

STATEMENT SUBMITTED  
BY THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION  
TO THE  
SUBCOMMITTEE ON TECHNOLOGY  
COMMITTEE ON SCIENCE  
AND THE  
SUBCOMMITTEE ON GOVERNMENT  
MANAGEMENT, INFORMATION, AND TECHNOLOGY  
COMMITTEE ON GOVERNMENT REFORM  
U.S. HOUSE OF REPRESENTATIVES

Y2K AND NUCLEAR POWER:  
WILL REACTORS REACT  
RESPONSIBLY?

SUBMITTED BY  
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U.S. NUCLEAR REGULATORY COMMISSION  
TESTIMONY ON YEAR 2000 AND NUCLEAR POWER PLANTS

**Introduction**

Madame Chairwoman and Mr. Chairman, members of the Committee, I am pleased to submit this testimony on behalf of the Commission regarding the Y2K readiness of the U.S. nuclear industry and the NRC's internal Y2K readiness preparations. Based on our review of responses from the nuclear power industry concerning Y2K readiness, our independent inspection efforts at all 103 units, and our ongoing regulatory oversight activities, we conclude that the Y2K problem will not adversely affect the continued safe operation of U.S. nuclear power plants.

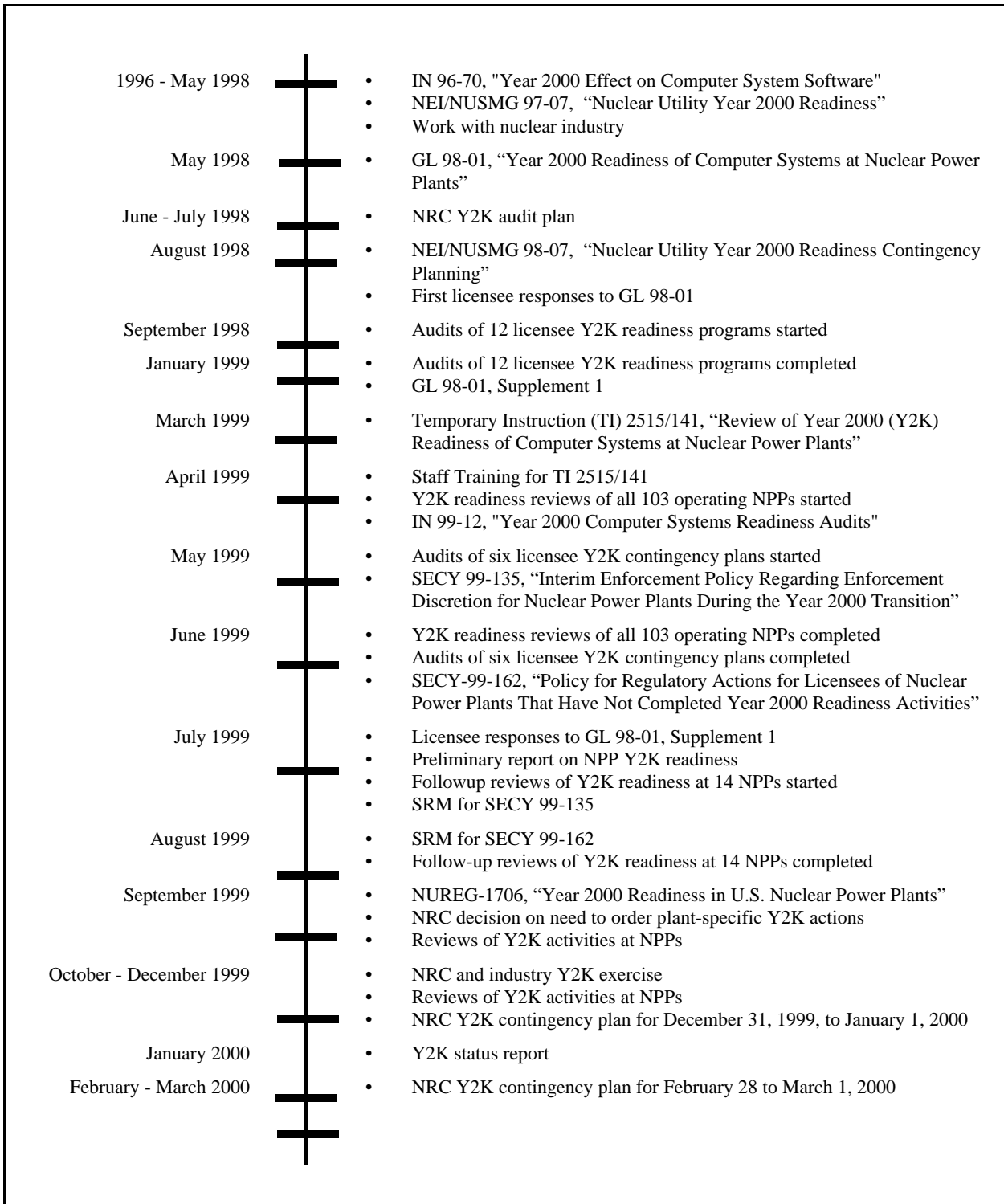
The Y2K problem has presented the NRC with a unique challenge, because NRC regulatory oversight and authority does not extend to the U.S. offsite electrical grid system. Nonetheless, we recognize the national importance of a broader focus that helps to ensure that potential concerns with electrical grid reliability are identified and resolved. The NRC supports the efforts of the President's Council on Year 2000 Conversion. As members of the Energy/Electric Power Sector Working Group, we understand the importance not only of maintaining nuclear power plant safety, but of reliable grid operation in the face of the Y2K problem as well.

