

May 18, 1999

**FOR:** The Commissioners

**FROM:** William D. Travers /s/  
Executive Director for Operations

**SUBJECT:** AGENCY CONTINGENCY PLANS FOR THE YEAR 2000 COMPUTER PROBLEM IN THE NUCLEAR INDUSTRY

**PURPOSE:**

To obtain Commission approval of agency contingency plans dealing with the Year 2000 (Y2K) problem in the nuclear industry.

**BACKGROUND:**

The Y2K problem pertains to the potential inability of computers to correctly recognize dates and results primarily from computer hardware or software that uses two-digit fields to represent the year. These systems may misread the year 2000 and cause the systems to fail, generate faulty data, or act in an incorrect manner. The Y2K problem has the potential to interfere with the proper operation of any computer system (including embedded systems), software, or database.

The staff is pursuing a comprehensive program for dealing with potential Y2K problems. The staff completed Y2K remediation of its own systems on February 5, 1999, ahead of the OMB target of March 31, 1999. Because of the nature of the Y2K problem, the staff has prepared contingency/business continuity plans for its mission-critical systems, specifically addressing failures that have the potential to result from the Y2K problem.

Additionally, the staff has been working with nuclear industry organizations and licensees since 1996 to address the Y2K problem. On the basis of audits and inspections of nuclear power plant, fuel cycle facility, and materials licensee Y2K programs to date, we are confident that our licensees will be Y2K ready by December 31, 1999, and that the Y2K transition will not affect the continued safe operation of our licensed facilities.

However, because of the nature of the Y2K issue, it is not possible to be 100-percent certain that all potential problems will be corrected. For this reason, the staff established a task force in September 1998 to develop a contingency plan for ensuring that public health and safety and the environment will continue to be protected, if unforeseen Y2K problems occur.

The staff provided the Commission with a draft of *NRC Contingency Plan for the Year 2000 Issue in the Nuclear Industry* (COMSECY 98-036) in November 1998. The contingency plan presented a reasonably conservative planning scenario for the Y2K transition and anticipated NRC staff actions to be taken in response to potential Y2K problems. The staff sought and received Commission approval to solicit public comment on the draft contingency plan. Public and industry comments were received and have been incorporated in the attached revision of the Y2K contingency plan.

The majority of the comments received on the contingency plan agree with the general scope and direction taken by the staff. However, we recognize the need for further development of the planning details and operational testing of the plan.

On February 19, 1999, a staff requirements memorandum (SRM) was issued on COMSECY-98-036. The SRM provided direction to the staff in three areas: (1) it required the staff to develop and run tabletop exercises and drills modeling potential Y2K scenarios, (2) it required the staff to evaluate and make a recommendation, following stakeholder input, on whether enforcement discretion would be preferable to the use of 10 CFR 50.54(x) in allowing licensees to deviate from license conditions or technical specifications arising from Year 2000 complications that would otherwise require plant shutdown, and (3) it directed the staff to expedite the purchase and deployment of mobile satellite communication equipment at each nuclear power plant site in advance of the Y2K transition. The revised Y2K contingency plan, briefly discussed below, addresses the issues outlined in the SRM.

**DISCUSSION:**

The revised plan includes an updated evaluation of potential Y2K issues for all types of NRC licensees, with particular emphasis on external interfaces, such as the electric grid and telecommunications infrastructures. As described in the Y2K contingency plan, there is growing confidence that the electric grid and telecommunications infrastructures will remain operable during the Y2K transition. Consequently, the staff believes that the original planning assumptions developed in the draft Y2K contingency plan (e.g., only localized telecommunications and electric power outages) are appropriate and sufficiently conservative for planning purposes. Furthermore, the planning assumptions with regard to the electric power and telecommunications infrastructure are consistent with the latest assessment by The President's Council on the Year 2000 Conversion, dated April 21, 1999 ([www.Y2K.gov/java/secassess.html](http://www.Y2K.gov/java/secassess.html)) and the April 30, 1999, North American Electric Reliability Council Y2K status report.

