May 23, 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 seventy-sixth report, which covers the month of March 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 March report includes a section on new reactor licensing. This is a subject of potential interest to Congress, and the NRC will utilize the monthly report to keep you informed of key activities and issues in this area. In addition, Section X of the March report provides the one-year review of the Davis-Besse nuclear power plant, consistent with direction provided in the FY 2003 Energy and Water Development Appropriations Act Conference Report (House Report 107-681).

The previous report provided information on a number of significant activities. These activities included identification by plant personnel of a reactor coolant system leak at the Hope Creek power plant and the licensee's decision to shut down the plant to repair the leak; authorization for Duke, Cogema, Stone & Webster to construct a facility at the Savannah River Site in South Carolina to manufacture mixed oxide fuel for eventual use in commercial nuclear power plants; and a brief overview of the numerous actions the NRC has taken to enhance the security of spent nuclear fuel.

The NRC and the National Academy of Sciences (NAS) have reached agreement on the release of an unclassified public version of the classified NAS report, "Safety and Security of Commercial Spent Nuclear Fuel Storage." The public version was issued by NAS on April 6, 2005.

On April 17, 2005, the Millstone Unit 3 nuclear power plant, located in Waterford, Connecticut, experienced an automatic shutdown. The event involved the activation of one of two safety subsystems and lifting of multiple steam line safety valves. At least one of the main steam safety valves appeared to remain open, which resulted in the declaration of an Alert, the second lowest of four levels of emergency classification. No injuries resulted from the event, and evaluations indicate there were no releases of radioactivity above allowable levels. On April 20, 2005, the NRC initiated a special inspection to evaluate the circumstances at the plant surrounding this event. The inspection team consisted of four full-time and three part-time inspectors. An inspector from the Connecticut Department of Environmental Protection also participated in the inspection as an observer. The NRC's initial response to the event included headquarters and regional staff and the agency's on-site inspectors for Millstone, who monitored the shutdown of the plant. Regional staff and the on-site inspectors continued to monitor activities to place the reactor in the cold shutdown condition.

In the area of fire protection, the NRC in March 2005 completed confirmatory testing of a fire-resistant material marketed under the trade name "Hemyc" that is used to protect electrical circuits needed to function during and after a fire. This material is applied as an electrical conduit fire barrier in approximately 15% of U.S. plants to meet NRC's fire protection requirements. Based on the test results, the NRC determined that the Hemyc material did not perform as a one-hour fire barrier as previously claimed. The NRC promptly informed all affected licensed nuclear facilities of the test results so they can implement appropriate compensatory actions and develop plans to resolve any non-compliance. On April 1, 2005, the NRC issued Information Notice 2005-07, "Results of Hemyc Electrical Raceway Fire Barrier System Full Scale Fire Testing," to all operating nuclear power reactor and fuel facility licensees to inform them of the test results. The Information Notice is available on NRC's website (www.nrc.gov). The NRC staff evaluated the potential non-compliance and, based on compensatory measures implemented by the licensees and other existing fire protection features, determined that the plants are safe to continue to operate. The NRC subsequently conducted a public meeting on April 29, 2005, at NRC headquarters in Rockville, Maryland. The discussion focused on the capability of Hemyc with respect to nuclear power plant fire protection strategies, given that the recent tests raised questions about Hemyc's ability to protect electrical cabling as long as required by NRC regulations. Members of the public were invited to participate by discussing these issues with NRC staff throughout the meeting.

On April 21, 2005, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty in the amount of $5,450,000 to FirstEnergy Nuclear Operating Company (FENOC). This enforcement action is based on FENOC's failure to implement properly the boric acid corrosion control and corrective action programs at Davis-Besse, which allowed reactor coolant system pressure boundary leakage to occur undetected for a prolonged period of time, resulting in reactor pressure vessel head degradation. Some of the violations included in this enforcement action were determined to be willful on the part of the licensee. The NRC assessed the significance of the performance deficiency using the Significance Determination Process and concluded that the significance was in the RED range. A RED finding is one with high importance to safety that results in increased NRC inspection and other NRC action.

In a separate enforcement action, on April 21, 2005, the NRC issued an Order banning an individual from all NRC-licensed activities for a period of 5 years for violating 10 CFR 50.5, "Deliberate Misconduct." The NRC found that the individual deliberately provided inaccurate information about the removal of boric acid deposits from the Davis-Besse reactor pressure vessel head and about the completion of a required inspection of the reactor pressure vessel head for reactor coolant system leakage, which caused FENOC to be in violation of 10 CFR 50.9, "Completeness and Accuracy of Information." The individual has asked for a hearing on the order. There are other potential violations from the Davis-Besse incident that require disposition. Additional enforcement action is possible.

Recently, the Commission, or in some cases the NRC staff, also accomplished the following:

- published in the Federal Register, on April 26, 2005 (70 FR 21449), a notice for the availability of the final environmental impact statement on the proposed renewal of the operating license for Arkansas Nuclear One power plant, Unit 2 (ANO-2). The staff found that there are no environmental impacts that would preclude license renewal for an additional 20 years of operation. The ANO-2 plant is located about 6 miles west-northwest of Russellville, Arkansas.

- published in the Federal Register on April 20, 2005 (70 FR 20457), a final rule that amended its rules for the conduct of adjudicatory proceedings. The final rule presents model milestones for the conduct of NRC adjudicatory proceedings. The final rule also requires a presiding officer to refer to the model milestones as a starting point for establishing a hearing schedule and to manage the case in accordance with that schedule. The purpose of the model milestones and accompanying changes to Subpart C is to enhance the efficiency and effectiveness of NRC adjudications, while ensuring that the rights of all parties to fair, effective, and timely adjudications are maintained. The final rule becomes effective May 20, 2005.

- issued on April 19, 2005, Regulatory Issue Summary (RIS) 2005-07, "Compensatory Measures to Satisfy the Fire Protection Program Requirements," to inform addressees that alternate compensatory measures, as otherwise required by the approved fire protection program, may be used for a degraded or inoperable fire protection feature under certain circumstances. This RIS describes the proper method for changing the approved fire protection program to utilize an alternate compensatory measure.

- published in the Federal Register on April 18, 2005 (70 FR 20062), a proposed rule that would certify the AP1000 standard plant design. The proposed rule would allow applicants or licensees who intend to construct and operate an AP1000 design to do so by referencing the AP1000 design certification rule. The comment period for this action closes July 5, 2005.

