October 29, 2004

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) 2004 Energy and Water Development Appropriations Act, House Report 108-212 and Senate Report 108-105, directed the Nuclear Regulatory Commission (NRC) to continue to provide a monthly report on the status of its licensing and regulatory duties. 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 seventieth report, which covers the month of September 2004. 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 previous report provided information on a number of significant activities. These activities included the following: (1) the NRC's Atomic Safety and Licensing Board ruling that the Department of Energy's (DOE's) certification that it had made available all DOE documentary material on its proposed Yucca Mountain high-level waste repository failed to meet NRC regulations; (2) publication in the Federal Register of a proposed rule amending 10 CFR Part 110 that will enhance U.S. import/export controls of high-risk radioactive materials; (3) an update on the status of the engineering design inspection at the Vermont Yankee nuclear power plant in Vernon, Vermont; and (4) issuance of the mid-cycle plant performance assessment letters for 102 of the Nation's 103 operating commercial nuclear power plants, excluding the Davis-Besse nuclear facility in Ohio, which is currently under a special NRC oversight program (an in-depth status report on Davis-Besse is included in the attached report).

On October 25, 2004, the NRC initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the agency's Web site. During this review, ADAMS, the NRC's on-line document library, will be temporarily unavailable to the public, although the remainder of the agency's Web site will be accessible. For the same reason, access to documents on the NRC's Electronic Hearing Docket and access to NRC staff documents relative to the proposed high level waste repository at Yucca Mountain (available through the Licensing Support Network) is also being suspended pending further review. No classified or safeguards (physical security) material is now or has ever been permitted on the NRC Web site. Immediately after September 11, 2001, the NRC took down its Web site and removed more than 1,000 documents that were evaluated as sensitive information. Since then, the agency has revised its policy regarding potentially

sensitive information to be withheld from public access. Agency guidelines provide that any information that could be useful, or could reasonably be expected to be useful, to a terrorist in a potential attack should be withheld. This latest review is intended to ensure that potentially sensitive information is not publicly accessible.

The NRC's review of Entergy Nuclear Generation Company's application for a 20 percent power uprate at Vermont Yankee Nuclear Power Station will not be completed by the original forecasted completion date of January 31, 2005. NRC staff has determined that the information submitted by Entergy to date does not provide sufficient assurance that the Station's steam dryer will remain capable of maintaining its structural integrity under extended power uprate conditions. This additional information is needed before the NRC staff can complete a draft safety evaluation of the proposed uprate and will therefore delay review by the Advisory Committee on Reactor Safeguards. Once Entergy provides the information and the NRC staff has had an opportunity to review it, a more definitive schedule for completing the uprate review will be available. Additionally, in Brattleboro, Vermont, on October 21 and 22, 2004, the NRC's Atomic Safety and Licensing Board heard oral arguments regarding the hearing requests from the Vermont Department of Public Service and the New England Coalition concerning the proposed uprate.

In the August monthly report, I provided information on the status of the engineering design inspection at the Vermont Yankee nuclear power plant. The public exit meeting to discuss the inspection results and the written inspection report have been delayed to early November 2004.

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

- established Memoranda of Agreement (MOA) with the North American Electric Reliability Council (NERC) and with the Federal Energy Regulatory Commission (FERC). NERC and FERC signed the MOAs on August 27, and September 1, 2004, respectively. In the MOAs, NERC , FERC, and NRC agreed to consult with each other regarding the availability of technical information that would be useful in the areas of mutual interest and to promote and encourage a free flow of such information pertaining to electrical grid reliability, security, and integrity.

- issued on September 10, 2004, a technical specification amendment for the Farley nuclear power plant incorporating the new programmatic and largely performance-based requirements for ensuring steam generator (SG) tube integrity. This first-of-a-kind technical specification is based on the Nuclear Energy Institute Generic License Change Package, which had been previously reviewed by the NRC staff. Issuance of this amendment is the culmination of NRC and industry efforts since the mid-1990s to develop an improved, more effective regulatory framework for ensuring SG tube integrity. Similar amendment requests were submitted for the South Texas Project and Catawba nuclear power plants, which are under staff review.

- published in the Federal Register on September 16, 2004 (69 FR 55736), a final rule amending regulations governing the medical use of byproduct material. The rule extends the expiration date for current training and experience requirements for 1 year,

from October 24, 2004, to October 24, 2005. On October 24, 2005, these requirements will be replaced by enhanced requirements. The rulemaking is necessary to allow sufficient time for implementation of a forthcoming final rule that could amend the training and experience requirements, including new requirements for recognition of specialty board certifications.

- met with Department of Energy (DOE) staff on September 23, 2004, in a closed meeting to discuss the development of a Memorandum of Understanding that will delineate DOE's and NRC's regulatory oversight roles and responsibilities for USEC, Inc.'s proposed gas centrifuge uranium enrichment facility.

- conducted a public meeting on September 29, 2004, with Pacific Gas and Electric Company (PG&E) in Eureka, California, to communicate to the local community the current status of PG&E's efforts to locate three spent fuel segments that were reported missing on July 16, 2004, at the permanently shut-down Humboldt Bay Nuclear Power Plant. The discussion also covered PG&E's schedule to complete an exhaustive inventory of the spent fuel pool at Humboldt Bay. During the meeting, the NRC described plans for a special inspection of PG&E's actions to begin the first week of November. The three missing spent fuel segments were previously discussed in the NRC's monthly reports for June and July 2004.

