

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, D.C. 20555

December 24, 1996

**NRC INFORMATION NOTICE 96-70: YEAR 2000 EFFECT ON COMPUTER SYSTEM  
SOFTWARE**

Addressees

All U.S. Nuclear Regulatory Commission licensees, certificate holders, and registrants (hereafter referred to as licensees).

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to the potential problems their computer systems and software may encounter as a result of the change to the new century. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid potential problems. However, suggestions contained in this information notice are not NRC requirements; therefore, no specific action nor written response is required.

Description of Circumstances

Earlier this year, the U.S. House of Representatives held hearings on an issue known as the "Year 2000" software problem. These hearings identified that some of the most important computer software used by the Federal government may not work correctly starting in the year 2000, because the software can only use single years or decades in performing calculations; it will not be able to recognize a change to the new century. Many computer systems will potentially fail to recognize this change to a new century and will misread "00" or the year 2000, as 1900, and thus may cause the system to fail or generate faulty data. The NRC, along with several other Federal agencies, is currently examining computer software used to support Agency functions that may be affected. Specific problems have already been identified and will be corrected. In some instances where future dates are used to schedule actions, problems have already occurred -- well before the end of the century.

Discussion

The Year 2000 issue affects everyone. It will have an impact on State and local governments, NRC licensees, and businesses. The magnitude of the Year 2000 issue poses a challenge to all those potentially affected. Dates are involved in many facets of computer systems and software. Neither industry nor the Federal government has yet identified the scope of the situation.

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updated on 1/6/97

This issue may affect NRC licensees in many different ways. For example, computer software used to calculate dose or to account for radioactive decay may not recognize the turn of the century, which could lead to incorrectly calculated doses or exposure times for treatment planning. Other examples of software that may be affected include security control, radiation monitoring, technical specification surveillance testing, and accumulated burn-up programs. Also, equipment that licensees have purchased may contain computer software susceptible to the Year 2000 problem. The problem could occur not only in computer software or data that have been acquired from external sources, but also in programs developed by licensees or consultants. For many licensees, this issue may not prove to be a significant health and safety concern. However, to prevent any other potential problems this issue may precipitate, licensees are encouraged to examine their uses of computer systems and software well before the turn of the century. In assessing computer software, licensees may want to consider reviewing those programs that are used to meet licensing requirements or those that have safety significance.

To facilitate the exchange of information among licensees, NRC, and the public, information related to the Year 2000 problem is posted on NRC's World Wide Web server ([www.nrc.gov](http://www.nrc.gov)) under the "News and Information" option. An example of information that has already been posted is contract language developed by the Federal government for acquisition of new information technology to avoid the Year 2000 problem. In addition to the information presented on NRC's homepage, an Internet list server has been established to encourage discussion of Year 2000 issues. To subscribe to this list, Internet e-mail may be sent to [listproc@nrc.gov](mailto:listproc@nrc.gov) with the message: subscribe year-2000 username, where the username is the first and last name of the individual making the request (e.g., John Doe).

Licensees may wish to consider what actions may be appropriate to examine and evaluate their software systems, and whether to designate an individual to monitor the continuing activities in government and industry to determine the extent of potential problems and proposed solutions. Any additional contact regarding the Year 2000 problem between NRC and licensees will be made through the addressee of this information notice, unless a separate point of contact is designated by the licensee. Licensees who wish to designate a separate point of contact should provide the contact name and address, including telephone and fax number and email address if available, to the appropriate technical contact of this information notice. Holders of Title 10 of the Code of Federal Regulations (CFR) Part 50 licenses are requested to provide this information to the appropriate Office of Nuclear Reactor Regulation (NRR) project manager (courtesy copy to the NRR technical contact listed below).

This information notice requires no specific action nor written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate regional office.