- approved, on April 15, 2005, a request by Entergy Nuclear South to increase the generating capacity of the Waterford Unit 3 nuclear power plant by approximately 8 percent. The power uprate for the unit, located 20 miles west of New Orleans, Louisiana, will increase its generating capacity from approximately 1075 megawatts electric to 1143 megawatts electric. The licensee plans to implement the power uprate following its spring refueling outage.

- published on April 12, 2005, in the Federal Register (70 FR 19125), a draft generic letter entitled, "Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power," for public comment. The proposed generic letter requests information from addressees in four areas: (1) use of transmission system operator protocols to monitor grid conditions to determine operability of offsite power systems; (2) use of transmission system operator protocols to monitor grid conditions for consideration in maintenance risk assessments; (3) offsite power restoration procedures; and (4) losses of offsite power caused by grid failures at a frequency of 20 years. The purpose of the proposed generic letter is to determine continued compliance with NRC regulations pertaining to availability/operability of offsite power for nuclear power plants. The public comment period ends June 13, 2005.

- issued on April 7, 2005, NRC Information Notice 2005-09, “Indications in Thermally Treated Alloy 600 Steam Generator Tubes and Tube-to-Tubesheet Welds,” to inform addressees about recent operating experience with degradation in steam generator tubes and tube-to-tubesheet welds.

- issued, on April 7, 2005, a draft safety evaluation report for an early site permit for the Grand Gulf site, about 25 miles south of Vicksburg, Mississippi. On April 22, 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.

- issued on April 5, 2005, NRC Information Notice 2005-08, “Monitoring Vibration to Detect Circumferential Cracking of Reactor Coolant Pump and Reactor Recirculation Pump Shafts,” to alert addressees to the importance of timely detection of circumferential cracking of reactor coolant pump and reactor recirculation pump shafts to minimize the likelihood of consequential shaft failures.

- published in the Federal Register on March 30, 2005 (70 FR 16335), the final “Medical Use of Byproduct Material--Recognition of Specialty Boards” rule. The NRC has amended its regulations governing the medical use of byproduct material to change its requirements for recognition of specialty boards whose certifications may be used to demonstrate the adequacy of the training and experience of individuals to serve as

radiation safety officers, authorized medical physicists, authorized nuclear pharmacists, or authorized users. The final rule also revises the requirements for demonstrating the adequacy of training and experience for pathways other than the board certification pathway. This final rule grants, in part, a petition for rulemaking submitted by the Organization of Agreement States and completes action on the petition. The effective date of this rule is April 29, 2005.

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 Report

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

MARCH 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 March 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 staff continues to make progress on tasks involving the use of probabilistic risk information. In March 2005, the staff provided to the Commission a recommendation for issuing a proposed rule to risk inform the requirements for emergency core cooling systems in 10 CFR 50.46. The Commission is considering the staff's recommendation.

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 consider the feedback in future ROP refinements. Recent activities include the following:

- On March 16, 2005, NRC staff hosted a monthly public meeting on the Mitigating Systems Performance Index (MSPI) at the NRC headquarters office. Meeting attendees discussed questions and issues raised during the recent industry workshop on implementing the MSPI that was held on February 9-10, 2005, in Dana Point, California. NRC staff also discussed how it plans to identify MSPI outlier plants and the process it will use to disposition unresolved issues prior to full implementation.

- On March 17, 2005, NRC staff hosted a monthly public meeting on the ROP at the NRC headquarters office. Industry and staff participants discussed Significance Determination Process issues, status and updates on the task groups working on the Scrams with Loss of Normal Heat Removal and Reactor Coolant System Leakage performance indicators, ROP security issues, and Performance Indicator Frequently Asked Questions.

- During the week of March 21, 2005, NRC staff made a presentation on the ROP at an International Atomic Energy Agency sponsored Nuclear Power Plant Inspection & Oversight Workshop in Saclay, France.

III Status of Issues in the Reactor Generic Issue Program

On March 30, 2005, Management Directive (MD) 6.4, "Generic Issues Program (GIP)," was updated and issued for staff use. The MD and associated Handbook 6.4 were updated to address a recommendation from the Davis-Besse Lessons Learned Task Force to revise and simplify the process for submitting candidate generic issues. Specifically, the updated MD clarifies the roles and responsibilities of various NRC oversight committees for evaluating generic safety issues.

More information on the NRC's Generic Issue Program is available at http://www.nrc.gov/what-we-do/regulatory/gen-issues.html.

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 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 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 FSAR 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 1000, and the goal of competing at least 96 percent of the licensing actions in less than or equal to one year was not met. The effects of the reprogramming will continue into FY 2005 and FY 2006. The licensing actions inventory and timeliness goals for FY 2005 will be changed. Additional resources will be allocated in FY 2006 to work down the inventory and improve timeliness to meet the original timeliness and inventory goals.

