

August 1, 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 sixty-seventh report, which covers the month of June 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 publishing a final rule applicable to the use of the Licensing Support Network (LSN) and the electronic hearing docket in the licensing proceeding on the disposal of high level radioactive waste at Yucca Mountain, Nevada; participating in and evaluating, along with the Federal Emergency Management Agency, a full emergency preparedness exercise at the Indian Point nuclear power plant; and establishing that the NRC will conduct a detailed engineering inspection at the Vermont Yankee Nuclear Station in August 2004 that we believe is appropriate for addressing our oversight responsibilities regarding public health and safety in conjunction with the requested 20 percent power uprate.

I would like to update you on the status of power uprate activities. Since November 3, 2003, the staff approved power uprates for two nuclear power plant units, resulting in a combined increase of about 45 megawatts-electric (MWe). This brings the total number of power uprates approved since 1977 to 101, resulting in a combined increase of approximately 4183 MWe to the Nation's electric generating capacity. The staff, as of July 29, is reviewing power uprates for 10 nuclear power plant units. If approved, these power uprates would result in a combined increase of an additional 965 MWe to the Nation's electric generating capacity. In July 2004, the staff conducted a survey of all licensees to obtain information regarding their plans for submitting power uprates over the next 5 years. Based on this survey and information obtained since the survey, licensees plan to request power uprates for 18 nuclear power plant units over the next 5 years. If approved, these power uprates would result in an increase of about 947 MWe. Based on the results of the July 2004 survey and the models the staff developed for reviewing power uprates, approximately 29 full-time equivalent staff will be used for reviewing the power uprates expected over the next 5 years. These resources are budgeted.

Power uprates are considered among the most significant licensing actions and are being reviewed in a timely manner. Because of the wide interest in power uprate licensing actions, we established a power uprate web site that is accessible from our home page (<http://www.nrc.gov>). Maintaining safety remains the staff's highest priority when conducting power uprate reviews, and the staff will ensure that the goal to maintain safety is not compromised in order to meet timeliness and resource expenditure goals. The staff continues to face challenges with technical issues including steam dryer failures (Quad Cities), various flow-induced vibration issues (Quad Cities and Dresden), and ultrasonic flow meter reading abnormalities (Byron, Braidwood, and Fort Calhoun). Due to extensive public interest and correspondence from various public officials, public interest groups, and other stakeholders, the staff continues to focus attention on activities related to the Vermont Yankee extended power uprate review. As noted above, to meet these challenges, the staff has dedicated resources to resolve these issues.

As reported previously, Vermont Yankee was conducting an investigation of two fuel rod segments missing from their container in the spent fuel pool. Vermont Yankee announced on July 13 that the missing spent fuel rod segments were located in a different container in the spent fuel pool. The NRC is continuing to monitor Entergy's activities to evaluate the licensee's compliance with NRC material control and accountability regulations.

As noted in last month's report, NRC dispatched an Augmented Inspection Team (AIT) to the Palo Verde Nuclear Generating Station, located near Wintersburg, Arizona, and operated by Arizona Public Service Company, to form a better understanding of the causes of, and the plant response to, the loss of off-site power which resulted in the shutdown of the three reactors at the site on June 14. While one of the six on-site emergency diesel generators failed, the three reactors were safely shutdown and placed in a stable condition. Immediate corrective actions implemented by the licensee for continued safe operation of the facility were reviewed and determined to be acceptable by the NRC. The team found that a number of system failures, as well as procedure and human performance issues, complicated the event and recovery efforts. On July 12, 2004, a public meeting was conducted in Goodyear, Arizona, to discuss the team's preliminary findings. The AIT's report was issued on July 16. NRC will conduct a follow-up inspection in the near future to evaluate the licensee's corrective actions.