**NRC Actions With Reactor Licensees**

In 1996, the NRC began to evaluate the impact of the Year 2000 (Y2K) problem on U.S. nuclear power plants. To ensure that senior level management at operating U.S. nuclear facilities was aware of the issues related to Y2K, the NRC issued Information Notice (IN) 96-70, "Year 2000 Effect on Computer System Software," on December 24, 1996. This notice described the potential problems that nuclear facility computer systems and software might encounter during the transition to the next century. All U.S. nuclear power plants, fuel cycle facilities, and other materials licensees were provided with copies of this document.

Since then (as depicted in the time line that follows), the NRC has been working with nuclear industry organizations and licensees to address issues related to transition into the next century. In 1997, the Nuclear Energy Institute (NEI) agreed to take the lead in developing

# TIMELINE OF SIGNIFICANT NRC Y2K REGULATORY ACTIVITIES



industry-wide guidance for addressing the Y2K problem at nuclear power reactors. In November 1997, NEI issued a guidance document to all U.S. nuclear power plant licensees, entitled "Nuclear Utility Year 2000 Readiness" (NEI/NUSMG 97-07). This document provided a step-by-step method to identify, test, and repair potential Y2K computer problems and contains detailed procedures and checklists for resolving Y2K issues, based on the best utility practices available. The NRC subsequently accepted this guidance as an appropriate program for nuclear power plant Y2K readiness.

In Generic Letter 98-01, issued in May 1998, the NRC formally accepted the NEI/NUSMG 97-07 guidance as an appropriate program for nuclear power plant Y2K readiness. GL 98-01 requested written responses from each operating U.S. nuclear power plant licensee, to confirm that the Y2K problem was being addressed effectively. All licensees initially responded in August 1998, stating that they had adopted plant-specific programs intended to make the plants "Y2K Ready"<sup>1</sup> by July 1, 1999. The licensees' Y2K programs include both the onsite backup power and the alternate ac power systems that are covered by the terms and conditions of the license and NRC regulations. GL 98-01 also required written confirmation of Y2K readiness no later than July 1, 1999, or, for licensees not Y2K ready by that date, a status report and schedule for the remaining work needed to ensure timely Y2K readiness.

On January 14, 1999, the NRC issued Supplement 1 to GL 98-01, providing an alternative to the response required by GL 98-01. The alternate response, also due by July 1, 1999, was to voluntarily include a broader spectrum of information on the overall Y2K readiness of the plant, including those systems necessary for continued plant operation that are not covered by the terms and conditions of the license and NRC regulations. By July 1, 1999, all licensees of operating nuclear plants had responded to the request in GL 98-01, Supplement 1. A summary of the reports was posted on the NRC external web site at <http://www.nrc.gov/NRC/Y2K/plantstatus.html>, and this status is routinely updated.