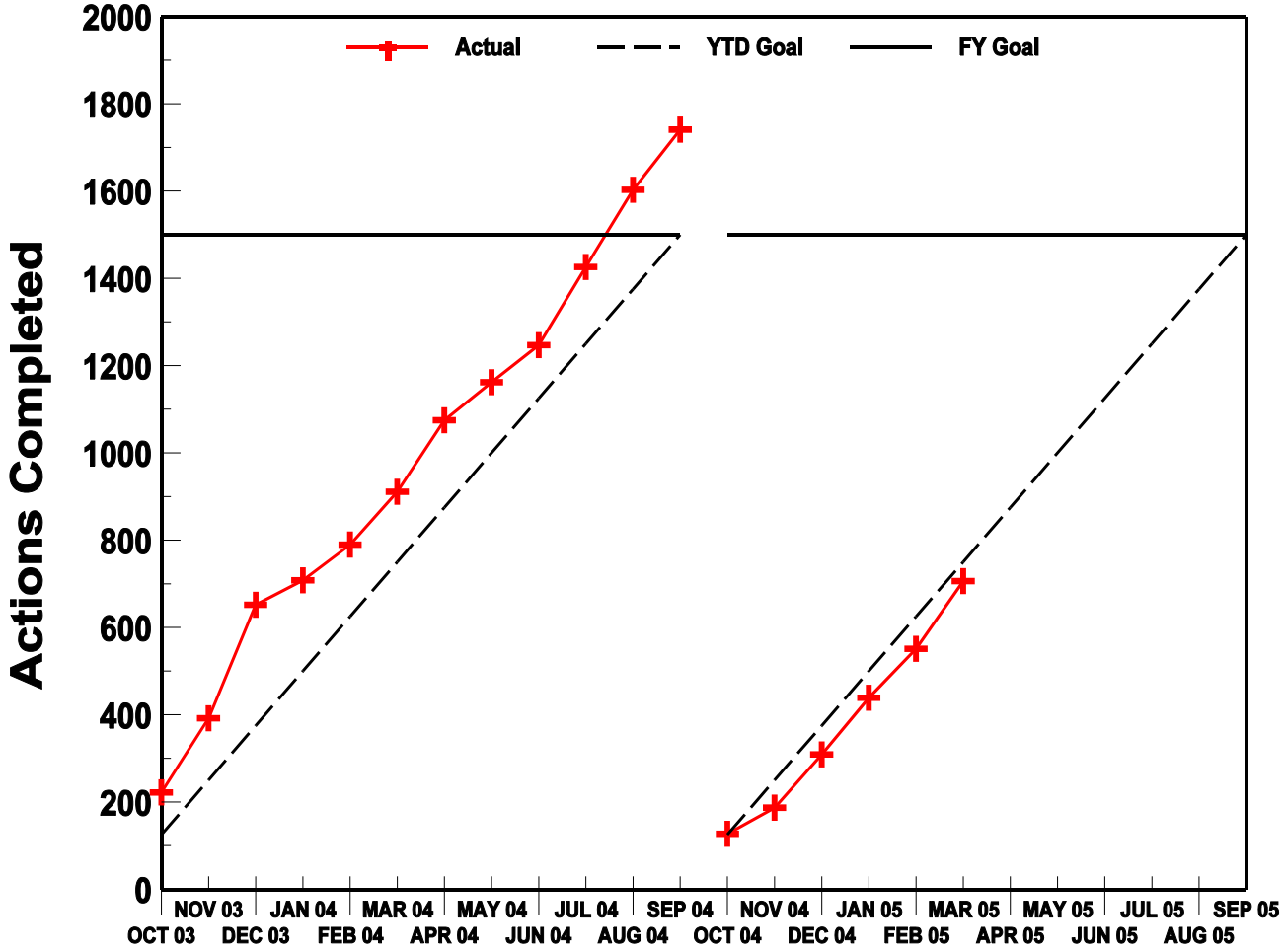
The actual FY 2003 and FY 2004 results, the FY 2005 goals, and the actual FY 2005 results, as of March 31, 2005, for the four NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the table below.

PERFORMANCE PLAN				
Output Measure	**FY 2003 Actual**	**FY 2004 Actual**	**FY 2005 Goals**	**FY 2005 Actual (thru 03/31/2005)**
Licensing actions completed/year	1774	1741	$ 1500	706
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	88%# 1 year; and 99 % # 2 years
Size of licensing action inventory	1296	1135	# 1200	1213
Other licensing tasks completed/year	500	671	$ 500	271

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

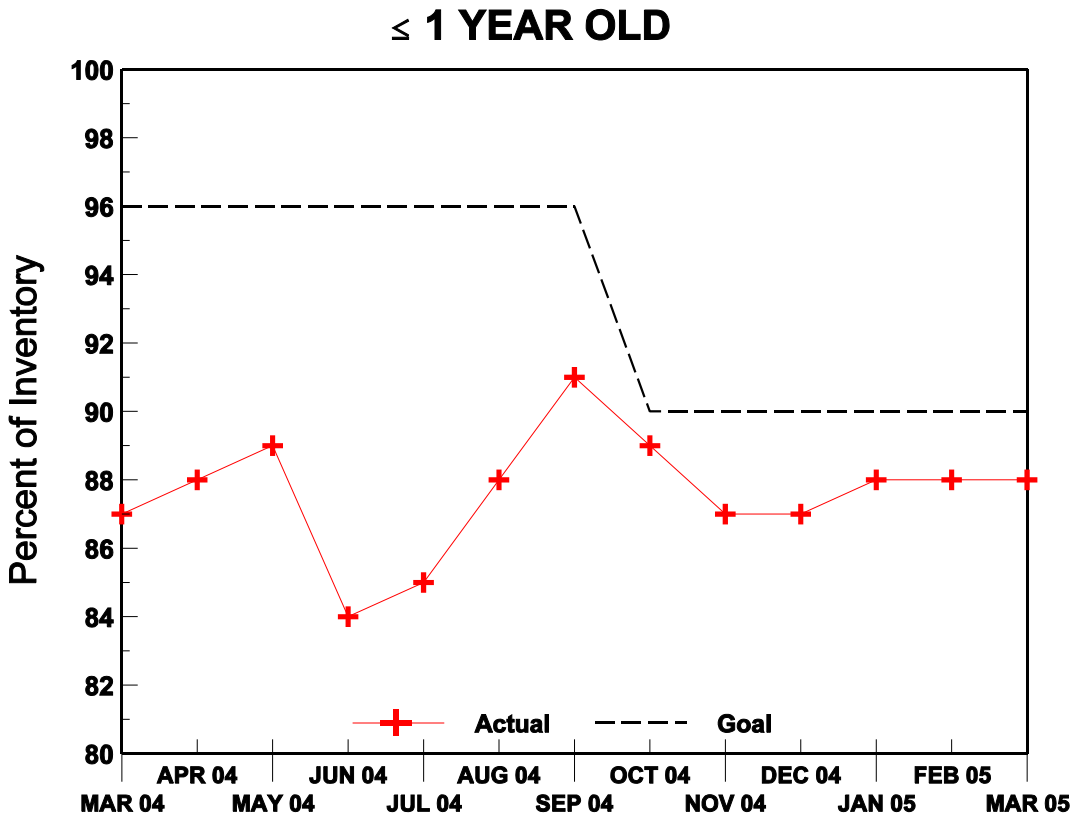
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Licensing Actions