Donald A. Cool, Director  
Division of Industrial and  
Medical Nuclear Safety  
Office of Nuclear Material Safety  
and Safeguards



Thomas T. Martin, Director  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Technical contacts: Mark A. Sitek, NMSS  
(301) 415-6155  
E-mail: mas6@nrc.gov

Michael Kaltman, NRR  
(301) 415-2905  
E-mail: mxk2@nrc.gov

Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRC Information Notices

*Attachment filed in Jacket*

LIST OF RECENTLY ISSUED  
NMSS INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
96-66	Recent Misadministrations Caused by Incorrect Calibrations of Strontium-90 Eye Applicators	12/13/96	All U.S. Nuclear Regulatory Commission Medical Use Licensees authorized to use strontium-90 eye applicators
96-63	Potential Safety Issue Regarding the Shipment of Fissile Material	12/05/96	All U.S. Nuclear Regulatory Commission licensees authorized to possess special nuclear material in unsealed quantities greater than a critical mass
96-57	Incident-Reporting Requirements Involving Intakes, During a 24-Hour Period that May Cause a Total Effective Dose Equivalent in Excess of 0.05 Sv (5 rem)	10/30/96	All U.S. Nuclear Regulatory Commission licensees
96-54	Vulnerability of Stainless Steel to Corrosion When Sensitized	10/17/96	All material licensees
96-53	Retrofit to Amersham 660 Posilock Radiography Camera to Correct Inconsistency in 10 CFR Part 34 Compatibility	10/15/96	All industrial radiography licensees
96-52	Cracked Insertion Rods on Troxler Model 3400 Series Portable Moisture Density Gauges	09/26/96	All U.S. Nuclear Regulatory Commission portable gauge licensees and vendors
96-51	Residual Contamination Remaining in Krypton-85 Handling System After Venting	09/11/96	All material licensees

LIST OF RECENTLY ISSUED  
NRC INFORMATION NOTICES

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Information Notice No.	Subject	Date of Issuance	Issued to
96-69	Operator Actions Affecting Reactivity	12/20/96	All holders of OLs or CPs for nuclear power reactors
96-68	Incorrect Effective Diaphragm Area Values in Vendor Manual Result in Potential Failure of Pneumatic Diaphragm Actuators	12/19/96	All holders of OLs or CPs for nuclear power reactors
96-67	Vulnerability of Emergency Diesel Generators to Fuel Oil/Lubricating Oil Incompatibility	12/19/96	All holders of OLs or CPs for nuclear power reactors
96-66	Recent Misadministrations Caused by Incorrect Calibrations of Strontium-90 Eye Applicators	12/13/96	All U.S. Nuclear Regulatory Commission Medical Use Licensees authorized to use strontium-90 (Sr-90) eye applicators
96-65	Undetected Accumulation of Gas in Reactor Coolant System and Inaccurate Reactor Water Level Indication During Shutdown	12/11/96	All holders of OLs or CPs for nuclear power reactors
96-64	Modifications to Containment Blowout Panels Without Appropriate Design Controls	12/10/96	All holders of OLs or CPs for nuclear reactors

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OL = Operating License  
CP = Construction Permit

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original signed by

Donald A. Cool, Director  
 Division of Industrial and  
 Medical Nuclear Safety  
 Office of Nuclear Material Safety  
 and Safeguards

original signed by

Thomas T. Martin, Director  
 Division of Reactor Program Management  
 Office of Nuclear Reactor Regulation

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 E-mail: mas6@nrc.gov

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 E-mail: mxk2@nrc.gov

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Tech Editor has reviewed and concurred on 10/21/96

DOCUMENT NAME: 96-70.IN \*SEE PREVIOUS CONCURRENCES

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OFFICE	TECH CONTS	C/PECB/DRPM	D/DRPM	D/IMNS
NAME	MSitek* MKaltman*	AChaffee*	TMartin	DCool
DATE	10/30/96	12/12/96	12/18/96	12/18/96

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TechEd: E. Kraus 10/21/96

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OFC	IMOB	E	*IMOB	*IMAB	*FCSS	*DWM	*SFPO	*IRM
NAME	MADONN		JMPiccone	LWCamper	EQTen Eyck	JGreeves	WTravers	JVoglewede
DATE	12/1/96		10/22/96	10/25/96	11/21/96	11/5/96	11/1/96	11/6/96
OFC	*NRR		IMNS					
NAME	TTMartin		DACool					
DATE	12/13/96		1/1/96					

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