- unveiled, on October 9, 2004, a new Web page that highlights the agency's emergency preparedness and incident response activities and makes information easily accessible on such topics as how the public should prepare for, and react to, a radiological emergency. The new site includes information on evacuation and sheltering; emergency classification; Federal, State and local responsibilities during a radiological emergency; and the NRC's enhanced Operations Center. Highlighted on the site is information about nuclear plants' response to terrorism; emergency exercises; the use of potassium iodide; response to dirty bombs; and research and test reactor preparedness.

- dispatched a special inspection team to the Hope Creek Nuclear Power Plant in order to understand better the circumstances surrounding a rupture of an 8-inch drain line in the turbine building on October 10, 2004, that led to a manual shutdown of the plant. There were no injuries to personnel. The plant, located near Salem, New Jersey, is operated by PSEG Nuclear, LLC. The review will include an assessment of whether the steam pipe failure could have been prevented and an independent evaluation of equipment and human-performance issues that complicated the shutdown. In addition, the inspection will assess the adequacy of the licensee's root-cause evaluation of the event and its plans for corrective actions. The team will document its findings and conclusions in a report expected to be issued within 45 days of the inspection's conclusion. The Hope Creek and Salem nuclear plants are located at the same site, and earlier this year the NRC conducted an extensive assessment of the environment there for raising and addressing safety issues. The licensee has implemented an action plan to address the work environment issues.

- approved on October 27, 2004, a request by Entergy Nuclear Operations, Incorporated, to increase the generating capacity of Indian Point Nuclear Generating Unit No. 2, located near Buchanan, New York, by 3.26 percent. The NRC staff determined that the licensee could safely increase the power output of the reactor primarily through increased feedwater flow measurement accuracy. The power uprate increases the generating capacity of the plant by 45 megawatts-electric, from approximately 995 to 1040 megawatts-electric.

- renewed on October 28, 2004, the operating licenses of the Dresden Nuclear Power Station, Units 2 and 3, located near Morris, Illinois, and the Quad Cities Nuclear Power Station, Units 1 and 2, located near Moline, Illinois, for an additional 20 years. The plants are operated by the Exelon Generation Company. The NRC has now issued renewed licenses for 30 power reactors.

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

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

SEPTEMBER 2004

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 2004. 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 many areas; however, there were no reportable milestones scheduled or completed during the month of September 2004.

II Revised Reactor Oversight Process

The NRC continues to implement the Reactor Oversight Process (ROP) at all nuclear power plants and 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 September 1, 2004, NRC staff participated in a Bilateral Technical Exchange Meeting at the NRC Headquarters Office between NRC and India's Atomic Energy Regulatory Board. Staff from NRC presented an overview of the ROP and a more detailed discussion of the Significance Determination Process (SDP).

- On September 9, 2004, NRC staff met with the Tennessee Valley Authority (TVA) at the NRC Headquarters Office to discuss the status of construction at TVA's Browns Ferry Unit 1 and for either side to voice concerns that have arisen or will arise in the future. Browns Ferry Unit 1 has been shutdown for 19 years and is undergoing major construction work to prepare it for restart around 2007.

- On September 15 and 16, 2004, NRC staff hosted the monthly Mitigating System Performance Index (MSPI)/ROP meeting at the NRC Headquarters Office to discuss MSPI implementation issues and the timeline of future MSPI implementation milestones with industry representatives. In addition, major ROP topics of discussion included public radiation protection and Fire Protection SDPs; Safety System Functional Failure Performance Indicator (PI); Task Force updates on the Scrams with Loss of Normal Heat Removal and Barrier Integrity PIs; Maintenance Rule Unavailability Monitoring in Shutdown; and new and open PI Frequently Asked Questions.

III Status of Issues in the Reactor Generic Issue Program

Resolution of the issues in the Reactor Generic Issue Program continues to be on track in accordance with the schedules previously submitted.

IV Licensing Actions and Other Licensing Tasks

Operating power reactor licensing actions are defined as orders, license amendments, exemptions from regulations, relief from inspection or surveillance requirements, topical reports submitted on a plant-specific basis, notices of enforcement discretion, or other actions requiring NRC review and approval before they can be implemented by licensees. The FY 2004 NRC Performance Plan incorporates three output measures related to licensing actions -- number of

licensing action completions 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 2004 NRC Performance Plan incorporates one output measure related to other licensing tasks -- number of other licensing tasks completed.

Recently, 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, have resulted in the NRC's reprogramming of resources to accommodate the additional work. One of the programs affected by the reprogramming of resources is operating power reactor licensing actions. As a result, the size of the licensing action inventory for FY 2004 exceeded the goal of $\leq$ 1000 by 13.5 percent and the goal of having at least 96 percent of the licensing action applications less than one year old was not met (91.0 percent). All other goals were met for FY 2004. The licensing action goals for FY 2005 are under review and appropriate actions will be taken to either meet or modify the goals.