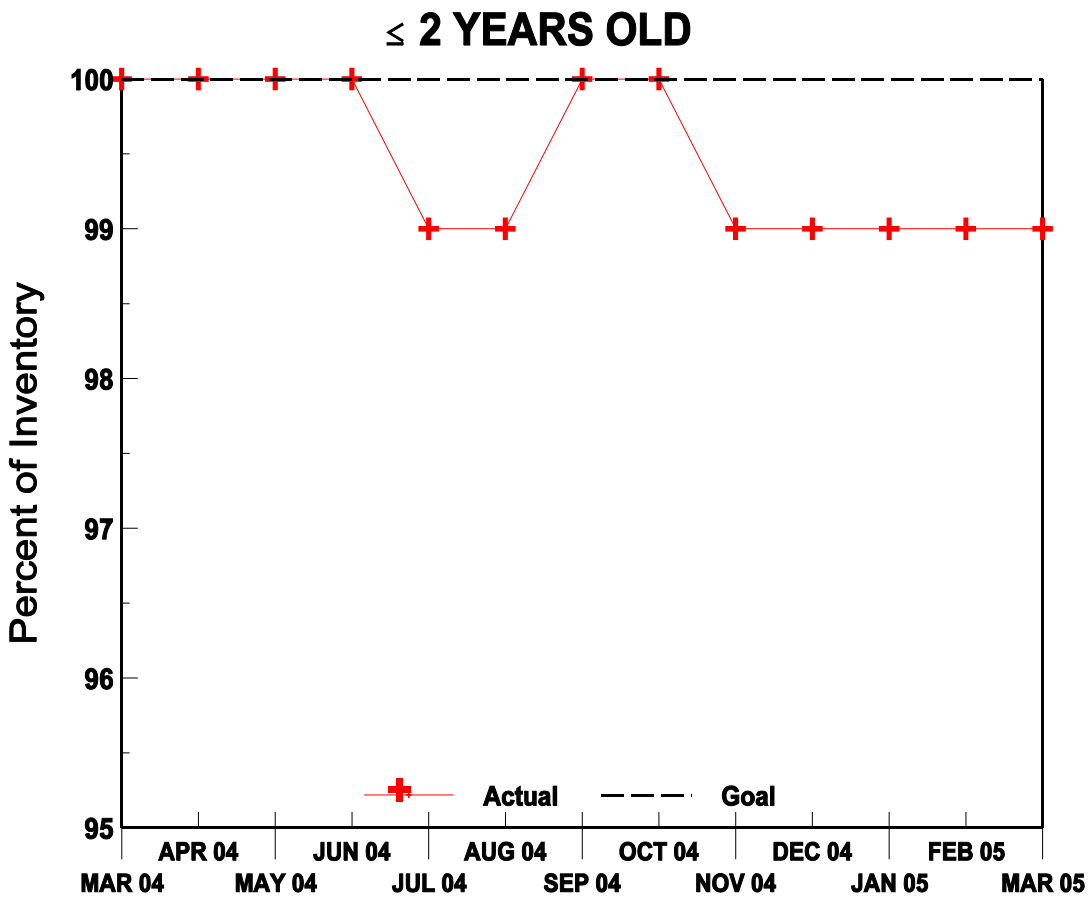
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



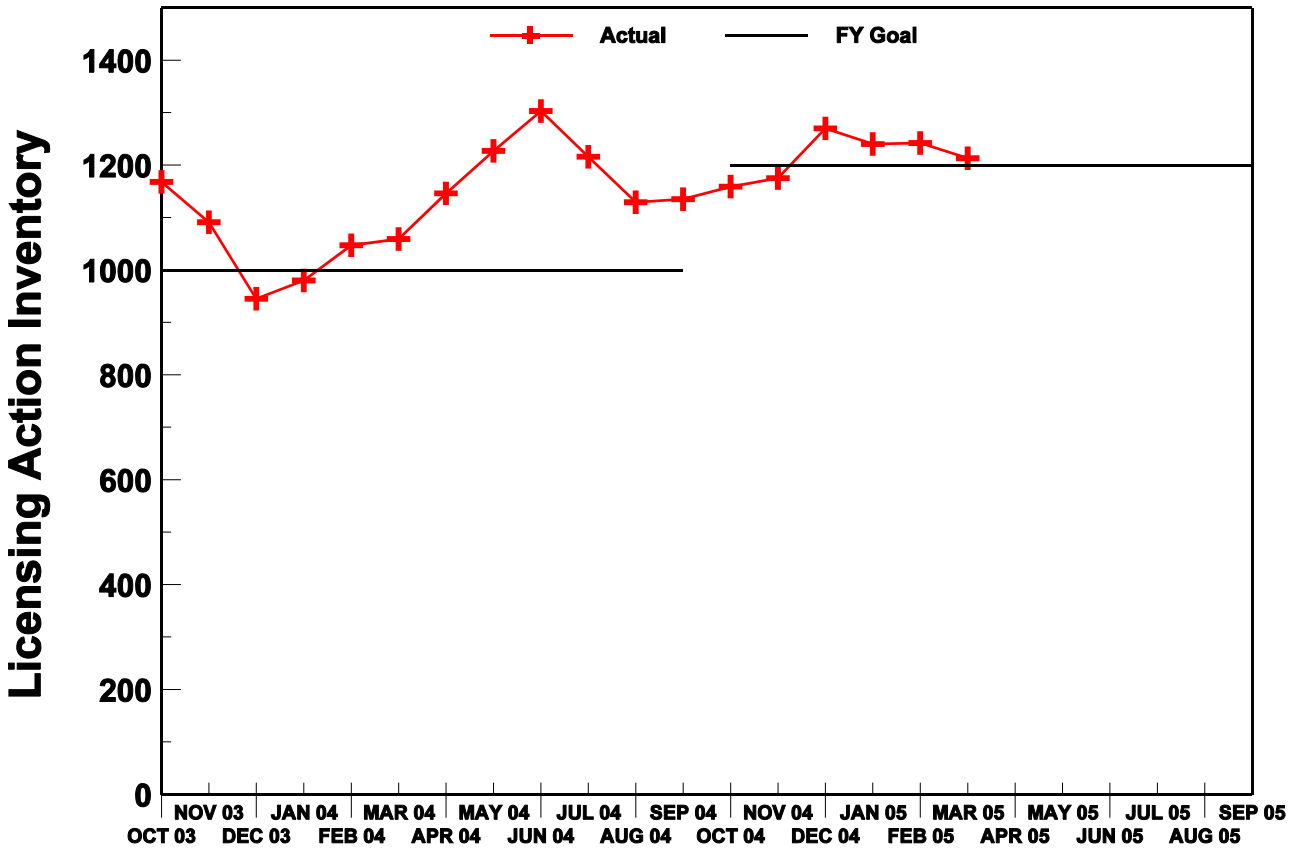
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



