UNITED STATES NUCLEAR REGULATORY COMMISSION OFFICE OF NUCLEAR REACTOR REGULATION WASHINGTON, D.C. 20555-0001

April 24, 1995

NRC INFORMATION NOTICE 95-23: CONTROL ROOM STAFFING BELOW MINIMUM REGULATORY REQUIREMENTS

Addressees

All holders of operating licenses or construction permits for nuclear power reactors and all licensed operators and senior operators at those reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to several instances in which control room staffing fell below regulatory requirements. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. This information notice establishes no new NRC requirements; therefore, no specific action or written response is required.

<u>Description of Circumstances</u>

From 1992 through 1994, a number of events occurred where facilities failed to maintain the required number of licensed reactor operators (ROs) or senior reactor operators (SROs) in the control room or at the controls of the facility as required by 10 CFR 50.54(k), 10 CFR 50.54(m)(2)(iii), and facility Technical Specifications and procedures.

On June 3, 1992, the senior nuclear shift supervisor (a licensed SRO) at Hope Creek turned over responsibility for the control room to the nuclear shift supervisor (also a licensed SRO) in order to attend a staff meeting. Sometime later, the nuclear shift supervisor, believing that he had turned over command of the control room to another licensed SRO, in this case the shift technical advisor, left the control room to check an equipment problem in the plant. The shift technical advisor, believing that the turnover of responsibility was yet to occur, returned to the work control office outside the control room. The nuclear shift supervisor and the shift technical advisor left the control room via different exits, thinking that the other would remain in the control room. The ROs noted their absence and paged the shift technical advisor, who returned within 3 minutes.

On October 9, 1992, the only SRO in the Nine Mile Point 1 control room (the shift supervisor) violated 10 CFR 50.54(m)(2)(iii) when he left the control room for 5 minutes with the plant at full power.

On February 14, 1993, the only SRO in the South Texas Project Unit 2 control room (the unit supervisor) violated 10 CFR 50.54(m)(2)(iii) when he left the

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control room to observe an RO perform a portion of a surveillance procedure. The unit supervisor was gone for about 40 seconds while the plant was in hot shutdown; he immediately realized his error and returned to the control room.

On October 14, 1993, the control room staffing at the Byron Station went below the minimum requirements in 10 CFR 50.54(m)(2)(iii) for approximately 22 minutes while one unit was shutdown and the other unit was at full power. The senior control room engineer (a licensed SRO) in charge of the dual-unit control room was relieved by the Unit 2 shift foreman (a licensed SRO not usually stationed in the control room) for a routine facility tour. The Unit 2 shift foreman, then the only SRO in the control room, subsequently left to investigate an equipment problem. The ROs did not realize that an SRO was not present until an equipment operator contacted the control room to speak to the senior control room engineer. The Unit 2 shift foreman subsequently returned to the control room.

On April 22, 1994, the licensed operators at H. B. Robinson violated 10 CFR 50.54(m)(2)(iii) when they all vacated the "at the controls" area for a period of 5 to 10 seconds while the plant was at full power. The on-duty shift technical advisor, who was not a licensed RO or SRO, noted that the last operator had departed and informed that operator that he was required to stay in the "at the controls" area. The operator returned immediately.

On September 28, 1994, the nuclear shift supervisor at the Hope Creek Station, who had responsibility for the control room, inadvertently walked out of the control room to the adjacent work control office for approximately 18 seconds, thereby leaving the control room with no SRO with an active license.

On November 28, 1994, the control room staffing at Shearon Harris fell below the minimum requirements in 10 CFR 50.54(m)(2)(iii) for approximately 4 minutes while the plant was at power. The 2 ROs on shift vacated the control room, leaving the SRO and 3 nonlicensed operators to watch the plant. The nonlicensed operators were assigned to the primary and balance-of-plant controls and to the SRO desk. Each was in training under the direct supervision of a licensed RO, but they were not performing any licensed duties at the time. When the trainee at the balance-of-plant position realized that he was without the direct supervision of a licensed operator, the SRO paged an RO to return to the control room.

Discussion

10 CFR 50.54(k) and 10 CFR 50.54(m)(2)(iii) require that an SRO be in the control room at all times when a nuclear power unit is in an operational mode other than cold shutdown or refueling. In addition to that SRO, the regulations further require that an RO or another SRO be present at the controls at all times. Furthermore, 10 CFR 55.53(d) states that all licensed operators are subject to, and must observe, all applicable rules, regulations, and orders of the NRC. The NRC has taken enforcement action against both facility licensees and individual licensed operators for failing to meet these requirements in certain of the above instances.

Several facilities have identified root causes of failing to meet manning requirements; those causes span human error, inadequate communications, lack of understanding of proficiency watch requirements, false perceptions of adequate shift staffing, and failure to understand supervisory responsibilities. Among the corrective actions and preventive measures licensees have adopted to address this problem are counseling and discipline, specific training on regulatory requirements, and physical adaptations to security cards such as clips or bands that serve as reminders to operators not to leave the control room.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Brian K. Grimes, Director
Division of Projects Support
Office of Nuclear Reactor Regulation

Technical contacts: Stuart A. Richards, NRR

(301) 415-1031

Neal K. Hunemuller, NRR (301) 415-1152

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Information		Date of	Tanad As
Notice No.	Subject	Issuance	Issued to
95-22	Hardened or Contaminated Lubricants Cause Metal Clad Circuit Breaker Failures	04/21/95	All holders of OLs or CPs
95-21	Unexpected Degradation of Lead Storage Batteries	04/20/95	All holders of OLs or CPs for nuclear power reactors.
94-64, Supp. 1	Reactivity Insertion Transient and Accident Limits for High Burnup Fuel	04/06/95	All holders of OLs or CPs for nuclear power reactors
95-18, Supp. 1	Potential Pressure-Locking of Safety-Related Power- Operated Gate Valves	03/31/95	All holders of OLs or CPs for nuclear power reactors.
95-20	Failures in Rosemount Pressure Transmitters due to Hydrogen Per- meation into the Sensor Cell	03/22/95	All holders of OLs or CPs for nuclear power reactors.
95-19	Failure of Reactor Trip Breaker to Open Because of Cutoff Switch Material Lodged in the Trip Latch Mechanism	03/22/95	All holders of OLs or CPs for nuclear power reactors.
95-18	Potential Pressure-Locking of Safety-Related Power- Operated Gate Valves	03/15/95	All holders of OLs or CPs for nuclear power reactors.
95-17	Reactor Vessel Top Guide and Core Plate Cracking	03/10/95	All holders of OLs or CPs for boiling water reactors.
95-16	Vibration Caused by Increased Recirculation Flow in a Boiling Water Reactor	03/09/95	All holders of OLs or CPs for boiling water reactors.

OL = Operating License CP = Construction Permit

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Discussion

Facilities should consider reviewing their procedures and training programs to ensure that the control room manning requirements of 10 CFR Part 50 are met at all times.

Several facilities have identified root causes of failing to meet these requirements; those causes span human error, inadequate communications, lack of understanding of proficiency watch requirements, false perceptions of adequate shift staffing, and failure to understand supervisory responsibilities. Among the corrective actions and preventive measures licensees have adopted to address this problem are counseling and discipline, specific training on 10 CFR requirements, and physical adaptations to security cards such as clips or bands that serve as reminders to operators not to leave the control room.

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