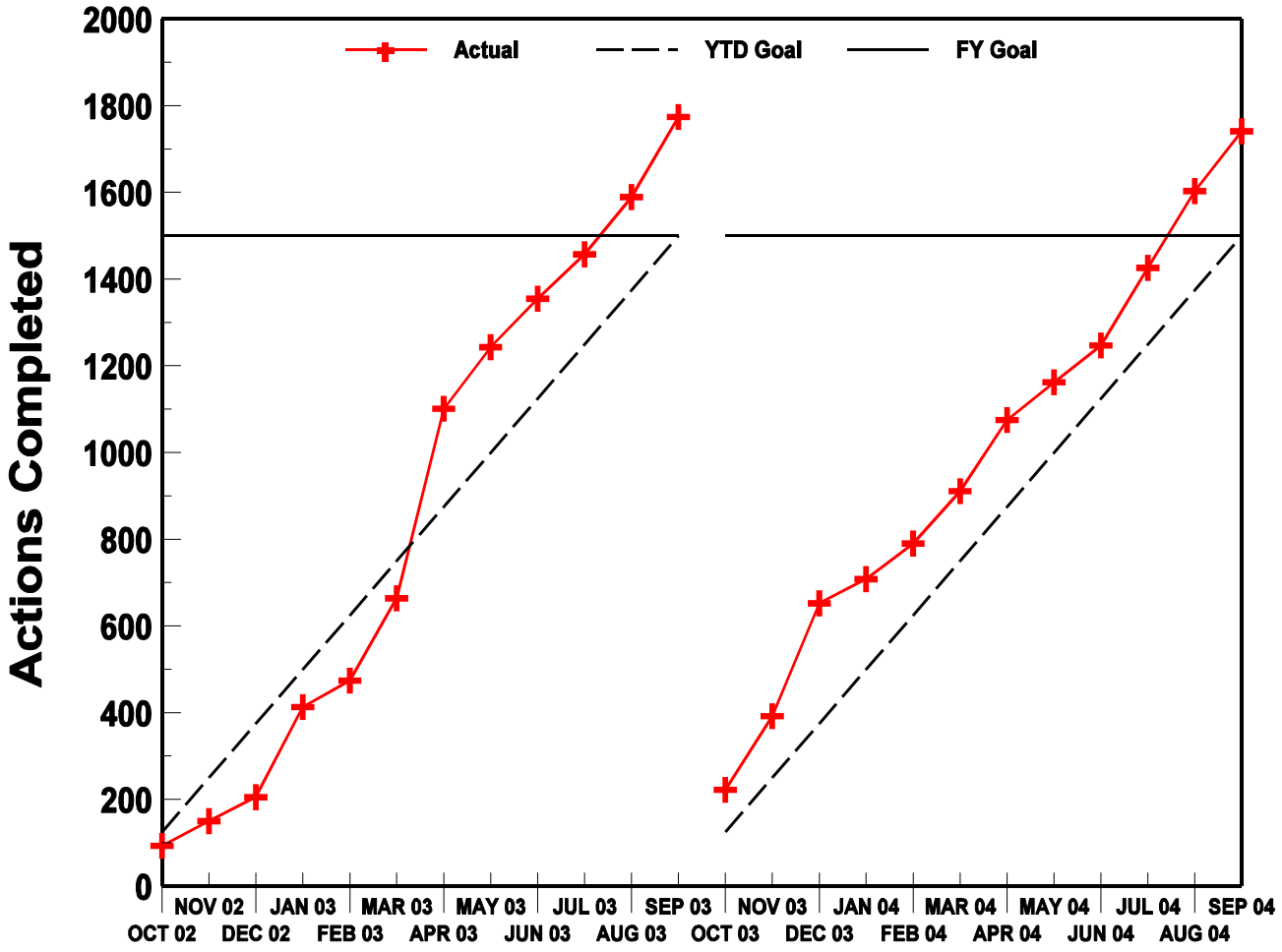
The actual FY 2002 and FY 2003 results, the FY 2004 goals, and the actual FY 2004 results, as of September 30, 2004, for the four NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the table below:

PERFORMANCE PLAN				
Output Measure	**FY 2002 Actual**	**FY 2003 Actual**	**FY 2004 Goals**	**FY 2004 Actual (thru 09/30/2004)**
Licensing actions completed/year	1560	1774	$\geq$ 1500	1741
Age of licensing action inventory	96.6% $\leq$ 1 year; and 100% $\leq$ 2 years	96%$\leq$ 1 year; and 100% $\leq$ 2 years	96% $\leq$ 1 year and 100% $\leq$ 2 years old	91.0% $\leq$ 1 year; 100% $\leq$ 2 years
Size of licensing action inventory	765	1296	$\leq$ 1000	1135
Other licensing tasks completed/year	426	500	$\geq$ 350	671

The following charts demonstrate NRC's FY 2004 trends for the four operating power reactor licensing action and other licensing task output measure goals:

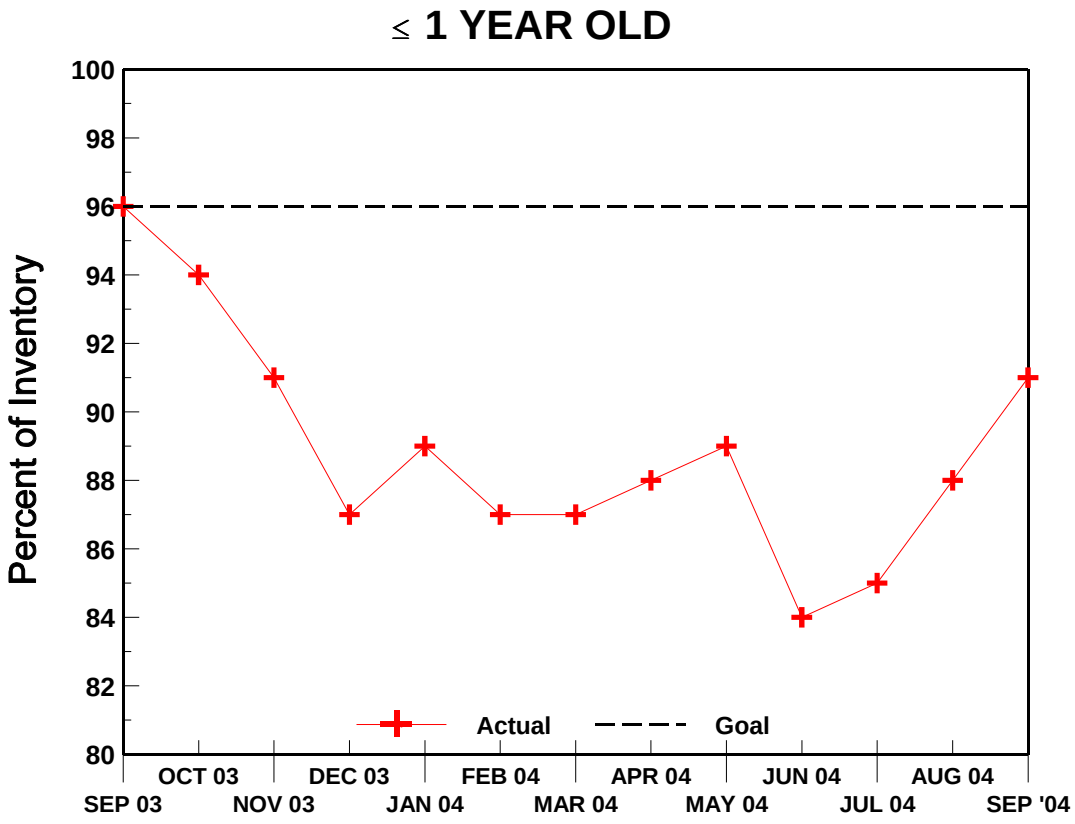
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Completed Licensing Actions



