Attachment A

NOTICE OF VIOLATION

Union Electric Company
Festus, Missouri

Docket No. 030-10524
License No. 24-02020-04

During an NRC inspection conducted on September 12, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is listed below:

License Condition No. 19.A. of License No. 24-02020-04 requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in the application dated February 9, 1990.

The referenced application establishes in Item 10 (radiation safety program), lockout procedures for Nucleonic Level Detectors.

Step 5 of the lockout procedures for Nucleonic Level Detectors require that the Control Attendant Operator (CAO) close and lock the shutter of the nuclear device prior to maintenance activities.

Contrary to the above, on August 1, 1991, the CAO failed to close and lock the shutter on an Industrial Nucleonics Level Detector, Model No. LS-101-S6 containing approximately 15 millicuries of cesium-137 as a sealed source, prior to maintenance activities on discharge chute no. 5b.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Union Electric Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission Region III, 799 Roosevelt Road, Glen Ellyn, Illinois, 60137 within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Dated at Glen Ellyn, Illinois
this 6th day of November 1991

Gary L. Shear for
Roy J. Caniano, Chief
Nuclear Materials Safety
Section 2

REVIEW OF INCIDENT

On August 1 and 2, 1991 maintenance personnel were assigned to repair the inner liner of coal chute No. 5B. During the repair process, it was discovered that the shutter on the Nucleonics Fixed Density Gauge, Model No. LS-101-S6 had been improperly locked out potentially exposing five workers in varying degrees to an unshielded cesium-137 sealed source containing approximately 15 millicuries, as corrected for decay. The lockout failed to secure the source. When work was started on August 1 a visual inspection of the lock and source by maintenance personnel appeared to indicate that the source was secured. During the work period August 2 another visual inspection of the lock and source position revealed that the source was not secured since the indicator lever had moved from the locked (shielded) position to an open position (unshielded). It was apparent that the source had moved from its shielded position sometime during the work period on August 1 or early in the work period on August 2.

The inspectors review of this incident revealed that the Control Attendant Operator (CAO) had attempted to lock the source in the shielded position. It was later discovered, as noted, that the CAO improperly locked the device which allowed the source to move into an exposed position exposing several maintenance personnel to the sealed source. The source lever apparently moved to the exposed position due to "jarring" associated with the chute maintenance activities.

The licensee submitted reports of the event to Region III dated August 2 and 27, 1991. The reports detailed the licensee's investigation of the event and evaluation of personnel exposures associated with the event. Based upon conservative (worst case) time and distance estimates, personnel exposure evaluations were conducted. These evaluations estimated that the maximum personnel exposure to a worker was 74.5 millirem.

Region III staff reviewed the above referenced report and concur with the licensee's evaluation of the event and associated personnel exposures. Survey results obtained by the NRC inspectors of the gauge and vicinity compared favorably with those of the licensee.

Interviews with the CAO and other individuals involved in the incident revealed that licensee personnel are familiar with procedures to be followed during maintenance activities involving radioactive gauges. In addition, the interviews indicated that the licensee had discussed the incident with the involved personnel and that they understood the results of the licensee's evaluation and the exposures sustained.

The root cause of the incident appeared to be a failure to properly lock out the gauging device and to physically verify that the gauge lever had been properly secured. This resulted in the apparent violation of License Condition 19.A. identified in Attachment A.

Corrective action includes an additional tagging precaution added to the Worker's Protection Authorization (WPA) which instructs the individual to physically verify that the device has been properly locked out. All personnel involved, whose duties require them to conduct activities associated with the radioactive gauges, including maintenance personnel, have been trained in the use of the new WPA and proper gauge lockout procedures.

Additionally, it was discussed with the licensee at the September 12, 1991 exit meeting, that the modified radioactive gauge lockout procedures be reviewed for applicability to other Union Electric plants which have similar inventories of nuclear gauges/equipment.