Recently, the Commission and the NRC staff also:

- completed an off-site power system operational readiness inspection at all nuclear power plants to assess electrical grid reliability and availability of off-site power. The staff is assessing the results of these inspections and will take appropriate regulatory action, if necessary. NRC staff also met with Federal Energy Regulatory Commission (FERC) staff on June 21, 2004, to discuss grid reliability issues. FERC staff shared their impressions regarding the ongoing North American Electric Reliability Council (NERC) audits. NRC staff discussed the ongoing reviews of the results of the off-site power system operational readiness inspection.
- received a non-emergency event notification on July 16 from the permanently shut-down Humboldt Bay Nuclear Plant in Eureka, California, of a nuclear material accountability discrepancy related to the spent fuel inventory. Specifically, the discrepancies concern documentation from 1968 related to three fuel rod segments, each about 18 inches in

length and about one-half inch in diameter, that were originally scheduled to be shipped to Battelle Institute in Ohio for a study, but subsequently were not shipped because the study was canceled. A more detailed review of records and a complete search of the spent fuel pool is underway to establish and verify the location of the three fuel rod segments. NRC inspectors have been on site and are fully aware of the status of these issues.

- approved a request by the Nuclear Management Company to increase the generating capacity of the Palisades nuclear power plant, located near South Haven, Michigan, by 1.4 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 at the plant increases the net generating capacity of the plant from 780 to 792 megawatts-electric (MWE).
- issued an Order designating G. Paul Bollwerk III, Chief Judge of the agency's Atomic Safety and Licensing Board Panel, as Pre-License Application Presiding Officer for Yucca Mountain. Consistent with the Commission's Order, Judge Bollwerk has delegated that authority to a three member Atomic Safety & Licensing Board (69 FR 42218, dated July 14, 2004). This Board will be responsible for resolving any disputes concerning certification of the electronic availability of documents related to the Department of Energy's expected application for a license for a high-level waste repository at Yucca Mountain, Nevada.
- met with the public in Peekskill, New York, to discuss the licensing and regulatory programs that will govern plans to construct and operate a dry cask interim storage facility (also known as an Independent Spent Fuel Storage Installation [ISFSI]) for spent nuclear fuel at the Indian Point 2 and 3 nuclear power plants. Indian Point is located in Buchanan, New York, and is operated by Entergy Nuclear Northeast. There are currently about 30 such ISFSIs at nuclear power plants across the country.
- conducted a public meeting in Piketon, Ohio, on June 23 to discuss United States Enrichment Corporation (USEC) Inc.'s proposed commercial gas centrifuge uranium enrichment facility (American Centrifuge Plant or ACP) to be sited at the Portsmouth Gaseous Diffusion Plant site in Piketon. USEC anticipates submitting its license application for the ACP in August 2004. During this meeting, the NRC described the proposed project, the licensing process that will be utilized in reviewing the license application, and opportunities for public input. The NRC staff also discussed the processes that will be utilized to develop its Environmental Impact Statement and to inspect the ACP.
- conducted the second quarterly management meeting with Louisiana Energy Services (LES) staff on June 24 to discuss management issues related to the gas centrifuge uranium enrichment plant proposed to be located in Eunice, New Mexico. Both NRC and LES staffs indicated that good progress has been made to date and that all goals have been met ahead of schedule. NRC staff is reviewing LES' responses to Requests for Additional Information and will communicate if additional clarification or information is needed. LES indicated that it intends to select an architect-engineer in August. The Atomic Safety & Licensing Board held a pre-hearing conference in Hobbs, New Mexico,

on June 15 to discuss proposed contentions raised on the LES gas centrifuge uranium enrichment plant. Staff from the New Mexico Environment Department, New Mexico Attorney General's office, and Nuclear Information and Resource Service/Public Citizen made presentations on their proposed contentions. The discussions followed the written filings made by the parties. The Atomic Safety and Licensing Board has admitted ten of the contentions for the hearing.

- dispatched a special inspection team to the Clinton Nuclear Power Plant in order to understand better the circumstances surrounding an automatic reactor shutdown and unexpected response of some plant equipment to the shutdown. The plant, located in Clinton, Illinois, is operated by AmerGen Energy Company, a subsidiary of Exelon Generation Company. On July 13, an automatic reactor shutdown occurred as a result of a trip of the main power transformer. The transformer trip was caused by a lightning strike which led to a disturbance on the electric grid. The main transformer connects the power from the plant generator to the electric grid.
- published in the Federal Register, dated June 30, 2004 (69 FR 39515), a notice of a license renewal application request and opportunity to request a hearing for Safety Light Corporation, located in Bloomsburg, Pennsylvania. The licensee is authorized to manufacture devices containing tritium at its facility.
- received a final application from the State of Minnesota for a Section 274b Agreement under the Atomic Energy Act. An NRC interoffice team is reviewing the application for compatibility with NRC's regulatory program and adequacy to protect public health and safety. Minnesota may then be designated an "Agreement State" and will regulate the safe use of certain radioactive materials within the State.