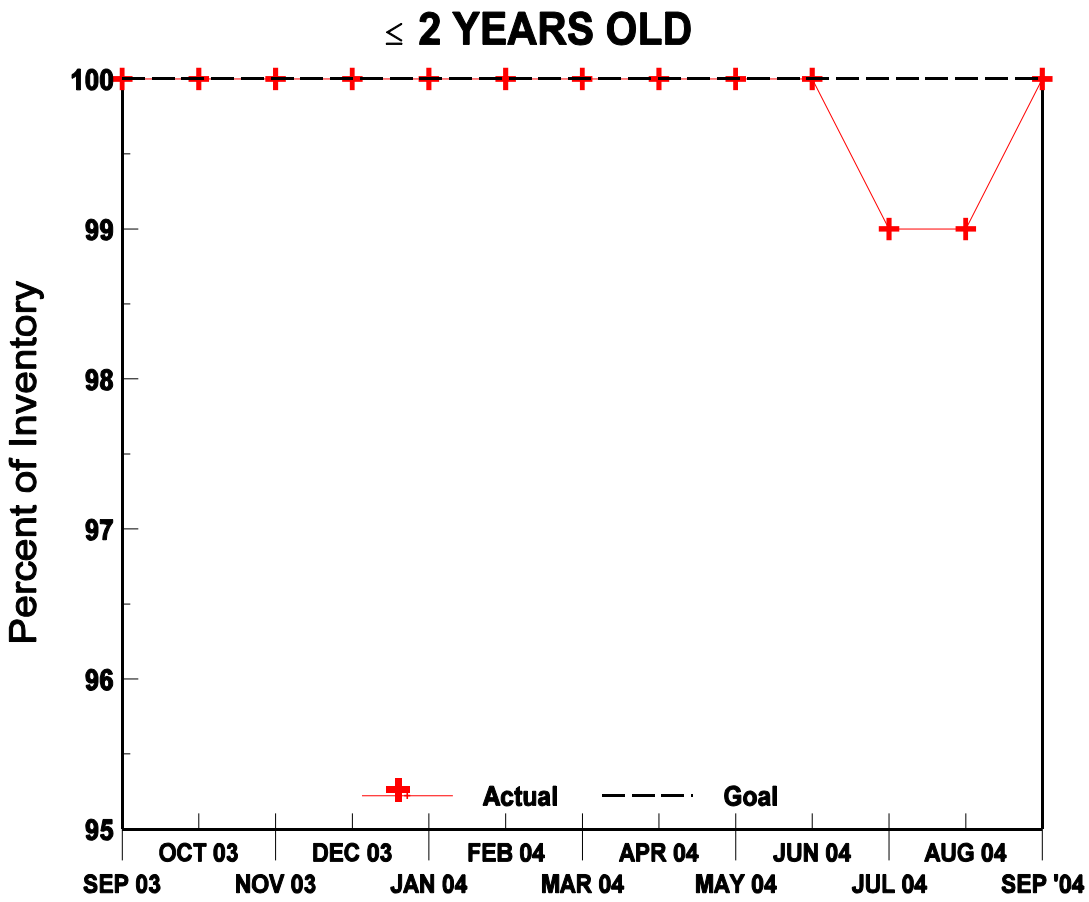
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