On the basis of the planning assumptions, the staff has prepared a Y2K contingency plan that contains three major facets: incident response, information sharing, and regulatory response.

The incident response facet of the plan describes steps the staff will take in the unlikely but possible event that a Y2K problem would result in a safety-significant event at a nuclear power plant (NPP) or gaseous diffusion plant (GDP), such as a loss of offsite power. As part of the information sharing facet of the plan, a small team of specialists will staff the headquarters Operations Center at noon on December 31, 1999, to monitor, evaluate, and communicate any Y2K problems at foreign reactors that have potential safety implications for domestic reactor licensees. This team would also be available to respond to any potential Y2K problems caused by embedded chips that have a date stamp based on an earlier time zone. Approximately 2 hours before midnight (EST) on December 31, 1999, the headquarters Operations Center will be staffed by a multidisciplinary Y2K response team,

headed by the Director of Incident Response Operations. In addition to headquarters staff, the Y2K response team will include resident or regional staff stationed at each NPP and GDP site and a small number of staff at the Incident Response Centers in each region. The NRC Regional IV 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. This Y2K response team will be prepared to respond to an event related directly or indirectly to a Y2K problem and would utilize time zone differences to share relevant safety information with those licensees that have not yet experienced the transition.

In support of the regulatory response facet of the plan, the Y2K response team will be prepared to process enforcement discretion requests related to a Y2K problem, particularly in situations in which failure to do so could have an adverse effect on electric grid stability. The staff plans to separately seek Commission approval on guidance to nuclear power plant licensees on the use of enforcement discretion in situations involving Y2K problems. These guidelines may permit continued plant operation in cases where a Y2K problem may impact compliance with a license requirement but not result in a safety concern.

The revised plan also describes steps the staff is taking to ensure that communications with the nuclear power plant and gaseous diffusion plant sites will be available in the unlikely event of a widespread telephone network outage. Also discussed are the steps the staff is taking to ensure that back-up fuel supplies will be available for the emergency diesel generator for the headquarters Operations Center.

This contingency plan specifically addresses plans for the Y2K transition (i.e., December 31, 1999, through January 1, 2000). For the times outside of the Y2K transition, including February 29, 2000, our review indicates that the potential for a serious event associated with Y2K-related issues is extremely low and carries low attendant risks to public health and safety and the environment. The staff intends to respond to events outside the Y2K transition period by utilizing its normal emergency response posture, which includes around-the-clock staffing of the Operations Center by qualified engineers to receive reports of any events and to initiate the agency's incident response plan.

After the final Y2K Contingency Plan is made publically available, the plan will be placed on the external NRC website. The staff plans to regularly update this plan without seeking additional Commission review, provided that the changes do not involve Commission policy issues.

#### **RESOURCES:**

The resources required to implement this contingency plan involve off-hours duty for NRC staff during the period December 31, 1999, through January 1, 2000. Details are provided in an attachment to the contingency plan.

The NRC will procure portable satellite telephones to be placed in the resident inspector offices of all operating nuclear power plants and the two gaseous diffusion plants. Additional satellite telephones will be located at headquarters and in the regional offices. Incident Response Operations staff has retained the services of the consulting firm Booz-Allen and Hamilton to perform a cost-benefit analysis of the available satellite communication systems to support the selection process. The procurement of portable satellite equipment is expected to be completed during fiscal year 1999.

#### **COORDINATION:**

The Office of the General Counsel has no legal objection to this paper. The Office of the Chief Financial Officer has reviewed this paper for financial implications and has no objections. The Office of the Chief Information Officer has reviewed this paper and has no information technology or information management concerns.

#### **RECOMMENDATIONS:**

Staff request action within 10 days. The staff will not take action until the SRM is received. The development of a Y2K contingency plan is within the delegated authority of the EDO.

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**ATTACHMENT:** [Contingency Plan for the Year 2000 Issue in the Nuclear Industry](#) 