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<sup>1</sup> A computer system or application is defined as "Y2K Ready" when it has been found suitable for continued use into the Year 2000, even if it has not been made fully Y2K Compliant ("Y2K Ready" systems will continue to function correctly). "Y2K Compliant" means that the computer systems or applications will accurately process date/time (including but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, the years 1999 and 2000, and leap-year calculations.

At this time, we are not aware of any Y2K problems in nuclear power plant systems that directly impact performance of safety systems. The majority of commercial nuclear power plants have protection systems that are analog rather than digital or software-based, and thus are not impacted by the Y2K problem. Errors such as incorrect dates in print-outs, logs or displays have been identified and corrected by licensees in some safety-related devices, but these errors have not affected the functions performed by the devices or systems. Most Y2K issues are in non-safety systems such as security systems and plant monitoring systems which support day-to-day plant operation but have no functions necessary for reactor safety. These systems are being addressed in the licensee Y2K readiness programs, in a manner consistent with the industry guidance and GL 98-01 schedule.

As you know, in ensuring public health and safety across the full range of our regulatory programs, we rely on both our own independent oversight and the recognized ability of our licensees to complete critical self-assessments and to initiate appropriate corrective actions. In the Y2K readiness arena, in addition to the comprehensive industry efforts, we have recognized the importance of providing an appropriate level of NRC oversight of nuclear power plant Y2K preparations.

One such NRC initiative was to audit, on a sample basis, the plant-specific Y2K programs at 12 nuclear power plant sites. The audit sample included a variety of plants of different ages, types, and locations, to provide an effective evaluation of Y2K readiness program implementation. These audits were completed in January 1999. Based on the results, we concluded that licensees were taking effective actions to achieve Y2K readiness by the GL 98-01 target date. We did not identify any issues that would preclude licensees from achieving Y2K readiness. These findings were consistent with those reported by the Department of Energy in the August 1999 report prepared by the North American Electric Reliability Council on the status of Y2K readiness of the electric power grid.

NRC audit results were reported on the NRC web site and discussed at industry workshops. In April 1999, we communicated a summary of audit observations and lessons learned through NRC Information Notice 99-12. The audit results indicated several common factors among effective programs. We found that following the industry guidance documents resulted in an overall functional and effective Y2K readiness program. In addition, we found that active management oversight is important and that central control of Y2K activities, independent peer reviews, and aggressive quality assurance involvement promoted consistency across program activities and products. Further, it was helpful for licensees to share information via owners' groups and utility alliances.

In NRC Generic Letter 98-01, we also noted that despite the best of efforts to achieve Y2K readiness, unanticipated problems (particularly external events) could disrupt continued plant operation, and contingency plans were needed to deal with these potential unanticipated Y2K problems. To address this need, in August 1998, NEI issued another guidance document, "Nuclear Utility Year 2000 Readiness Contingency Planning" (NEI/NUSMG 98-07). This document provided guidance for establishing a contingency planning process that included management controls, preparation of individual contingency plans, and development of an integrated contingency plan that allows the licensee to manage risks associated with Y2K-induced events internal and external to the plant. This guidance, which was found acceptable by the staff, has been incorporated into Y2K readiness programs by all U.S. nuclear power plant licensees. Plant-specific Y2K contingency plans were also developed.

The January 1999 audit results indicated that licensees began to develop contingency plans late in the Y2K preparation process. Consequently, we concluded that six additional reviews were needed, focused differently and involving licensees other than the previous 12, to determine the effectiveness of licensee contingency planning. These reviews, which were completed in June 1999, focused on the licensees' approach to addressing both internal and external Y2K risks to safe plant operations based on the guidance in NEI/NUSMG 98-07. The results of these additional audits indicated that licensees had developed effective contingency planning for reducing the risks associated with Y2K-induced events. The results of these audits were also placed on the NRC's Y2K web site.