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

**JUNE 2004**

Enclosure

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<sup>1</sup>Note: The period of performance covered by this report includes activities occurring between the first and last day of June 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. On June 16, the NRC published in the *Federal Register* (69 FR 33536) a final rule to allow a licensee to comply voluntarily with the National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants- 2001 Edition." NFPA 805 is a performance-based, risk-informed approach to fire protection. The final rule will allow licensees to develop risk-informed and performance-based approaches to fire protection provided they meet the criteria specified in the standard. The final rule incorporates recent advances in fire protection information and is expected to reduce the need for exemption requests. It may also reduce the regulatory burden for many licensees. The effective date of the rule is July 16, 2004.

## **II Reactor Oversight Process**

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

- The staff conducted its monthly Mitigating System Performance Index (MSPI) public meeting on June 17, 2004. Industry confirmed that it no longer seeks to eliminate the Significance Determination Process as a condition to implement the MSPI for those failures covered by MSPI. As a result, the staff is currently formulating the remaining technical and implementation issues in response to its May 25, 2004 memorandum to internal stakeholders requesting identification of critical issues to be resolved prior to replacement of the Safety System Unavailability Performance Indicator. The staff's goal is to have an agency position on these issues and on how to proceed by the July 21, 2004 public MSPI meeting. Near term items to be accomplished soon after the decision is made (assuming an endorsement) are the creation of a committee to work on a draft temporary instruction, MSPI implementation guidance (NEI 99-02, Section 2.2 and Appendix F), a list of significant differences and assumptions that need to be resolved resulting from the standardized plant analysis risk upgrade and validation reviews for the pilot plants, as well as a sample MSPI basis document to be used in the public workshops.

## **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 the licensee. The FY 2004 NRC Performance Plan incorporates three output measures related to licensing actions -- the

number of licensing action completions per year, the age of the licensing action inventory, and the 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 licensee topical reports, NRR responses 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 the licensee. The FY 2004 NRC Performance Plan incorporates one output measure related to other licensing tasks -- the 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 reprogramming 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, by the end of FY 2004, the size of the licensing action inventory will most likely exceed the goal of  $\leq 1000$  and the goal of having at least 96 percent of the licensing action applications less than one year old will not be met. Nevertheless, we anticipate meeting our goal of completing more than 1500 licensing actions in FY 2004. NRC is working with licensees on prioritizing the licensing action workload.

