. Measures have been established to minimize any possibility for a conflict of interest with respect to responsibilities for physical protection. To date, mock adversary force personnel have performed adequately in the force-on-force exercises in which they have participated.

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. The staff is also developing Emergency Action Levels (EAL) specifically for events involving credible imminent threats. The EAL development program includes plans to coordinate issues with other agencies and state and local governments.

The NRC is continuing the site-specific spent fuel pool assessments begun July 5, 2005. The NRC is conducting 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. Forty-five site assessments have been completed as of the end of September 2005. The spent fuel pool assessments for the remaining sites will be completed by the end of the calendar year. In addition, the NRC is continuing with the structural analyses of two spent fuel pools to provide added assurance of spent fuel pool structural safety margin. These analyses will also be completed by the end of the calendar year.

On August 26, 2005, the NRC published a Proposed Rule on fitness-for-duty (10 CFR Part 26), including both drug/alcohol testing and fatigue-related provisions, for public comment (70 FR 50442). The principal reason for the rulemaking is to update the rule and enhance consistency

with advances in other relevant Federal rules and guidelines. The comment period ends on December 27, 2005. On September 21, 2005, the NRC conducted a public workshop on the Proposed Rule. Comments from the workshop will be addressed during development of the Final Rule.

IX 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 (SPUs) 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 (EPUs) 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 to date, has completed 105 such reviews. Approximately 13,250 megawatts-thermal (MWt) or 4,417 megawatts-electric (MWe) to the Nation's electric generating capacity or an equivalent of about four nuclear power plant units has been gained through implementation of power uprates at existing plants. The NRC staff currently has 13 plant-specific power uprate applications under review. The 13 applications under review include four MUR power uprates, two SPUs, and seven EPUs.

The Vermont Yankee (VY) EPU was submitted on September 10, 2003. The NRC did not complete this review by the end of FY 2005 and, therefore, did not meet the goal of completing 100 percent of its reactor licensing actions within 2 years. The scheduled review of the VY EPU was extended to allow a thorough review of key technical issues associated with safe operation at higher power levels. In addition, to address litigation issues, the Atomic Safety and Licensing Board hearing will be held after the NRC staff issues a final Safety Evaluation, currently scheduled for February 24, 2006.

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

In June 2005, the NRC staff surveyed all licensees to obtain information on whether they planned to submit power uprate applications over the next 5 years. Based on this survey and information obtained since the survey, licensees plan to request power uprates for 19 nuclear power plant units over the next 5 years. If approved, these power uprates will result in an increase of about 4,333 MWt or approximately 1,444 MWe.

X Status of the Davis-Besse Nuclear Power Station

This six-month update on the status of Davis-Besse covers the period from March 2005 through September 2005. This is the last 6 month update that was requested by Congress. The NRC's Oversight Panel continued with its oversight of Davis-Besse performance until July 1, 2005. The decision to close the Inspection Manual Chapter (IMC) 0350 Panel and transition oversight for Davis-Besse back to the ROP was based on the recommendation of the IMC 0350 Panel and subsequent deliberation among several Senior Agency Managers. On May 19, 2005, the NRC staff informed FirstEnergy of the transition and basis behind the decision. The NRC returned oversight of Davis-Besse to Column II (Regulatory Response) of the ROP Action Matrix due to one open White finding in the Emergency Preparedness area.

Plant Operating History

The Confirmatory Order associated with the restart authorization required Davis-Besse to perform a mid-cycle outage in order to inspect the condition of the upper and lower reactor vessel heads. As reported in the previous six-month update, that outage and associated inspections were completed on February 10, 2005, and no reactor coolant system pressure boundary leakage was identified. The reactor has operated safely at or near 100 percent power since February 10, when it was returned to power.

Results of NRC Inspections

Overall, Davis-Besse maintained an appropriate safety focus on plant activities during this time period. The NRC has implemented the full baseline inspection program required by the ROP, and most of the inspections were conducted by the resident inspectors assigned to the plant. Other inspections included radiological protection, emergency preparedness, maintenance rule compliance, operator licensing, problem identification and resolution, safety system design, and safety culture/safety conscious work environment. During these inspections, several findings of very low safety significance were identified.

Status of the NRC's Review of the Licensee's Compliance With Requirements of the March 8, 2004 Confirmatory Order

On March 8, 2004, the NRC issued a Confirmatory Order to Davis-Besse adding two conditions to the plant's operating license: (1) conduct of independent assessments for five years in the areas of operations, engineering, corrective actions, and safety culture; and (2) inspection and evaluation of the reactor coolant system pressure boundary during a mid-cycle outage.