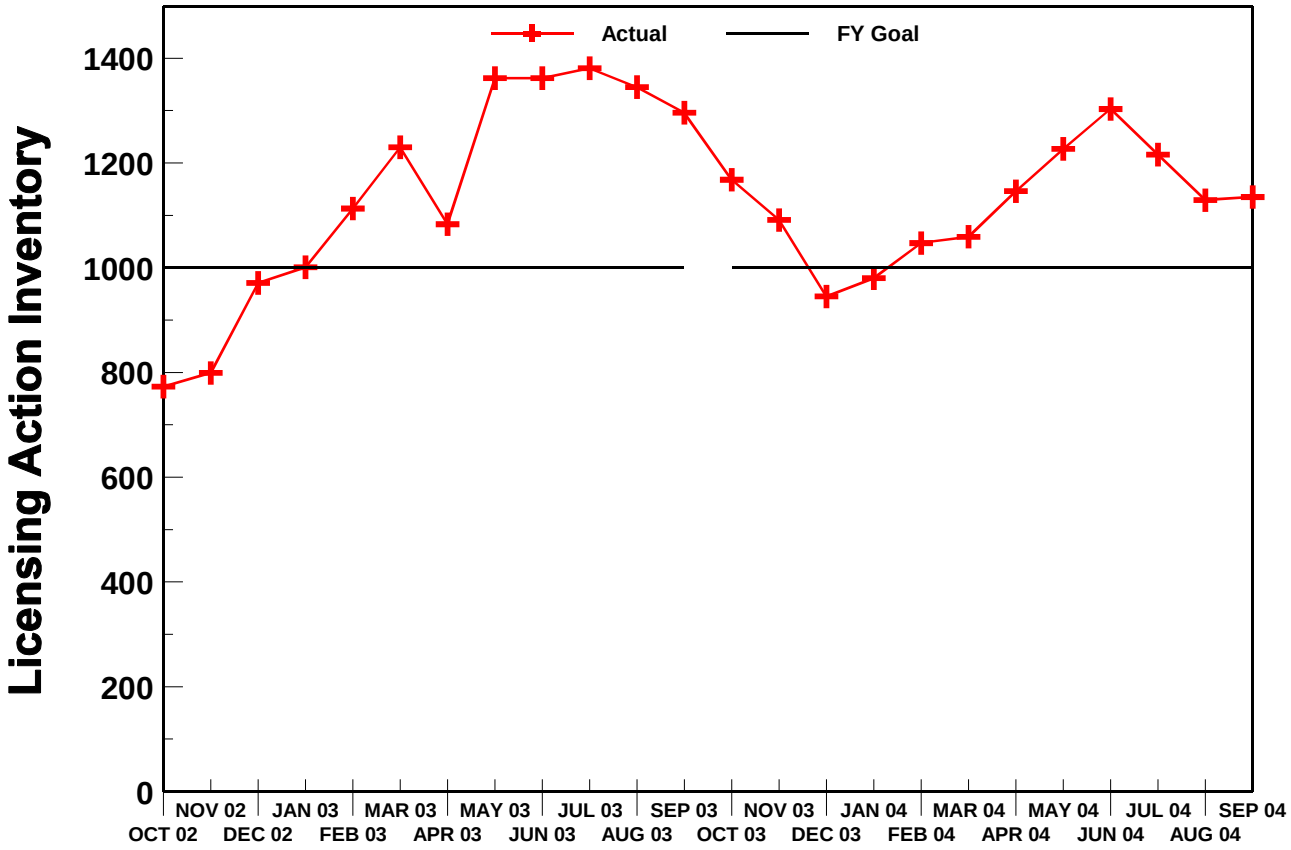
Nuclear Reactor Safety - Reactor Licensing

Performance Plan Target: Age of Licensing Action Inventory



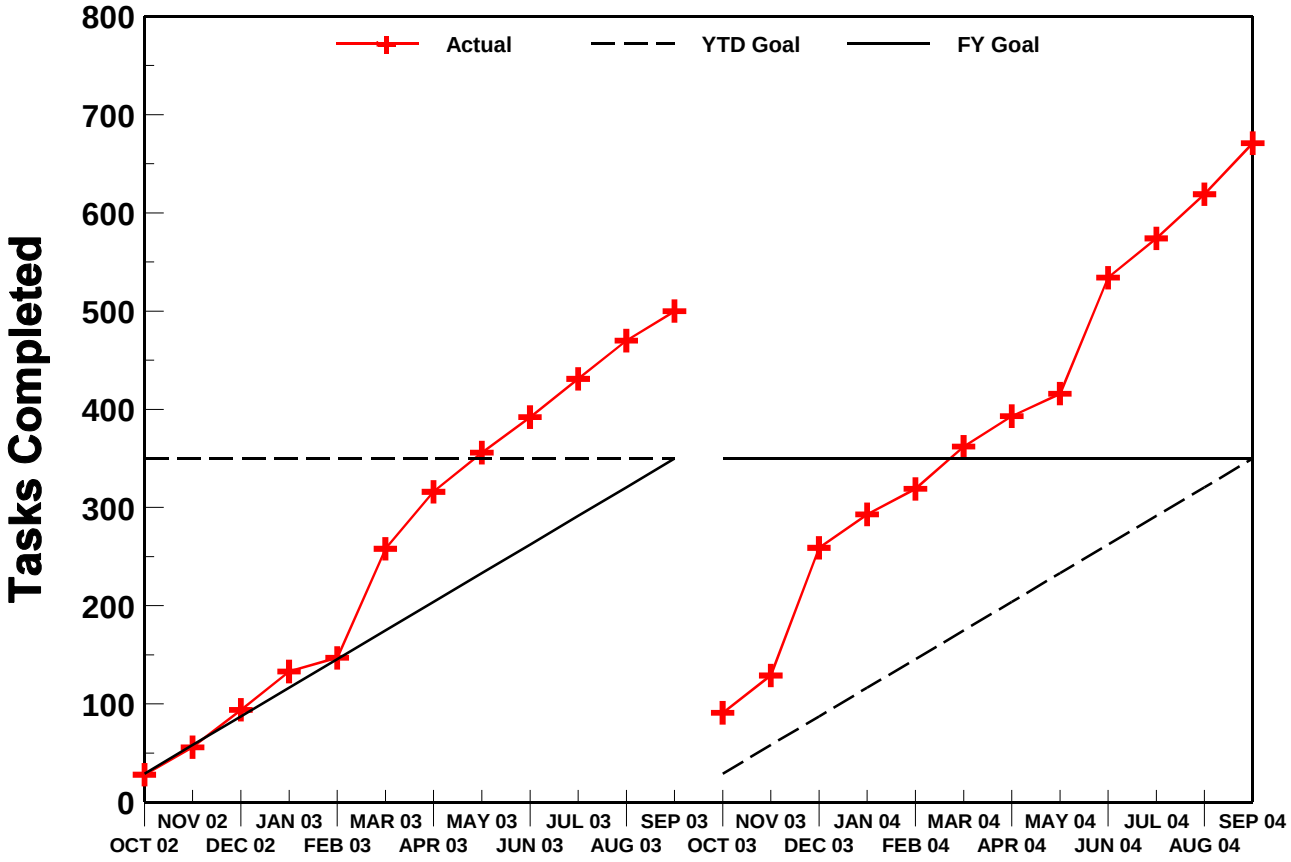
Nuclear Reactor Safety - Reactor Licensing