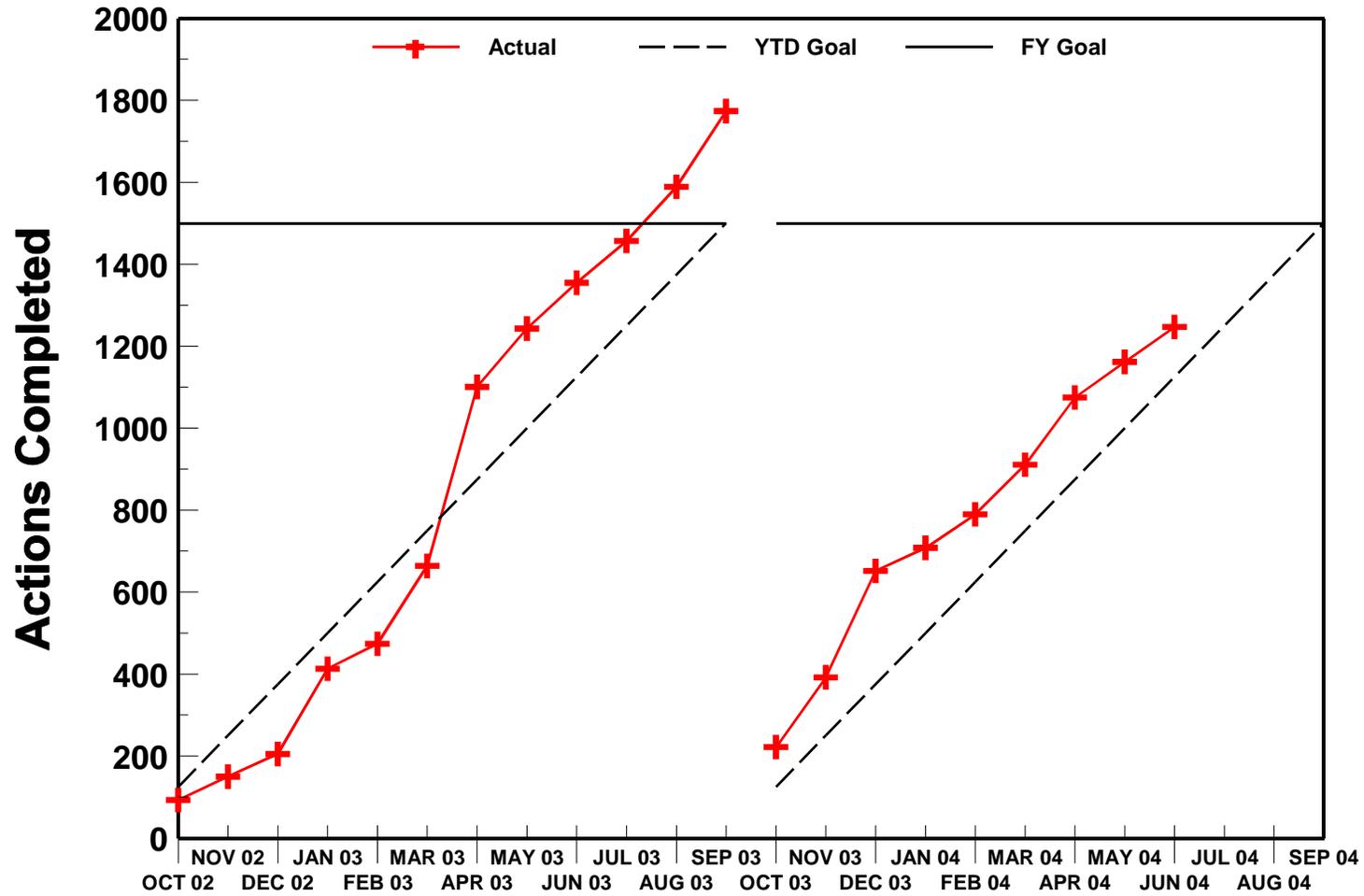
The actual FY 2002 and FY 2003 results, the FY 2004 goals and the actual FY 2004 results, as of June 30, 2004, for the four NRC Performance Plan output measures for operating power reactor licensing actions and other licensing tasks are shown in the table below:

PERFORMANCE PLAN				
Output Measure	FY 2002 Actual	FY 2003 Actual	FY 2004 Goals	FY 2004 Actual (thru 06/30/2004)
Licensing actions completed/year	1560	1774	$\geq 1500$	1247
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	84.0% $\leq 1$ year; 100% $\leq 2$ years
Size of licensing action inventory	765	1296	$\leq 1000$	1303
Other licensing tasks completed/year	426	500	$\geq 350$	534

The following charts demonstrate NRC's trends for the four operating power reactor licensing actions and other licensing task output measure goals.