All four of the Independent Assessments that were required to be performed in 2004 were completed and submitted to the NRC as described in the previous six month update report. Two of the four Independent Assessments that are required to be performed in 2005 were completed during the past six months. The other two are scheduled for November, 2005. A brief summary of the completed assessments follows:

- Operations Assessment:

  The 2005 Independent Assessment in the area of Operations was conducted on site from June 13 to June 24, 2005, and the final Independent Assessment report was issued on August 22, 2005. The assessment team concluded that a significant improvement was noted in the quality and depth in which the Operations department was now assessing their performance, including an emphasis on safe and efficient plant operations. This report did not document any significant areas for improvement. The assessment team's conclusions were consistent with the NRC's observations of the licensee in this area.

- Corrective Action Program Assessment:

  The 2005 Independent Assessment in the area of Corrective Actions was conducted on site from July 11 to July 22, 2005, and the final Independent Assessment report was issued on September 19, 2005. The assessment team concluded that implementation of the corrective action program was effective, but identified three areas where improvements were needed. Those areas were the average age of outstanding condition reports needed to be reduced; trending of equipment issues was below industry standards; and deficiencies noted in the thoroughness, accuracy, and timeliness of many cause determinations. The assessment team's conclusions were consistent with the NRC's observations of the licensee in this area.

As reported in the previous six-month update, the inspection and evaluation of the reactor coolant system pressure boundary was completed during the mid-cycle outage (January 17, 2005 to February 10, 2005). No indications of reactor coolant leakage were noted during the inspections of the upper reactor vessel head, the lower reactor vessel head, or the pressurizer penetration nozzle inspections.

Inspection Approach Going Forward

In addition to the routine ROP inspection activities required for a Column II facility, additional inspections will be performed at Davis-Besse as authorized by NRC's Executive Director for Operations. The additional inspections will include the following:

- Evaluation of the March 8, 2004, Confirmatory Order Required independent assessments for 2005 conducted in the areas of operations performance; organizational safety culture, including safety conscious work environment; corrective action program implementation; and engineering program effectiveness.

- Performance of an additional Problem Identification and Resolution team inspection for the biennial period of covering 2004 and 2005. This additional inspection is necessary to monitor the licensee's performance in the areas of self assessment, problem identification, trending, and progress toward effectively reducing the large backlog of maintenance and corrective action items.

Oversight Panel Public Communication

The Oversight Panel continued to provide a comprehensive forum for public access and stakeholder involvement until it was closed on July 1, 2005. The Oversight Panel held one local public meeting during this time period. This meeting was held to discuss the transition of Davis-Besse oversight from the IMC 0350 Process to the ROP. The meeting was transcribed, and the transcript was placed on the NRC's public access web site. In addition, Oversight Panel members routinely met with County Officials from Ottawa County, Ohio, to discuss issues of interest.

Issuance of Notice of Violation and Proposed Civil Penalty

On April 21, 2005, the NRC issued a Notice of Violation and Proposed Civil Penalties of $5,450,000 as a result of NRC special inspections and investigations in response to significant degradation of the reactor pressure vessel head at Davis-Besse.

On September 14, 2005, the licensee responded to the Notice of Violation and Proposed Civil Penalties. In this letter, the licensee agreed to pay the proposed civil penalty, and the President and Chief Operating Officer for FENOC stated:

> I want to reiterate that FENOC has accepted full responsibility for its past failure to properly implement its boric acid corrosion control and corrective action programs. Further, the Company [FENOC] had acknowledged that this lapse allowed the reactor coolant system pressure boundary leakage to occur undetected for a prolonged period. FENOC recognizes that this poor performance negatively impacted the reputation of the Company, the Davis-Besse plant and its employees with the community, the industry, and with regulators, particularly the NRC. FENOC has implemented comprehensive corrective actions, made sweeping changes in management staff throughout the organization, and will continue to focus on the safe, reliable operation of the plant.

The NRC is currently in the process of evaluating the licensee's response to the Notice of Violation.

Detailed information on NRC activities associated with Davis-Besse can be found at: http://www.nrc.gov/reactors/operating/ops-experience/vessel-head-degradation.html.

XI 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 (ESP), and combined licenses for nuclear power plants.

Design Certifications and Pre-Application Meetings

On August 24, 2005, General Electric (GE) submitted a design certification application for the Economic Simplified Boiling Water Reactor (ESBWR) design.

By letter dated September 23, 2005, the NRC staff informed GE that the acceptance review for the ESBWR design certification application was complete, that the staff concluded that portions of the application are not sufficiently complete for the staff to begin its review of those areas, and that the application will not be formally accepted for docketing until additional information is provided. The deficient portions of the application that preclude docketing are described in the enclosure to the September 23, 2005 letter. The staff will begin reviewing the portions of the application that contain sufficient information. A schedule for the design certification review will be established after additional information is submitted and the staff determines that the application is sufficiently complete and acceptable for docketing. The staff requested that GE provide its plans within 30 days of the issuance of the letter, including a schedule for addressing the identified deficiencies. The reactor design review and accompanying rule issuance is scheduled to take 42 - 60 months to complete. During public meetings held on September 27-29, 2005, GE provided the staff an overview of the entire application and a detailed discussion of the probabilistic risk assessment.