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

Dresden, Units 2 and 3, and Quad Cities, Units 1 and 2, Combined License Renewal Application

The staff issued the final supplemental environmental impact statement (SEIS) for both Dresden and Quad Cities in June 2004 and the safety evaluation report for both sites in July 2004. The staff is completing activities to support a decision in November 2004 on renewing the licenses.

Farley, Units 1 and 2, License Renewal Application

The Farley license renewal application is currently under review. The draft SEIS was issued in August 2004, and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in October 2004.

Arkansas Nuclear One, Unit 2, License Renewal Application

The Arkansas Unit 2 license renewal application is currently under review. The draft SEIS was issued in August 2004, and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in November 2004.

Cook, Units 1 and 2, License Renewal Application

The Cook license renewal application is currently under review. The draft SEIS was issued in September 2004 and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in December 2004.

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

The Browns Ferry license renewal application is currently under review. The draft SEIS is scheduled to be issued in December 2004, and the safety evaluation report, identifying 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, and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in December 2004, and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in February 2005. A request for hearing was received in response to the NRC's notice of opportunity for hearing, and an Atomic Safety and Licensing Board (ASLB) was established. The ASLB found that none of the petitioner's contentions satisfied the requirements to be admissible for litigation and denied the petition for hearing. The petitioner's motion for reconsideration was denied by the ASLB, and an appeal of the hearing denial is pending with the Commission.

Point Beach, Units 1 and 2, License Renewal Application

The Point Beach 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 January 2005, and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in May 2005.

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

The Nine Mile Point 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 April 2005, and the safety evaluation report, identifying any remaining open items, is scheduled to be issued in June 2005.

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, L.L.C. (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 updates, one issue concerning the consequences of an F16 aircraft crash accident at the proposed facility remains in litigation before the Atomic Safety and Licensing Board (ASLB).

During this reporting period, the ASLB concluded hearings on the accidental aircraft crash consequence issue at NRC headquarters in Rockville, Maryland. Proposed findings of fact and conclusions of law are due to be filed by the parties in October and November 2004. The ASLB will likely issue its decision on crash consequences no later than January 2005.

The Commission currently has under consideration certain matters raised on appeal from prior ASLB decisions. These involve PFS's petition for review of an ASLB ruling on a financial assurance contention and the State of Utah's petition for review of the ASLB's rulings on the redaction of proprietary information.

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	Sept 2004	0	0	0	0	0
	FY 04 Total	0	0	0	0	0
	FY 03 Total	0	0	0	0	0
	FY 02 Total	0	0	0	0	0
Severity Level II	Sept 2004	0	0	0	0	0
	FY 04 Total	0	1	0	0	1
	FY 03 Total	0	0	0	0	0
	FY 02 Total	1	0	0	0	1
Severity Level III	Sept 2004	0	0	1	0	1
	FY 04 Total	1	2	5	0	8
	FY 03 Total	2	0	4	0	6
	FY 02 Total	2	0	0	0	2
Severity Level IV or Green	Sept 2004	0	0	0	0	0
	FY 04 Total	1	0	2	2	5
	FY 03 Total	1	0	2	1	4
	FY 02 Total	0	0	2	0	2
Non-Cited Severity Level IV or Green	Sept 2004	5	1	15	7	28
	FY 04 Total	271	175	290	301	1,037
	FY 03 Total	211	164	253	184	812
	FY 02 Total	207	89	207	151	654

* 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 White, Yellow or Red Findings	Sept 04 Red	0	0	0	0	0
	Sept 04 Yellow	0	0	0	0	0
	Sept 04 White	0	2	0	0	2
	FY 04 Total	3	4	7	5	19
	FY 03 Total	6	1	7	1	15
	FY 02 Total	5	4	6	8	23

Description of Significant Actions taken in September 2004*

Virginia Electric and Power Company (Surry) EA-04-005

On September 15, 2004, a Notice of Violation was issued for a violation associated with a White SDP finding involving ineffective safe shutdown procedures during a postulated fire that could have resulted in a reactor coolant pump seal loss of coolant accident. The violation cited the licensee's ineffective alternative shutdown capability and response procedures for a postulated fire in the Emergency Switchgear Room Number 1 and 2.

Duke Energy Corporation (Oconee) EA-04-115

On September 24, 2004, a Notice of Violation was issued for a violation associated with a White SDP finding involving inconsistent fire response procedures that could result in the failure to maintain pressurizer level within the required indicating range. The violation cited the licensee's inadequate fire response procedures.

American Electric Power Company (D.C. Cook) EA-04-109

On September 29, 2004, a Notice of Violation was issued for a Severity Level III violation involving an application for renewal of a Senior Reactor Operator license that was not complete and accurate in all material respects.

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 issued to strengthen further the security of NRC-licensed facilities and control of nuclear materials.

*Security related enforcement actions are not included in the statistics in the above Tables or in the Description of Significant Action due to the sensitive nature of security findings.