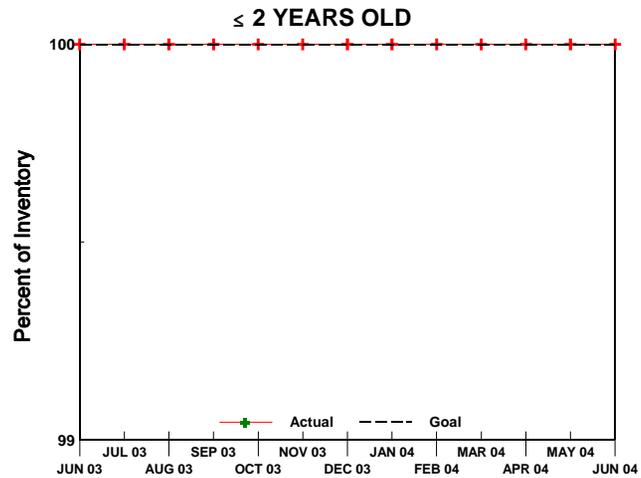
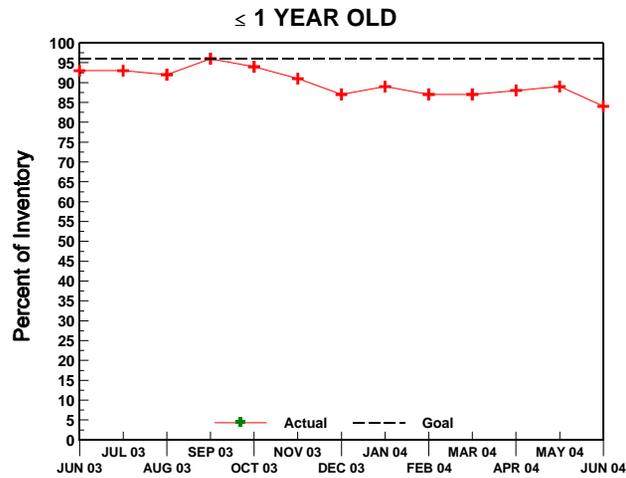
# Nuclear Reactor Safety - Reactor Licensing

**Performance Plan Target: Completed Licensing Actions**



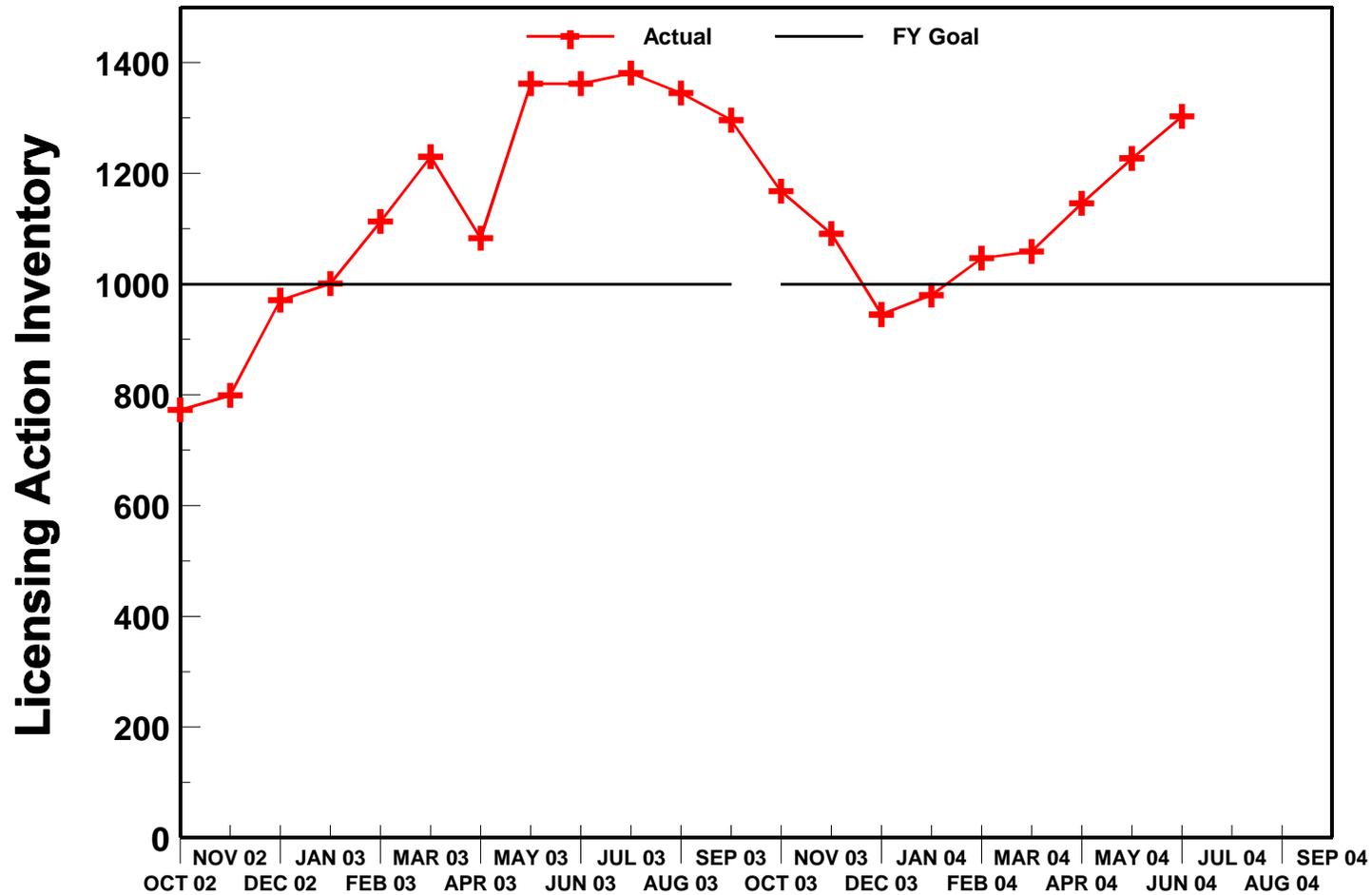
# Nuclear Reactor Safety - Reactor Licensing