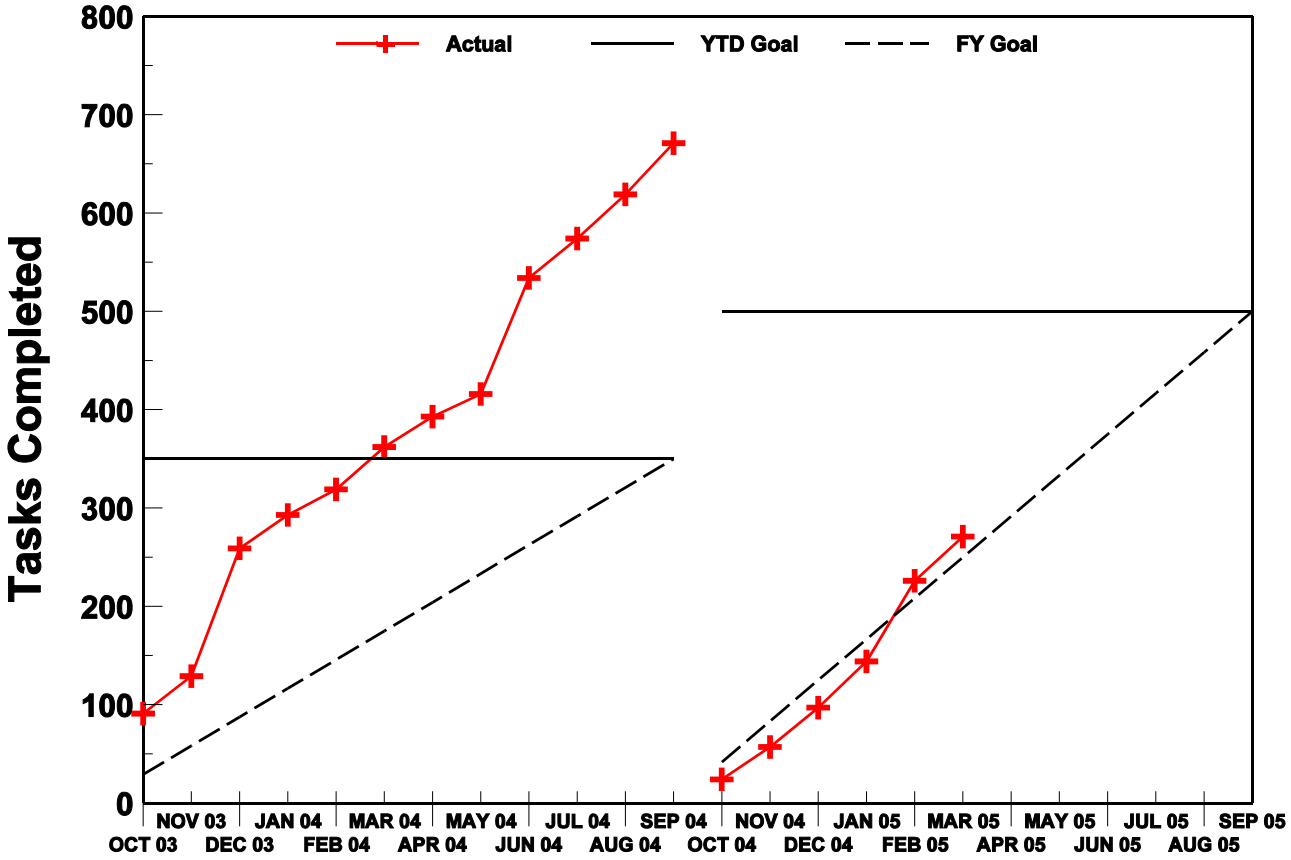
Nuclear Reactor Safety - Reactor Licensing

Performance Plan: Size of Licensing Action Inventory



Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Other Licensing Tasks



V. Status of License Renewal Activities

Farley, Units 1 and 2, License Renewal Application

The staff issued the final supplemental environmental impact statement (SEIS) and the safety evaluation report (SER) in March 2005. The staff is completing activities to support a decision on the license renewal application in July 2005.

Arkansas Nuclear One, Unit 2, License Renewal Application

The Arkansas Unit 2 license renewal application is currently under review. The draft SEIS was issued for public comment, and the staff is addressing the comments received. The final SEIS is scheduled to be issued in April 2005. The draft SER was issued in November 2004. The staff received the applicant's comments on the draft SER and is preparing to issue the report in April 2005.

Cook, Units 1 and 2, License Renewal Application

The Cook license renewal application is currently under review. The draft SEIS was issued for public comment, and the staff is addressing the comments received. The final SEIS is scheduled to be issued in May 2005. The SER, identifying any remaining open items, was issued in December 2004. The staff received the applicant's responses to the open items and is preparing to issue the SER in May 2005.

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

The Browns Ferry license renewal application is currently under review. The draft SEIS was issued for public comment in December 2004, and the public comment period ended in March 2005. The staff is addressing the comments received on the draft SEIS and is preparing to issue the final SEIS in July 2005. The SER, which will identify any remaining open items, is scheduled to be issued in August 2005.

Millstone, Units 2 and 3, License Renewal Application

The Millstone license renewal application is currently under review. The draft SEIS was issued for public comment in December 2004, and the public comment period ended in March 2005. The staff is addressing the comments received on the draft SEIS and is preparing to issue the final SEIS in July 2005. The SER, which identified the remaining open items, was issued in February 2005, and the responses to the open items are due in April 2005. A petition for late intervention and request for hearing was submitted in February 2005, and an Atomic Safety and Licensing Board (ASLB) has been established to preside over the proceeding.

Point Beach, Units 1 and 2, License Renewal Application

The Point Beach license renewal application is currently under review. The draft SEIS was issued for public comment in January 2005, and the public comment period ends in April 2005. The SER, which will identify any remaining open items, is scheduled to be issued in May 2005.