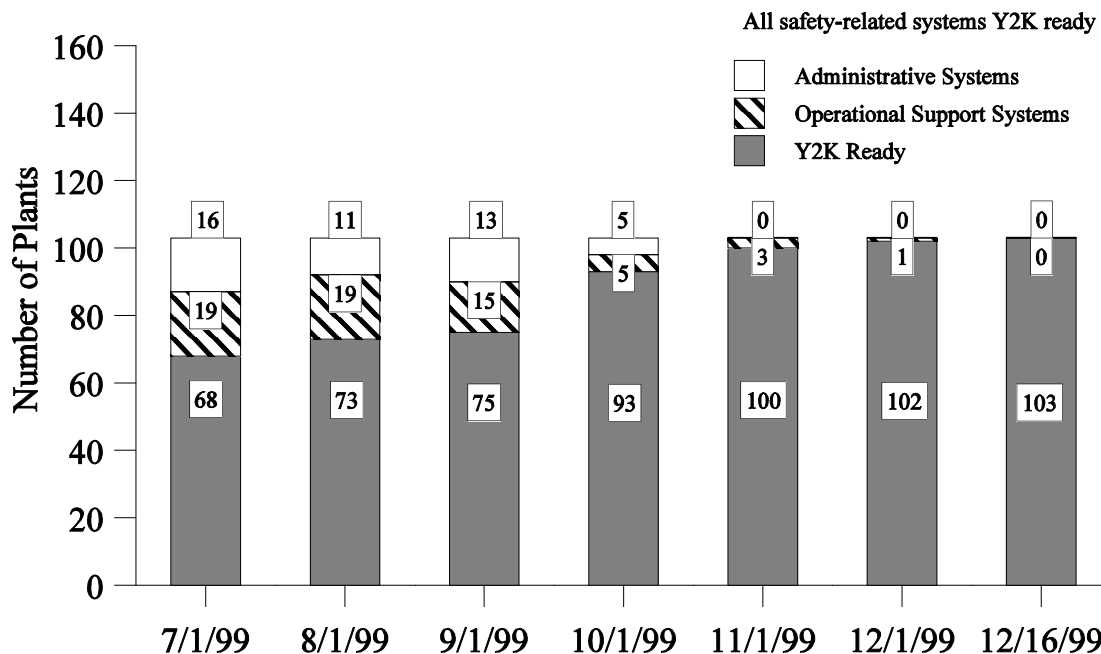
To gain additional confidence that nuclear power plant licensees were effectively implementing Y2K readiness programs, NRC regional staff reviewed plant-specific Y2K program implementation activities, including contingency planning, at all 103 NRC-licensed commercial nuclear power plant facilities. These inspection activities were completed between April and June 1999 and provided an independent assessment of licensee Y2K readiness programs. The results of these inspections were used as a benchmark to compare with licensee responses to Generic Letter 98-01 Supplement 1, and to provide an informed approach for determining any further regulatory responses. In early September NRC published NUREG-1706, "Year 2000 Readiness in U.S. Nuclear Power Plants," providing detailed information on plant readiness, remaining work to be done, and staff activities. Copies have been provided to the Committee and placed on the NRC Y2K Web site.

## **Current Status of Nuclear Power Industry Year 2000 Readiness**

Regarding our highest priority—the uninterrupted performance of plant safety systems—all 103 nuclear power plants report that their efforts are complete, and that no remaining Y2K-related problems exist that could directly affect the performance of safety systems or the capability for safe shutdown. As of September 30, 91 plants had completed the next order of priority, reporting that all of their computer systems that support plant operation are "Y2K ready and that contingency plans were in place." The remaining 12 plants reported that, to be fully Y2K ready, they still had additional work to complete on a few non-safety computer systems or devices, i.e., systems that could affect power operations or on of plant monitoring or are administrative. Typically, the remaining Y2K work is waiting on a scheduled plant outage in the fall, or is delayed while awaiting the delivery of a replacement component. In each case, the licensees with Y2K work remaining provided satisfactory schedules for completing that work.

During September, 18 additional nuclear power plants completed their Y2K readiness activities. Late last month, the staff sent letters to the 12 licensees of the plants that were not expected to be Y2K ready on non-safety systems by September 30 to confirm their completion schedules and tasks for the remaining work. These plants include Comanche Peak Units 1 & 2, Cook Units 1 & 2, Hope Creek, Farley Unit 2, Peach Bottom Unit 3, Salem Units 1 & 2, South Texas Units 1 & 2, and Three Mile Island Unit 1. Subsequently, South Texas Units 1 & 2 reported that they had completed their work ahead of schedule and that these two nuclear power plants were Y2K ready. Therefore, only 10 plants have Y2K work remaining on non-safety systems and 93 plants have reported that they are fully Y2K ready.