## Performance Plan Target: Age of Licensing Action Inventory



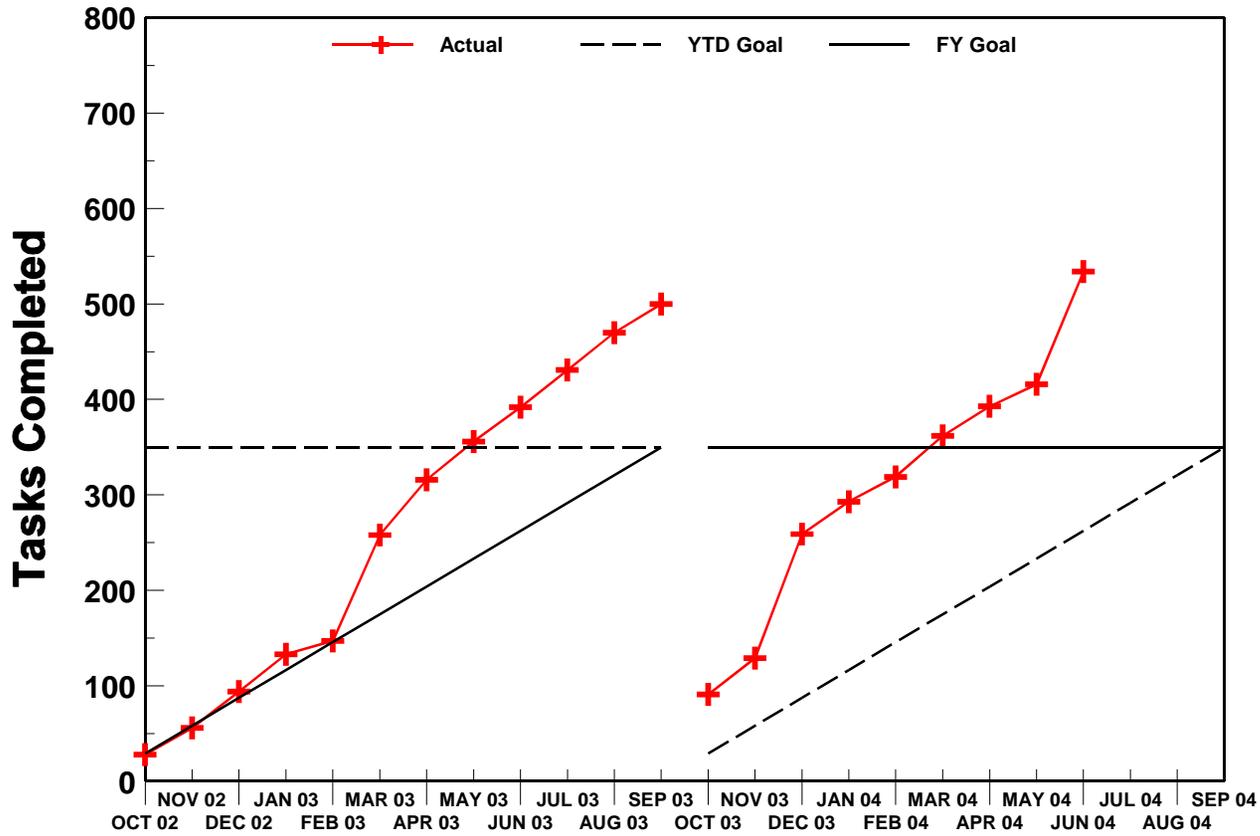
# Nuclear Reactor Safety - Reactor Licensing