Orders were issued on April 29, 2003, to revise 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. Licensees are required to implement the Orders no later than October 29, 2004. Implementation of these Orders will include employing revised security plans, revised safeguards contingency plans, and revised guard training and qualification plans, and completing any necessary plant modifications. The NRC staff has endorsed appropriate implementing guidance and provided it to the industry so plant and program changes can be completed on schedule. All licensees submitted the required plans by the April 29, 2004 scheduled date, and the NRC staff is implementing the review and approval process. The reviews are progressing as planned and should be completed 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.

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. Pilot force-on-force exercises were completed at fifteen plants in 2003. The staff has provided a paper to the Commission summarizing lessons learned from the force-on-force pilot program and how these lessons can be factored into the full implementation of the force-on-force program. The Commission has approved enhanced force-on-force testing. Following implementation of the revised Design Basis Threat (DBT) on October 29, 2004, the NRC will implement triennial force-on-force testing at each nuclear power plant site. In the interim, the NRC is conducting force-on-force exercises at a rate of approximately two per month through October 2004.

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 will provide 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.

During 2003, the staff suspended the physical protection portion of the baseline inspections in the Reactor Oversight Process. Instead, NRC inspections in the reactor security area were focused on licensee implementation of compensatory measures to address the post-9/11 threat environment. These compensatory measures were required by the Commission's February 25, 2002 Order. In late 2003, the staff developed a revised baseline inspection program for reactor security, taking into consideration the enhanced requirements and the higher threat environment. The staff began implementation of the revised baseline inspection program during the first week of March 2004. Until the DBT Orders are fully implemented, the inspections will focus on those elements of the program that have been fully implemented under

previous orders, such as access authorization and security force work hour limits. During FY 2005, inspection efforts will focus on verifying implementation of the DBT. Implementation of all elements of the baseline inspection program will commence in 2006.

IX Power Uprates

The staff has assigned power uprate license amendment reviews a high priority. 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. Measurement uncertainty recapture (MUR) power uprates are power uprates of less than 2 percent and are 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 101 such reviews. Approximately 12,548 megawatts-thermal (4183 megawatts-electric) or an equivalent of about four nuclear power plant units has been gained through implementation of power uprates at existing plants. The staff currently has 10 plant-specific power uprate applications under review, with three more potentially arriving in October. The 10 applications under review include 5 stretch power uprates and 5 EPUs.

On September 10, 2003, Entergy Nuclear Operations, Inc. submitted a request for an EPU at its Vermont Yankee (VY) plant in Brattleboro, Vermont. On August 30, 2004, the Vermont Department of Public Service (DPS) and the New England Coalition (NEC) each submitted a request for hearing on the VY EPU application. The five contentions raised by DPS and the seven contentions raised by NEC pertain to a number of technical topics within the NRC's scope of review for the power uprate. On September 29, 2004, both Entergy and the NRC staff filed responses to the hearing requests from the Vermont DPS and the NEC related to the VY EPU amendment. Under the NRC's procedural rules, the DPS and NEC have seven days in which to file replies to the NRC staff and Entergy filings. Thereafter, under the rules, the Licensing Board has 45 days to issue a decision on whether to accept or reject each hearing request.

The staff is continuing its efforts related to dryer cracking and other flow-induced vibration issues that have occurred at Exelon's Quad Cities and Dresden plants following implementation of EPUs. NRC staff met with Exelon on September 23 and 24, 2004, at Exelon's Cantera office in Warrenville, Illinois, and discussed the licensee's flow-induced vibration analyses pertaining to steam dryers and other components. The staff continues to evaluate the licensee's analyses in this area, and future meetings with Exelon are scheduled.

In July 2004, the staff completed a survey of nuclear power plant licensees to obtain information regarding industry's plans related to power uprate applications. Based on this survey, licensees

plan to submit power uprate applications for 18 nuclear power plant units in the next 5 years. These include 7 MUR power uprates, 1 stretch power uprate, and 10 EPU. Planned power uprates are expected to result in an increase of about 2841 megawatts-thermal (947 megawatts-electric).

X Status of the Davis-Besse Nuclear Power Station

This six-month update on the status of FirstEnergy Nuclear Operating Company's (FENOC's) Davis-Besse nuclear plant covers the period from plant startup in March 2004 through September 2004. 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 make a determination whether plant performance warrants resumption of the NRC's normal reactor oversight program.

NRC Lifts Restriction on Davis-Besse Restart

In early 2004, the NRC staff completed its inspection, assessment, and licensing activities and evaluated the effectiveness of the licensee's actions to address the issues that resulted in the plant shutdown. On March 8, 2004, NRC's lifted its restart restriction on the restart of Davis-Besse. To support its decision, the NRC confirmed resolution of the various issues contained in the Davis-Besse restart checklist and restart action matrix. The restart checklist included the six specific commitments from the March 2002 Confirmatory Action Letter. Key inspections conducted by the NRC prior to restart included restart readiness assessment team inspections, management and human performance team inspections, and a corrective action team inspection.

Davis-Besse committed to a number of improvement initiatives in its restart report that were intended to ensure that the improvements realized during the extended outage remain in place. In a letter dated March 8, 2004, lifting NRC's restriction on restart, the NRC described its expectations that these improvement initiatives are completed as scheduled and that the NRC is 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. In response to the Confirmatory Order, the Nuclear Information and Resource Service filed a Petition for Hearing, which was denied by the NRC because the issues raised were not within the scope of the Confirmatory Order.

Based on the licensee's satisfactory resolution of all the issues contained in the restart checklist and restart action matrix, FENOC's improvement commitments from the restart report, and NRC's Confirmatory Order, the NRC determined that the plant was safe for restart and operation.