## Nuclear Power Plant Y2K Readiness



The plants that have Y2K work remaining are continuing to progress toward Y2K readiness. As depicted in the chart above, we expect this trend to continue. Based on the information available today, by November 1, 1999, only three plants are projected to have Y2K work remaining. Those three are Comanche Peak (Unit 1), Farley (Unit 2), and Salem (Unit 1). The Y2K work remaining for all these plants is on non-safety plant support systems and an outage is required to complete the Y2K activities. The outages have been scheduled, and each of these licensees have experience on sister units in successfully completing the most significant Y2K remediation activities.

The NRC will continue to monitor progress at those plants with remaining work and will independently verify completion of the scheduled items, including reviews of licensee Y2K contingency plans. At this time, we believe that all licensees will be able to operate their plants safely during the transition from 1999 to 2000 and beyond, and we do not anticipate the need for the NRC to direct any plant-specific action. Given the readiness of the nuclear power plants, their operation through the transition to the Year 2000 should be beneficial in terms of maintaining reliable electrical power which is important to public health and safety.



### **Nuclear Power Plant Emergency Power**

Based on current information from the North American Electric Reliability Council (NERC), it appears highly unlikely that availability of offsite power from the electrical grid will be significantly affected by Y2K-induced problems. According to NERC's latest report of August 3, 1999, more than 99 percent of the nation's electricity supply is classified Y2K-ready or Y2K-ready with limited exceptions, and 96 percent of all local distribution systems are certified ready for the Year 2000. In its reports issued on January 11 and April 30, 1999, NERC states, "Transmission outages are expected to be minimal and outages that may occur are anticipated to be mitigated by reduced energy transfers established as part of the contingency planning process." Both reports indicate that the transition through critical Y2K rollover dates should have a minimal impact on electric systems operations in North America and that widespread, long-term loss of the grid as a result of Y2K-induced events is not a credible scenario.

Nevertheless, the possibility of electric grid instabilities and blackouts during Y2K critical dates has been addressed by both the NRC and licensees. The scope of licensees' Y2K programs, including contingency planning, covers the onsite power and other emergency power systems at the plant, including emergency diesel generators (EDGs). NRC audits and reviews of licensee Y2K program activities to date have verified licensee consideration of these systems, and no associated Y2K issues relating to onsite or emergency power systems have been identified. Moreover, licensees are taking anticipatory measures for the Y2K transition, including completing surveillances and assuring EDG fuel supplies are "topped off." Existing regulatory and technical specification requirements provide a high confidence in EDG operability, availability, and reliability. Additionally, EDG reliability in emergency situations has been high, as demonstrated during weather-related power upsets. For example, following the 1992 landfall of Hurricane Andrew at the Turkey Point nuclear power plant, EDGs operated reliably for approximately six days providing electrical power to plant systems. Therefore, we do not consider it necessary to impose additional EDG requirements on licensees during Y2K critical dates.

### **Spent Fuel Pools At Operating Nuclear Power Plants**

Spent fuel pool (SFP) cooling and make-up systems are mostly based upon analog controls and, therefore, are not subject to Y2K problems. Nevertheless, as previously explained, licensees implemented a structured program to be Y2K ready before the Year 2000 transition. This is a staff approved industry program that involves the identification of all software-based systems, equipment

and components, assessment of their vulnerability to the Y2K problem, and remediation if found vulnerable. The SFP systems and components are included in the program. The program also includes contingency plans for both external and internal events during the Y2K critical dates. For example, loss of off-site power and other types of grid issues are included as part of the contingency plan. SFP cooling water pumps can be powered from emergency power supplies if normal power is lost. Generally, the contingency plan makes use of existing plant procedures for loss of power to the SFP cooling and makeup systems that are based on NRC regulations.