## Performance Plan: 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 is addressing comments received on the draft supplemental environmental impact statements (SEISs) and is preparing to issue the final SEISs in July 2004 for both Dresden and Quad Cities. The staff is reviewing the applicant's responses to open items identified in the safety evaluation report and is preparing to issue the safety evaluation report in July 2004.

### Farley, Units 1 and 2, License Renewal Application

The Farley 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 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 and the staff is preparing requests for additional information. The draft SEIS is scheduled to be issued in September 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 and the staff is preparing requests for additional information. The draft SEIS is scheduled to be 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 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 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 has been received in response to the NRC's notice of opportunity for hearing and an Atomic Safety and Licensing Board has been established.

### 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 staff expects to issue the draft SEIS in January 2005 and the safety evaluation report, identifying any remaining open items, in May 2005. A request for hearing has been received in response to the NRC's notice of opportunity for hearing.

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

On May 27, 2004, the NRC received an application for renewal of the operating licenses for Nine Mile Point, Units 1 and 2. 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, 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 F-16 aircraft crash at the proposed facility remains to be litigated before the Atomic Safety and Licensing Board (ASLB).

During this reporting period, the depositions of expert witnesses in the proceeding were completed. Hearings will begin in August 2004. The ASLB may issue its decision on crash consequences by January 2005.

Finally, the Commission currently has under consideration certain matters raised on appeal from prior ASLB decisions. These involve PFS's petition for review of a January 2004 ASLB ruling on a financial assurance contention, the State of Utah's petition for review of the ASLB's rulings on the redaction of proprietary information, and the State of Utah's petitions for review of the ASLB's decisions on three environmental contentions.

## 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	June 2004	0	0	0	0	0
	FY 04 YTD	0	0	0	0	0
	FY 03 Total	0	0	0	0	0
	FY 02 Total	0	0	0	0	0
Severity Level II	June 2004	0	0	0	0	0
	FY 04 YTD	0	1	0	0	1
	FY 03 Total	0	0	0	0	0
	FY 02 Total	1	0	0	0	1
Severity Level III	June 2004	0	1	1	0	2
	FY 04 YTD	1	2	4	0	7
	FY 03 Total	2	0	4	0	6
	FY 02 Total	2	0	0	0	2
Severity Level IV or Green	June 2004	0	0	0	1	1
	FY 04 YTD	1	0	2	1	4
	FY 03 Total	1	0	2	1	4
	FY 02 Total	0	0	2	0	2
Non-Cited Severity Level IV or Green	June 2004	4	0	7	5	16
	FY 04 YTD	181	132	209	204	726
	FY 03 Total	211	164	202	184	761
	FY 02 Total	207	89	201	151	648

\* 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, or III refer to the number of Severity Level I, II, and III violations or problems. The monthly totals generally lag by 30 days due to inspection report and enforcement development.

<b>Escalated Reactor Enforcement Actions Associated with the Reactor Oversight Process</b>						
		Region I	Region II	Region III	Region IV	Total
Notices of Violation Related to White, Yellow or Red Findings	6/04 Red	0	0	0	0	0
	6/04 Yellow	0	0	0	0	0
	6/04 White	0	1	0	1	2
	FY 04 YTD	3	2	7	5	17
	FY 03 Total	6	1	7	1	15
	FY 02 Total	5	4	6	8	23

### **Description of Significant Actions taken in June 2004\***

#### **Nebraska Public Power District (Cooper) EA-04-120**

On June 25, 2004, a Notice of Violation was issued for a violation associated with a White Significance Determination Process (SDP) finding involving a high failure rate on the licensed operator biennial requalification written examinations. The violation cited the failure to implement consistently all elements of a systems approach to training in the licensed operator requalification program.