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

The NRC has extended the schedule for the its review of the Nine Mile Point application. The application has been under staff review since May 2004. The staff has informed the applicant in two letters that the responses to the staff's requests for additional information and the applicant's level of support were not adequate. Following extended discussions with the staff, the applicant in March 2005 requested a grace period of up to 90 days in order to address the issues. Assuming a satisfactory submittal and adequate support from the applicant for staff review activities, the staff will resume the review and establish a new schedule to accommodate the additional time needed to complete the Nine Mile Point application review. Nine Mile Point continues to operate safely; the issues raised by the staff relate to how the applicant would maintain the plant if the license is renewed.

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 is scheduled to be issued in September 2005 and the SER, which will identify any remaining open items, is scheduled to be issued in December 2005.

Beaver Valley, Units 1 and 2, License Renewal Application

In February 2005, the NRC received an application for renewal of the operating licenses for Beaver Valley, Units 1 and 2. The staff performed the required acceptance review to determine if the application contained sufficient information to be acceptable for docketing and staff review. In a March 2005 letter, the staff returned the application, notifying the applicant that the application was not complete and was not acceptable for docketing. The staff requested that the applicant notify the NRC of its plans regarding the application. If the applicant submits a revised application that meets the acceptance criteria, the NRC will establish a review schedule.

Monticello License Renewal Application

On March 24, 2005, the NRC received an application for renewal of the operating license for the Monticello Nuclear Generating Plant. The staff is currently performing the required acceptance review of the application and, if found acceptable, will docket the application, notice an opportunity for hearing, and issue the review schedule.

Palisades License Renewal Application

On March 31, 2005, the NRC received an application for renewal of the operating license for the Palisades Nuclear Plant. The staff is currently performing the required acceptance review of the application and, if found acceptable, will docket the application, notice an opportunity for hearing, and issue the review schedule.

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

Litigation continues on the application by Private Fuel Storage, LLC (PFS) for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the Reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah. As noted in previous monthly update, on February 24, 2005, the ASLB issued its decision on the aircraft crash issue in favor of the applicant, finding that the probability of an F-16 aircraft crash accident or ordnance impact into the facility that would result in a release of radioactive materials is less than 1×10^{-6}/yr (one in one million per year). Also on February 24, 2005, the ASLB ruled that the State of Utah's late-filed Contention UU, alleging that the U.S. Department of Energy (DOE) will not accept spent nuclear fuel from the proposed facility, lacked adequate factual foundation and was inadmissible.

On February 28, 2005, the Commission offered the parties an opportunity to comment on whether the Commission should direct issuance of an immediately effective license. The parties filed their comments. Also, the State of Utah filed a motion for reconsideration with the ASLB of its ruling on the aircraft crash issue and a petition for Commission review of the ASLB's decision on Utah's late-filed contention regarding DOE acceptance of spent nuclear fuel from PFS. The ASLB scheduled oral arguments for April 6, 2005, on the motion for reconsideration.

VII Enforcement Process and Summary of Reactor Enforcement by Region

Reactor Enforcement by Region

Reactor Enforcement Actions*						
		Region I	Region II	Region III	Region IV	TOTAL
Severity Level I	March 05	0	0	0	0	0
	FY 05 YTD Total	0	0	0	0	0
	FY 04 Total	0	0	0	0	0
	FY 03 Total	0	0	0	0	0
Severity Level II	March 05	0	0	0	0	0
	FY 05 YTD Total	0	0	0	0	0
	FY 04 Total	0	1	0	0	1
	FY 03 Total	0	0	0	0	0
Severity Level III	March 05	0	0	0	0	0
	FY 05 YTD Total	0	1	1	0	2
	FY 04 Total	1	2	4	0	7
	FY 03 Total	2	0	4	0	6
Cited Severity Level IV or GREEN	March 05	0	0	0	0	0
	FY 05 YTD Total	1	0	0	0	1
	FY 04 Total	1	0	2	2	5
	FY 03 Total	1	0	2	1	4
Non-Cited Severity Level IV or GREEN	March 05	4	0	7	12	23
	FY 05 YTD Total	138	88	142	164	532
	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 (EATS) 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.

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	Mar 05 RED	0	0	0	0	0
	Mar 05 YELLOW	0	0	0	0	0
	Mar 05 WHITE	1	0	0	0	1
	FY 05 YTD Total	3	0	0	0	3
	FY 04 Total	3	4	7	6	20
	FY 03 Total	6	1	7	1	15

Description of Significant Actions Taken During March 2005

AmerGen Energy Company, LLC (Oyster Creek) EA-04-213 - On March 1, 2005, a Notice of Violation was issued for violations associated with a White Significance Determination Process (SDP) finding involving untimely actions to change an Emergency Action Level (EAL) threshold value used to declare a General Emergency or a Site Area Emergency and revise supporting emergency procedures. The violations cited the licensee's failure to maintain an emergency classification and action level scheme and the failure to implement properly the configuration change process in accordance with the Technical Specifications.

FirstEnergy Nuclear Operating Company (Perry) EA-04-214 - On March 29, 2005, a Notice of Violation was issued for a violation associated with a White SDP finding involving the failure to follow the requirements of the Perry Emergency Plan during an event that was classified at the Alert level. The violation cited the licensee's failure to implement properly the required standard emergency classification and action level scheme.

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. The latest advisory, which addressed fraudulent use of Social Security numbers, was issued on March 23, 2005.

Orders were issued on April 29, 2003, to supplement the threat against which individual power reactor licensees and category I fuel cycle facilities must be able to defend (design basis threat [DBT]), limit the number of hours that security personnel can work, and enhance training and qualification requirements for security personnel. All licensees implemented the Orders by October 29, 2004.

Orders were issued on October 23, 2003, to all nuclear reactor licensees and research reactor licensees that transport spent nuclear fuel. The licensees subject to the Order have been issued a specific license by NRC authorizing the possession of spent nuclear fuel and a general license authorizing the transportation of spent nuclear fuel in a transport package approved by the Commission in accordance with the Atomic Energy Act of 1954, as amended, and 10 CFR Parts 50 and 71. The staff began implementation of a revised baseline inspection program to oversee the enhanced security requirements and the higher threat level. Inspection efforts are focusing on verifying implementation of the revised security plans.

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 purpose of the force-on-force exercises is to assess and improve, as necessary, performance of defensive strategies at licensed facilities. To enhance the realism and effectiveness of the force-on-force exercises, the NRC has established fitness and training standards for mock adversary force personnel. Application of these standards provides assurance that the mock adversary force has received appropriate training in offensive tactics and is a credible and challenging adversary. The NRC retains responsibility for oversight of the mock adversary force and evaluation of licensee performance. In addition, 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 they have participated in.