Analysis has shown that a sufficient period of time is available for a licensee to take mitigative actions upon loss of spent fuel pool cooling pumps' electrical power. Therefore, the staff has confidence that spent nuclear fuel stored at operating nuclear power plants will remain safe during the Y2K transition.

### **Spent Fuel Pools At Decommissioning Facilities**

Currently, there are 19 permanently shutdown nuclear power plants, 14 of which have spent fuel remaining on site. As time passes, fission products in the spent fuel decay and the heat in the spent fuel generated by this decay reduces significantly. Thus, the SFP heat load is reduced and the time available for operators to take actions to mitigate off-normal conditions increases. The maintenance of the integrity of spent nuclear fuel in the water-filled spent fuel pools is the major nuclear safety objective of these plants. This objective is assured through programs and systems such as systems to monitor fuel pool water temperature, level, chemistry and radiation in the area of the pool, and a safeguards program. Existing procedures and operator training allow the licensee to deal with normal and off-normal situations. Computers may be used to control, monitor and log the various parameters of the required programs and systems. However, the permanent plant staff would have ample time available and is capable of manual control of these functions, if needed.

In view of the reduced spent fuel pool decay heat loads at permanently shutdown plants and the long periods of time available to take mitigative actions, no formal Y2K guidance was issued to decommissioning plants. However, the NRC staff did contact all decommissioning reactor licensees by telephone in early 1999, and they all stated that they had taken actions to address the Y2K issue.

## **NRC Actions With Materials Licensees and Fuel Cycle Facilities**

To alert licensees and certificate holders to the Y2K issue, NRC has issued four Information Notices (INs) to all materials licensees and fuel cycle facilities. An additional IN, which forwarded a copy of an FDA letter to medical device manufacturers, was sent to medical licensees only. The INs described potential Y2K issues, encouraged development of a Y2K readiness program (e.g., inventory, testing, remediation), alerted licensees and certificate holders to systems that were known to be or may be affected by Y2K problems, provided updates of NRC's Y2K activities, provided sources of Y2K information, and encouraged development of Y2K contingency plans. NRC has not identified any generic Y2K issue for NRC regulated material used by materials licensees.

NRC inspected the ten major fuel cycle facilities between September 1997 and October 1998 to assess the status of the facilities' Y2K programs and other safety matters. These inspections indicated that the facilities were adequately addressing Y2K issues.

To confirm that the ten major fuel cycle facilities were effectively addressing the Y2K issue, the NRC issued Generic Letter (GL) 98-03, "NMSS Licensees' and Certificate Holders' Year 2000 Readiness Programs." As with GL 98-01 for nuclear power plants, GL 98-03 required that the ten major fuel cycle facilities submit written responses regarding their facility-specific Y2K readiness program for safety and safeguards. All ten facilities provided the required response, and six facilities were Y2K ready by October 1, 1999. The remaining facilities provided a status report and schedule for remaining work to become Y2K ready well before December 31, 1999. There have been no identified risk-significant Y2K concerns for fuel cycle facilities. All of the major fuel cycle licensees, with the exception of the Gaseous Diffusion Plants (GDPs), have informed NRC that they plan to be in safe shutdown during the transition to the Year 2000. NRC has two resident inspectors assigned full time at each GDP. One inspector will be onsite at each GDP during the Y2K transition. NRC conducted follow-up Y2K inspections, including review of contingency plans, at the Portsmouth GDP in August 1999 and the Paducah GDP in September 1999. These inspections determined that the Y2K programs at both GDPs had taken the necessary actions to resolve the Y2K issue and had adequately addressed management planning, implementation, quality assurance, regulatory considerations, and documentation.

NRC will continue to make Y2K inquiries during inspections and will continue to monitor list servers, manufacturer web sites, news media, Congressional reports, and the President's Y2K Council reports for Y2K issues that may affect materials licensees and fuel cycle facilities. If Y2K issues that may affect materials licensees and fuel cycle facilities are discovered, the information will be forwarded to licensees and fuel cycle facilities and placed on the NRC Y2K web site. Also, NRC will confirm that the remaining fuel cycle facilities have completed Y2K readiness actions prior to the transition.