#### **Carolina Power and Light Company (Brunswick Steam Electric Plant, Unit 2) EA-04-076**

On June 2, 2004, a Notice of Violation was issued for a violation associated with a White SDP finding involving the failure to take adequate corrective action for conditions adverse to quality associated with the No. 3 emergency diesel generator (EDG 3) jacket water cooling (JWC) system. The corrective maintenance performed to stop a pipe coupling leak on the JWC supply line to the turbo charger for EDG 3 failed to correct the leak. The violation also cited the failure to comply with Technical Specification 3.8.1, AC Sources Operating, because, due to the ongoing leak, the EDG 3 was inoperable while the plant was in Mode 1 "Power Operation" for a period in excess of seven days.

### **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.

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 purposes of the force-on-force exercises are 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. In the interim, the NRC plans to continue to conduct force-on-force exercises at a rate of approximately two per month through October 2004. 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.

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. Routine implementation of all elements of the baseline inspection program will commence in 2006.

## **IX Power Uprates**

The staff has given power uprate license amendment reviews a high priority. The staff considers power uprate applications among the most significant licensing actions. Therefore, it is 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 5 plant-specific applications under review. During the month of June 2004, the NRC staff approved a measurement uncertainty recapture (MUR) power uprate for the Palisades plant in Michigan. This power uprate increased the licensed power level at Palisades by 35.4 megawatts-thermal or approximately 14 megawatts-electric. On June 3, 2004, the NRC staff received an application for a 4.85 percent power uprate at the Indian Point 3 plant in New York. This proposed power uprate will increase the generating capacity of the plant from 3067.4 to 3216 megawatts-thermal, resulting in an output of 1093.5 megawatts-electric.

On June 10, 2004, the NRC issued a letter to Florida Power and Light (FPL) Energy Seabrook, LLC (licensee for Seabrook) informing them that the NRC had received sufficient information to allow the NRC staff to proceed with their detailed technical review of the Seabrook stretch power uprate. The licensee submitted an application, dated March 17, 2004, requesting an uprate of 5.2 percent power or 176 megawatts-thermal or approximately 86 megawatts-electric. The NRC staff expects to complete this review by February 28, 2005.

The NRC staff issued a letter on May 4, 2004, responding to the Vermont Public Service Board letter, dated March 15, 2004, requesting that the NRC perform an independent engineering inspection at Vermont Yankee to support the review of the Vermont Yankee EPU application. In this letter, the staff noted that the NRC would perform a pilot engineering inspection at the site and that the NRC was willing to meet with the Board. A meeting was held on June 28, 2004, in Montpelier, Vermont, to discuss the NRC's on-going review of the Vermont Yankee power uprate application and the future engineering assessment inspection scheduled at Vermont Yankee.

On June 23 and 24, 2004, an NRC staff member visited the Leibstadt nuclear power plant, near Koblenz, Switzerland, and the Swiss Federal Nuclear Safety Inspectorate (HSK) to share information and to discuss regulatory issues and lessons learned from materials degradation due to power uprates. On June 28 and 29, 2004, the NRC staff member visited the Ringhals nuclear power plant, near Varberg, Sweden, and the Swedish Nuclear Power Inspectorate (SKI)

to share information about the power uprate programs in each country. The Leibstadt plant implemented a 14.7 percent power uprate between 1998 and 2002, and the Ringhals 3 plant has an application submitted to SKI and the Swedish government to increase the reactor thermal power by 13.5 percent between 2005 and 2007.

In January 2004, the staff completed a survey of nuclear power plant licensees to obtain information regarding industry's plans for power uprate applications. Based on this survey, licensees plan to submit power uprate applications for 26 nuclear power plant units during the next 5 years. These include 8 measurement uncertainty recapture power uprates, 6 stretch power uprates, and 12 extended power uprates. Planned power uprates are expected to result in an increase of about 5296 megawatts-thermal (1766 megawatts-electric).

#### **X      Status of Davis-Besse Nuclear Power Station**

Interim reports to be provided in September 2004, March 2005, and September 2005.