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, Federal Bureau of Investigation (FBI) and others to develop plans to address recommended actions. Additionally, the NRC completed six imminent aircraft threat announced walk-throughs with nuclear power plant licensees, and lessons learned have been incorporated into a Safeguards Advisory. Walk-throughs are scheduled to resume in September 2005, following updates to licensees' implementing procedures and NRC review of those procedures.

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

IX Power Uprates

The staff has assigned a high priority to power uprate license amendment reviews. The staff considers power uprate applications among the most significant licensing actions and is therefore conducting power uprate reviews on accelerated schedules.

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 are power uprates that are typically on the order of less than 7 percent and are within the design capacity of the plant. Stretch power uprates 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 staff has been conducting power uprate reviews since then and, to date, has completed 104 such reviews. Approximately 12,975 megawatts-thermal (4,325 megawatts-electric) 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 11 plant-specific power uprate applications under review. The 11 applications under review include 2 MUR power uprates, 2 stretch power uprates, and 7 EPUs. On March 24, 2005, the NRC approved a 4.85 percent stretch power uprate for the Indian Point Unit 3 nuclear plant.

In January 2005, the staff completed a survey of nuclear power plant licensees to obtain information regarding the industry's plans related to power uprate applications. Based on this survey, licensees plan to submit power uprate applications for 29 nuclear power plant units in the next 5 years. These include 15 MUR power uprates, 3 stretch power uprates, and 11 EPUs. Planned power uprates are expected to result in an increase of about 4,663 megawatts-thermal (1,553 megawatts-electric).

X Status of the Davis-Besse Nuclear Power Station

This six-month update on the status of Davis-Besse covers the period from October 2004 through February 2005. The NRC's Oversight Panel continued with its oversight of Davis-Besse performance and anticipates continuing coordination of enhanced inspection and regulatory activities of Davis-Besse until at least April 2005. At that point, the agency will determine if plant performance warrants resumption of the NRC's normal reactor oversight program.

Plant Operating History

From October 2004 until January 13, 2005, the plant operated at or near full power. On January 13, 2005, as a result of problems encountered during the testing of the under voltage relays associated with a 4160 volt essential bus, the licensee began reducing power in anticipation of a Technical Specification required reactor shutdown. After a power reduction of approximately 6 percent, the licensee made the necessary equipment repairs, exited the Technical Specification shutdown action statement, and restored the reactor to 100 percent power later that day. On January 16, 2005, the licensee began reducing power in preparation for a scheduled mid-cycle outage.

NRC inspectors determined that the outage was effectively planned, implemented, and that emergent work activities were properly incorporated into the outage work schedule. The main generator was placed on line February 10, 2005, ending the outage.

The plant operated at approximately 100 percent power for the remainder of the month of February and March.

Post-Restart (March 2004) Inspection Approach

The agency has implemented an enhanced inspection approach that was approved by the Oversight Panel. This approach includes the conduct of the full baseline inspection program utilized at all operating reactor facilities; enhanced inspection of corrective action program effectiveness; enhanced NRC performance indicator monitoring (throughout Calendar Year 2004), special inspections to evaluate compliance with the Confirmatory Order, dated March 8, 2004; and special inspections to evaluate implementation and effectiveness of the licensee's commitments for continuing improvement.

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

Prior to restart, the licensee committed to a number of improvement initiatives that were intended to ensure that the improvements realized during the extended outage remain in place. In its March 8, 2004 letter lifting NRC's restriction on restart, the NRC described its expectations that these improvement initiatives would be completed as scheduled and that the NRC would be notified should the schedule change. In addition, attached to that letter, 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. A brief summary of each follows:

- Operations Assessment: On October 8, 2004, the licensee submitted to the NRC the Operations Independent Assessment Final Report. The NRC inspectors concluded that the Assessment Team's activities were of sufficient depth and scope and the Action Plans developed by the licensee to address the Areas For Improvement were adequate. No issues of significance were identified during this assessment.

- Corrective Action Program Assessment: On October 1, 2004, Davis-Besse completed its Independent Assessment of the Corrective Action Program. The NRC inspectors concluded that the Assessment Team's activities were of sufficient depth and scope and that the Action Plans developed by the licensee to address the Areas For Improvement were adequate. The assessment team characterized the licensee's program and implementation as overall marginal, with an unsatisfactory rating in the program trending area. This was in agreement with the NRC's assessment of this area at the time of plant restart in March 2004. Although the independent assessment team rated the trending program as "unsatisfactory," the agency's Problem Identification and Resolution inspection, conducted subsequent to the independent assessment, found that the licensee has begun to show improvement with its trending activities. Overall, the licensee's corrective action program has improved since restart.

- Engineering Assessment: On December 6, 2004, the licensee submitted to the NRC the Engineering Independent Assessment Report. The NRC inspectors concluded that the Assessment Team's activities were of sufficient depth and scope and that the Action Plans developed by the licensee to address the Areas For Improvement were adequate. Overall, the NRC inspectors concluded that the Engineering function appears on the path of improvement; however, continued diligence is required. Primary challenges for the coming year are to sustain continued improvement and focus on the design change backlog.

- Safety Culture/Safety Conscious Work Environment: The NRC is currently reviewing the external independent safety culture report and the licensee's proposed action plan that were submitted on February 4, 2005. The safety culture report documents the findings of the independent assessment of safety culture which was performed at Davis-Besse from November 2 through November 18, 2004. The review will include the external assessment, the licensee's Employee Concerns Program survey, and the licensee's Oversight assessment along with the licensee's action plan to address any deficiencies.

The inspection and evaluation of the reactor coolant system pressure boundary was completed during the mid-cycle outage. 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 nozzles.

Results of NRC Inspections

Overall, Davis-Besse has maintained an appropriate safety focus on plant activities during this time period. Most of the inspections were conducted by the three resident inspectors assigned to the plant. Other NRC inspections were conducted in the areas of radiological protection, reactor vessel head integrity, and steam generator tube integrity.

Based on enhanced inspection activities and the evaluation of the data submitted by the licensee for their performance indicators, the Oversight Panel determined that all performance indicators were valid indicators of licensee performance, and the NRC has returned to normal performance indicator monitoring under the baseline inspection program.

