

PRELIMINARY NOTIFICATION

June 3, 1981

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-81-14

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically that which is known by IE staff on this date.

FACILITY: Arkansas Power and Light Company
Arkansas Nuclear One, Unit 1
(Docket 50-313)

SUBJECT: POSSIBILITY OF OVEREXPOSURE TO NEUTRONS BY FOUR INDIVIDUALS IN ANO-1 CONTAINMENT BUILDING



Four individuals made a Containment Building entry during the afternoon of June 2, 1981, at ANO-1. The individuals were in the ANO-1 Containment Building approximately eighteen minutes in an attempt to locate the source of unidentified primary system leakage. The unidentified primary system leakage has slowly increased from approximately 0.2 gallons per minute (gpm) to 0.7 gpm during the last few days.

The four individuals' neutron TLD's indicated exposure levels of from 19 to 24 rem. However, the licensee believes that these indicated exposures are incorrect due to the following:

1. The PNR-4 neutron survey instrument indicated dose exposure at a rate that indicated overall exposure to these four individuals was between 1 and 2 rem (most probable maximum dose was calculated to be 1.7 rem neutron dose).
2. The other dosimetry (beta and gamma) indicated integrated doses of 50 to 200 mrem for each of these four individuals.
3. Pathways used by the individuals, time in the containment building, and previous experience indicate that approximate exposures of less than two rem integrated neutron dose to each of the four individuals would be anticipated.
4. There have been generic problems with calibration of neutron TLD's due to the differences in neutron energies and it is known that agreement between the TLD's and survey instruments has been very poor.

ANO-1 reactor tripped at 12:30 a.m. on June 3, 1981, due to an anticipatory signal resulting from a ruptured diaphragm in the main turbine lubricating oil system. Therefore, confirmatory measurements can not be made immediately to determine the accuracy of the neutron TLD readings. The licensee is investigating the neutron TLD calibration and response characteristics in an effort to resolve the difference in the dose indications.

6/3/81 - FAXED TO HQ FOR BROADCAST --

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The licensee has not notified NRC HQ Duty Officer nor does the licensee plan to issue a press release. These decisions were based on the licensee's position that the 19 - 24 rem integrated neutron doses are erroneous for the reasons stated above.

ANO-1 is a B&W PWR facility.

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