On September 21 and 22, 2005, the NRC staff held a public meeting with Pebble Bed Modular Reactor (PBMR), Pty, to discuss various technical issues related to planning for a PBMR design pre-application review. The NRC staff anticipates a formal pre-application review of the PBMR design in the 2006 and 2007 time frame. PBMR indicated during the public meeting that the submittal of a design certification application will be delayed from 2007 to 2008.

On September 28, 2005, the NRC staff held a non-public meeting with Westinghouse to discuss proprietary information related to the International Reactor Innovative and Secure (IRIS) test plan to support the Evaluation Model Development and Assessment Process (EMDAP).

Early Site Permits

The staff is currently reviewing three 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. By letter dated July 25, 2005, Dominion notified the staff that its North Anna ESP application was modified to replace incorrect figures. On September 28, 2005, the NRC staff issued the final NRC technical report, NUREG-1835, which contains the revised final SER and the final ACRS report, which was issued July 18, 2005. The revisions to the final SER are minor in nature, did not warrant the issuance of a supplemental final SER, and were noted in the NUREG. The draft Environmental Impact Statement (EIS) for the North Anna ESP was issued on December 10, 2004, and the Final EIS is scheduled to be issued in December 2005.

In September 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 September 27, 2005, the

NRC staff held a public meeting with Exelon to discuss certain aspects of the supplemental draft SER. The final SER is scheduled to be issued in February 2006. The draft EIS for the Clinton ESP was issued on March 2, 2005, and the Final EIS is scheduled to be issued in July 2006.

System Energy Resources Inc. submitted an ESP application in October 2003 for its Grand Gulf site located in Claiborne County, Mississippi. The final SER is scheduled to be issued in October 2005. The draft EIS for the Grand Gulf ESP was issued on April 21, 2005, and the Final EIS is scheduled to be issued in April 2006.

In addition to the three ESP applications under review, the staff anticipates the submission of an ESP application from Southern Nuclear Operating Company (SNC) during the summer of 2006. On August 17, 2005, SNC notified the NRC staff that Georgia Power Company had directed them to pursue an ESP/Combined License (COL) at the Vogtle Electric Generating Plant site located near Waynesboro, Georgia. On September 8, 2005, the NRC staff held a public meeting with SNC to discuss the application schedule and other application related activities. SNC anticipates submitting an ESP application in August 2006 and a COL application in March 2008. SNC started seismic boring activities on August 29, 2005, and is currently scheduled to finish in November 2005. The NRC staff conducted an audit of the seismic boring activity/quality assurance from September 12-14, 2005.

Combined License

On September 15, 2005, AREVA and Constellation Energy announced the formation of UniStar Nuclear, a joint enterprise 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 fifty percent of Unistar. Bechtel provides architect-engineer and construction expertise support to the company.

On September 22, 2005, NuStart, a consortium of nuclear power companies, announced the selection of sites and reactor technologies for COL applications to be submitted in 2007 or 2008. The sites selected are the Tennessee Valley Authority's Bellefonte site near Scottsboro, Alabama, and Entergy Corporation's Grand Gulf site near Port Gibson, Mississippi. The Bellefonte site will use the Westinghouse AP 1000 design, and the Grand Gulf site will use the GE ESBWR design.

On September 22, 2005, Entergy announced it will pursue a COL for an ESBWR at its River Bend Station site near St. Francisville, Louisiana. Entergy stated that it plans submit an application in 2007 or 2008.

By letter dated August 24, 2005, Progress Energy notified the NRC staff that it expects to identify both a site and a vendor by the end of 2005, with the potential submittal of a COL application in the first quarter of 2008. The NRC staff has scheduled a public meeting with Progress Energy on November 1, 2005, to discuss the application schedule and other application related activities.

Regulatory Infrastructure

The NRC staff is scheduled to issue a proposed rulemaking to revise 10 CFR Part 52 in December 2005. The changes to the rule are based on lessons learned during the previous design certification reviews and on discussions with external stakeholders about the ESP and COL processes.

The NRC staff anticipates issuing the staff's plan for development and implementation of a new 10 CFR Part 50 that is technology-neutral, risk-informed, and performance-based to the Commission in December 2005. The plan will include the issuance of an Advanced Notice of Proposed Rulemaking (ANPR) for the new Part 50. It is anticipated that this ANPR will be issued in 2006.

Other New Reactor Licensing Information

NRC staff met with representatives from the Department of Energy (DOE) on September 12, 2005, to discuss provisions of the Energy Policy Act of 2005 that direct DOE to develop a standby support program for up to six entities who apply for a COL under 10 CFR Part 52. The program will create an insurance fund that will pay unexpected licensee costs incurred in the COL process from a regulatory or litigation delay that is beyond the licensees' control. The NRC staff provided DOE with an overview of the Part 52 COL process. DOE discussed the anticipated timeline for rulemaking to implement the legislation and requested NRC staff to participate in a future DOE public workshop on the rulemaking.