### **NRC Internal Year 2000 Readiness Preparations**

As of February 5, 1999, all of NRC's systems have been examined and, as needed, fixed or replaced with regard to the Y2K problem. This work was accomplished more than a month ahead of OMB's established milestone and well under budget.

We have completed all work necessary to ensure that 100 percent of our telecommunications infrastructure is compliant or not affected by Y2K issues. We have contacted our telecommunications service providers, and all have responded that they are Y2K compliant.

The NRC's Y2K Contingency Plan describes steps the staff will take in the unlikely event that a Y2K problem would result in a safety concern at a nuclear power plant or gaseous diffusion plant. Beginning at noon on New Year's Eve, a team of specialists will staff the NRC Headquarters Operations Center to monitor, evaluate, and communicate any Y2K problems at foreign reactors that have potential safety implications for domestic reactor licensees. At 10:00 p.m. the Headquarters Operations Center will be staffed by a multi-disciplinary Y2K response team, headed by a senior NRC manager.

In addition to Headquarters staff, the Y2K response team will include inspectors stationed at each nuclear power plant and gaseous diffusion plant site and a team of specialists at the incident response centers in each region. The NRC regional office in Arlington, Texas, will be prepared to assume the functions of Headquarters if an unanticipated Y2K problem results in the unavailability of the Headquarters Operations Center. In addition, the inspectors on site as well as the regional incident response centers and the Headquarters Operations Center will be equipped with satellite phones for use in the unlikely event that there is a major problem with the telephone network.

Yet another aspect of the NRC's Contingency Plan involves the sharing of information. The NRC is developing a Y2K Early Warning System to facilitate the sharing of information. We are working with our international partners to invite countries with major nuclear power programs to participate in this system. So far, about 25 countries, including Japan, South Korea, Taiwan, several Western European countries, Canada, and Mexico have committed to using this system.

The NRC has coordinated and communicated our Y2K Contingency Plan with our Federal partners, including the Federal Emergency Management Agency (FEMA), the Department of Energy, the Environmental Protection Agency, the National Communication System, the Federal Communications Commission, and the President's Council on the Year 2000 Conversion.

The Commission has recognized that continued safe operation of nuclear power plants during the transition to the Year 2000 may be important to help maintain reliable electrical power supplies. As such, as a companion to the NRC Y2K contingency plan, the Commission has expanded its enforcement discretion policy to allow for rapid decision-making under circumstances where an emergent, unanticipated Y2K problem might result in licensee non-compliance, but would not affect continued safe plant operation. The NRC has a policy of exercising its enforcement discretion with regard to temporary non-compliance of license conditions when it can be demonstrated that it is in the interest of safety. The Y2K transition enforcement policy builds on the existing enforcement discretion policy and continues to ensure public health and safety while appropriately considering some of the unique aspects associated with the Y2K transition.

### **Y2K Exercises**

In July, NRC conducted a Y2K Tabletop exercise involving NRC, Baltimore Gas and Electric, the State of Maryland and the counties surrounding the Calvert Cliffs nuclear power plant. The exercise tested the NRC Y2K contingency plan procedures against a number of scenarios, including loss of power and loss of telecommunications. The exercise confirmed that each participant had put a considerable amount of thought into preparing for potential problems during the Y2K transition. Although no major Y2K contingency plan inconsistencies were identified, there were a number of valuable observations and lessons from this tabletop. We have put a synopsis of this exercise on our Y2K web site, so that the information can be shared with other stakeholders.

On October 15, 1999, NRC conducted a full scale exercise to validate our readiness to execute the provisions of the NRC's Y2K Contingency Plan for the Nuclear Industry. During the first phase of the exercise, which started at 6:00 a.m., an NRC team monitored information reported by regulators in nations which would experience the Y2K transition in advance of the U.S. This information was provided through an Internet based Y2K early warning system developed by NRC. Through this system, nuclear power plant licensees, who have read only access to this system, were able to monitor the status of foreign nuclear power plant designs similar to their own. The second phase of the exercise, focusing on potential domestic concerns, assembled an NRC Y2K response team that included staff in the Headquarters Operations Center, the Regional Incident Response Centers, and participating nuclear power plant sites. Licensee participants from eleven reactor sites and three fuel cycle facilities presented challenges ranging from simple requests for enforcement discretion to plant upsets resulting in an NRC emergency response activation. In some cases, licensee participants conducted internal Y2K exercises in parallel with this exercise. The exercise, simulated a Headquarters failure, necessitating a transfer of all Headquarters functions to NRC's Regional Office in Arlington, Texas. At that point, the back-up Operations Center in Texas assumed the lead role for NRC response and exercised their ability to assume the vital headquarters response roles. The exercise successfully demonstrated the NRC's ability to effectively deal with a wide range of unlikely, but possible, Y2K challenges. Although the exercise was highly successful, several valuable lessons were learned which will allow the NRC to further improve its high state of readiness.