NRC Observed Plant Restart

On March 11, 2004, Davis-Besse was restarted. The plant reached full power on April 4, 2004. Startup of the plant was observed with NRC providing around-the-clock oversight by NRC

resident inspectors and NRC operator license examiners from all NRC Regional Offices. Overall, Davis-Besse performed the startup well. After full power was reached around-the-clock oversight was discontinued; however, the Oversight Panel continued to monitor plant activities utilizing enhanced on-site inspection coverage. The NRC concluded from its inspections that the Davis-Besse restart was conducted in a methodical and safe manner.

NRC Continues Enhanced Oversight, Including Specific Post-Restart Inspection Strategy

The Oversight Panel approved a post-restart inspection strategy that involves implementation of the routine inspection program utilized at all operating reactor facilities, enhanced inspection of corrective action program effectiveness, enhanced NRC performance indicator monitoring, special inspections to evaluate compliance with the Confirmatory Order, and special inspections to evaluate implementation and effectiveness of the licensee's commitments for continuing improvement. NRC continued ongoing oversight and presence at the facility. In July 2004 NRC Commissioner Jeffrey Merrifield, Executive Director for Operations Luis Reyes, and Regional Administrator James Caldwell visited the Davis-Besse plant. The Oversight Panel conducted a midyear performance review of Davis-Besse and briefed senior NRC management of the results.

Plant Operating History

The plant operated at full power most of the time through September 30, 2004. Reactor criticality was achieved on March 11, 2004. The main generator was synchronized to the grid on March 16, 2004, and the main turbine was tripped off-line to perform the main turbine overspeed trip test on March 17, 2004. The plant was shut down later on March 17 to repair a main feedwater block isolation valve. Reactor criticality was again reached on March 26, 2004, and the main generator was synchronized to the grid on March 27, 2004. The plant reached full power on April 4, 2004. On August 4, 2004, Davis-Besse experienced a reactor trip due to a fuse failure while plant personnel were performing reactor trip breaker testing. The plant was restarted and reached full power on August 10, 2004. NRC inspectors were on site and observed both the shutdown and restart which the licensee performed in a safe manner.

Results of NRC Inspections

Overall, Davis-Besse has maintained an appropriate safety focus on plant activities since restart. The NRC conducted several inspections following restart. Most of the inspections were conducted by the three resident inspectors assigned to the plant. Other inspections conducted included engineering design changes, plant safety culture, and radiological protection. Since restart, there were no findings greater than "very low safety significance" other than a violation for an issue which was discovered last year by FENOC.

In 2003, FENOC identified that it inadvertently violated NRC requirements for completeness and accuracy in response to a 1998 request for information letter from the NRC. The violation was not related to the reactor vessel head degradation. The NRC performed a special inspection prior to restart and found no widespread noncompliances regarding existing submittals and determined that FENOC took proper and extensive corrective actions to ensure that future submittals to the NRC are complete and accurate.

Oversight Panel Public Communication

The Oversight Panel continued to provide a comprehensive forum for public access and stakeholder involvement. The Oversight Panel held five local public meetings since the plant was restarted to discuss plant performance and provide the public access to Oversight Panel members. All the meetings were transcribed, with the transcripts placed on the NRC's public access web site. In addition, Oversight Panel members routinely met with County Commissioners to discuss issues of interest. Topics have included the Reactor Oversight Process, the Davis-Besse specific inspection strategy for the year, and NRC's experience with other plants in extended shutdown conditions due to performance problems. The Oversight Panel will continue to hold public meetings to discuss plant performance.

The Oversight Panel also continued to receive letters and emails from members of the public and has responded to all of them. In addition, publicly available "newsletters" were published reporting the status of NRC activities regarding the Davis-Besse plant. The newsletters receive wide distribution, including Federal, State, and local officials, media outlets, public interest groups, and the public, and are handed out at the local public meetings near the site.

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

On September 20, 2004, the NRC made available results from its preliminary risk (Accident Sequence Precursor (ASP)) analysis of the combined safety issues at Davis-Besse that existed during the year before the reactor vessel head degradation was discovered. 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 number of analyses varies from year-to-year, but is usually between about five and 30 per year. The Davis-Besse analysis was one of a number of risk analyses that are performed on a routine basis.

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 the combination of issues at Davis-Besse had about six chances in 1,000 of damaging the core during that one-year period. This 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. Based on the preliminary analysis, this event rates as a "significant" precursor. "Significant" is the NRC's highest category for a precursor. Since 1979, 18 events have been rated as "significant," four of which had higher risk estimates than this situation, and there were two in the past 10 years which were roughly equivalent to Davis-Besse. The four more serious events were, in order, the Three Mile Island accident in 1979, the loss of feedwater event at Davis-Besse in 1985, damage to a heat exchanger at the Brunswick plant in 1981, and the unavailability of a high-pressure injection pump at the Shearon Harris plant in 1991. The roughly equivalent events were the draining of the reactor coolant system at the Wolf Creek plant during a 1994 maintenance outage and a loss of off-site power at the Catawba plant in 1996.

Independent Assessments Required by the March 8, 2004, Confirmatory Order

Two of four independent assessments of plant activities required by the Confirmatory Order to be completed in 2004 have been completed. The assessment of the operations area was conducted during August 2004, and the results are due to be reported to the NRC and the public in October 2004. The assessment of the corrective action area was conducted in September and October 2004, and the results are due to be reported in November 2004. The remaining two assessments are required to be completed in 2004. The assessment of the engineering area is scheduled in October 2004. The assessment of organizational safety culture is scheduled for November 2004.

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