In addition to the inspections noted above, a special emergency preparedness inspection associated with discrepant alert and notification system performance indicator data and degraded siren activation capability was performed. As a result of this inspection activity, an Apparent Violation of 10 CFR 50.9(a) was identified. Specifically, the licensee's submittals of discrepant alert and notification system performance indicator data for the second and third calendar quarters of 2004 adversely impacted the NRC's ability to perform its regulatory function. A White performance indicator would have resulted in a supplemental inspection in accordance with NRC Manual Chapter 0608, "Performance Indicator Program," and Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area." Additionally, the inspectors identified a finding of low to moderate safety significance, or a White finding, associated with inability of the Ottawa County Sheriff's Dispatch Center to activate all 54 Emergency Planning Zone (EPZ) sirens from April 27 through May 7, 2004, and that its capability to activate all 54 EPZ sirens was degraded from April 6 through May 7, 2004. In accordance with the normal reactor oversight process a supplemental inspection will be scheduled to followup on the White performance indicator and White finding.

Oversight Panel Public Communication

The Oversight Panel continued to provide a comprehensive forum for public access and stakeholder involvement. The Oversight Panel held three local public meetings during this time period to discuss plant performance and provide the public with access to Oversight Panel members. All the meetings were transcribed, and the transcripts were 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.

NRC's Analysis of Risk of Davis-Besse Operation Prior to Shutdown in 2002

On March 14, 2005, the NRC issued the final Accident Sequence Precursor (ASP) analysis of the combined safety issues at Davis-Besse that existed prior to the 2002 shutdown. The NRC's ASP program analyzes and reports on events and conditions at all nuclear facilities that have an increased risk greater than one in a million.

The NRC staff's calculations estimated how the reactor head damage, combined with design problems in certain high-pressure pumps and issues affecting a water recirculation system component (containment sump), could have led to damage to the reactor core in the year preceding discovery of the head damage. This ASP analysis concluded that the combination of issues at Davis-Besse had about six chances in 1,000 of damaging the core during that one-year period. This result was the same as that of the preliminary ASP analysis announced publicly in September 2004. The ASP determination does not estimate the likelihood of a radioactivity release, since the steel containment vessel and shield building and other safety systems designed to prevent the release of radioactive material were fully functional and capable of protecting public health and safety.

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 staff expects to license the next generation of new light water reactor 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, and combined licenses for nuclear power plants.

Design Certifications

On March 11, 2005, the Commission approved publication of the proposed rule for the Westinghouse AP1000 design certification rulemaking in the Federal Register. The final rulemaking is scheduled to be issued by December 2005. In 2005, General Electric (GE) is scheduled to submit its design certification application for the Economic and Simplified Boiling Water Reactor (ESBWR) design. The reactor design review and accompanying rule issuance is scheduled to take 42 - 60 months to complete.

In addition to the AP1000 and ESBWR, the staff continues to interact with reactor design vendors such as Westinghouse for the International Reactor Innovative and Secure (IRIS) design, Framatome ANP for the European Pressurized-Water Reactor (EPR) design, Atomic Energy of Canada, Ltd (AECL) for the advanced CANDU reactor (ACR)-700 design, and Pebble Bed Modular Reactor (PBMR) (Pty) Limited for the PBMR design. Additionally, the staff conducted a meeting with representatives of Galena, Alaska, regarding a potential application

for licensing of the Toshiba 4S reactor to supply the town with electricity. The pre-application meetings with the vendors have resulted in tentative schedules for submitting design certification applications. However, none of these reactors are yet formally associated with a domestic partner for a potential combined license (COL) application.

Early Site Permits (ESPs)

The staff is currently reviewing three ESP applications. Dominion Nuclear North Anna, LLC submitted an ESP application in September 2003, for its North Anna site, located in Louisa County, Virginia. The staff issued the draft SER and the draft environmental impact statement (EIS) for the North Anna site on December 20, 2004. The final SER for the North Anna ESP is scheduled to be issued in June 2005, and the final EIS is scheduled to be issued in August 2005.

Exelon Generation Company, LLC submitted an ESP application in September 2003, for its Clinton site, located in Harp Township, DeWitt County, Illinois. The staff issued the draft SER for the Clinton ESP on February 10, 2005, and the draft EIS on March 2, 2005. The final SER is scheduled to be issued in August 2005, and the final EIS is scheduled to be issued in October 2005.

System Energy Resources Inc. submitted an ESP application in October 2003, for its Grand Gulf site, located in Claiborne County, Mississippi. The staff issued the draft SER and draft EIS for the Grand Gulf ESP on April 7 and April 22, 2005, respectively. The final SER is scheduled to be issued in October 2005, and the final EIS is scheduled to be issued in December 2005.

In addition to the three ESP applications under staff review, the staff anticipates the submission of an ESP application from Southern Nuclear Operating Company (SNC) during the summer of 2006. SNC has not indicated for which site it will request an ESP.

Combined License

On March 4, 2005, the NRC received a letter, from Duke Power regarding its plans to prepare a COL application. On March 14, 2005, the staff conducted a public meeting with Duke Power to discuss these plans. Duke Power identified four possible COL application scenarios: 1) a certified design with a greenfield site; 2) a certified design with a previously characterized site; 3) a certified design with an existing site; and 4) a non-certified design with a greenfield site. Duke power is considering three reactor technologies: 1) General Electric ESBWR; 2) Framatone ANP EPR; and 3) Westinghouse AP1000. Duke Power stated that it plans to decide if it will proceed with the project in May 2005. If Duke Power chooses to proceed, it

stated that it plans to select the site and reactor technology by the end of 2005 and to submit a COL application in early 2008. Duke plans to select a site within the Duke Power service territory and does not intend to seek an ESP. Duke plans to provide its detailed plans and schedule for pre-COL and COL activities by July 2005, and anticipates initiation of pre-COL application discussions with the NRC later in 2005.

In November 2004, the Department of Energy awarded grants to both the Dominion-led consortium, which included AECL, and the NuStart Energy consortium under its Nuclear Power 2010 program to demonstrate the NRC's COL process for licensing the construction and operation of new nuclear power plants under 10 CFR Part 52.

Additionally, the staff received a letter dated December 7, 2004, from NuStart Energy stating that it plans to submit at least one COL application in 2008. The NRC is also anticipating a COL application from Dominion, based on Dominion's response to the DOE solicitation.