Throughout the exercise, a mock White House Information Coordination Center (ICC) was operated the NRC Auditorium. The personnel who will represent the NRC at the ICC during the actual Y2K transition period had the opportunity to test the procedures for communicating and sharing data between the NRC Operations Center and the mock ICC. In addition, a Joint Public Information Center was simulated, where Graduate-level journalism students from American University, were present to play the role of the media.

### **Federal Coordination**

On the Federal level, the coordination and cooperation between Federal agencies on the Y2K issue are a foundation upon which the Federal government is building for future cooperative efforts. Much of the effort being spent on the Y2K problem will help Federal agencies better respond to emerging unconventional threats to the United States, such as terrorist acts. For example, the National

Communication System, in partnership with the telecommunications industry, has established a telecommunications network used for communicating national security and emergency preparedness information that is independent of the public telephone network. Although the Y2K problem was the impetus for enhancing this network, it will become permanent following the Y2K transition. The President's Council on the Y2K Conversion also has established a command center that will collect and disseminate information during the Y2K transition. After the Y2K transition, this center will be turned over to the Critical Infrastructure Assurance Office to support our national response to emergent threats. NRC has purchased satellite phones for all of our nuclear power plant resident inspector locations as part of our Y2K contingency plan, and many utilities are also investing in upgraded communication systems. Our new satellite phones have already been put to use in our response to the recent hurricanes. These are just a few examples of how the Y2K effort will pay off long after the Year 2000 transition.

### **International Activities**

We are involved in promoting awareness of the Y2K issues internationally. For consideration at the 42nd International Atomic Energy Agency (IAEA) General Conference in September 1998, the NRC took the lead in drafting a resolution on Y2K as it applies to the safety of nuclear power plants, fuel cycle facilities, and other enterprises using radioactive materials. The resolution was adopted by the IAEA Member States and urged, among other things, that: (1) member States submit information to the IAEA on activities underway to inventory and remediate Y2K problems at their nuclear facilities; and (2) the IAEA act as a central coordination point in disseminating information about Member State Y2K activities.

Since the General Conference, the NRC has worked with the IAEA to formulate a Y2K program that would address nuclear safety aspects of the Y2K problem. The NRC has also been working with its foreign bilateral nuclear safety cooperation partners on raising awareness of the Y2K problem and offering assistance within its means. The most notable development in this area has been the creation of the Y2K Early Warning System, discussed earlier, which will allow all participating countries to rapidly share Y2K related information on nuclear facility and grid performance.

## **Summary**

The Commission has been active in addressing the Y2K problem with our licensees and continues to work, both nationally and internationally, to promote awareness and provide assistance in addressing the Y2K problem. We recognize that despite efforts of the industry and the NRC, unexpected events could occur; consequently contingency plans have been established.

With that said, it is of paramount importance to note that the NRC and the U.S. nuclear power industry are addressing the Y2K computer problem in a comprehensive, thorough and deliberate manner. Licensees for all 103 nuclear power plants have reported that the safety systems are Y2K ready. We expect all nuclear power licensees will complete their remaining Y2K readiness activities before the Y2K transition. The NRC has also conducted independent reviews of Y2K programs at all operating U.S. nuclear power plants. The results of these reviews all indicate that licensees have taken the proper steps to identify and remediate systems that could be affected by the Y2K bug. We will closely monitor the progress of plants that still have some systems left to remediate, but we fully expect that all commercial nuclear power plants will operate safely, as planned and without interruption, through the Y2K transition.

I look forward to working with the Committee, and I welcome your comments and questions.