

ARKANSAS POWER & LIGHT COMPANY
January 29, 1988

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L. J. Callan, Director
Division of Reactor Projects
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

SUBJECT: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313/50-368
License No. DPR-51 and NPF-6
Semiannual Summary of Activities
Relating to Personnel Occupational
Exposure Data Discrepancies

Dear Mr. Callan:

Provided below is a summary of the progress made toward correction of personnel occupational exposure data discrepancies. This summary was requested by Mr. Gagliardo of your staff in his letter of September 14, 1987 (ØCNAØ987Ø7). Also provided is clarification of what will be considered an exposure that adversely affects an individual's cumulative whole body dose.

This effort was described in AP&L's letter of July 30, 1987 (ØCANØ78717). The discrepancies are, for the most part, record-keeping errors involving inconsistencies in the reporting of extremity doses, skin of whole body, and exposures to the head in relation to the whole body dose.

These discrepancies occurred in varying degrees during the period between 1973 and 1983 and may have affected reports filed under 10CFR19.13, 10CFR20.408, and 10CFR20.409, and reporting requirements of 10CFR20.405.

The discrepancies for exposures relating to quarterly limits involve three areas: (1) inconsistencies in the reporting of extremity dose summaries on NRC Form 5, Current Occupational External Radiation Exposure; (2) depth of extremity doses reported for shallow dose measurement not meeting the 7 mg or less requirement of NRC Form 5,

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although the reported doses compared favorably with industry standards of this time period; and (3) inconsistencies in the reporting of skin or whole body doses. The records for quarterly limits will be corrected, but corrected reports will not be submitted as these limits are not cumulative and would not affect an individual's future exposure.

The discrepancies for exposures relating to accumulated whole body doses involve inconsistencies in the reporting of head doses. These occurred for periods when whole body TLDs and head TLDs were issued. If the periods did not coincide for the entirety, the conservative reporting would have been to sum the two readings. This was not consistently done in all cases. Depending on how the total dose is corrected, an individual's accumulated whole body dose is subject to increase.

No indication of exposures exceeding the limits of 10CFR20 have been identified in the reviews completed up to this time.

Data Review Summary, July to December, 1987

Exposure records of TLD readings for the period between 1973 and 1983 have been collected from the permanent record files and ordered by date. Personnel dose records for this period have been accumulated, as well, and separated into active personnel and inactive or terminated personnel. Active personnel who have been associated with Arkansas Nuclear One prior to and continuously since 1983 have been identified. This group accounts for approximately 400 individuals of an estimated 8000 to 10,000 total, or 4 to 5%. The review of these records is approximately 50% complete. Correction of these records will preclude incorrect reports for these individuals if they terminate at a later date. As noted above, no excessive exposures have been identified by these reviews.

While this percentage appears low for a six-month effort which represents one-third of the estimated time for completion, the collection of the records was a major task required before reviews could begin. At this time, the effort is consistent with the original estimated completion date of December 31, 1988.

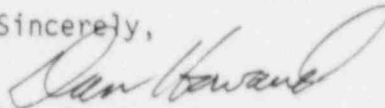
Clarification of Adversely Affecting Whole Body Doses

AP&L indicated that corrected reports will be submitted to the individual and the NRC in instances where accumulative whole body doses are adversely affected. Paragraphs 20.101 and 20.102 of 10CFR provide requirements on radiation dose standards and determination of prior dose for individuals. These take into account an accumulated occupational dose to the whole body such that it does not exceed $5(N-18)$ rems where N equals the individual's age in years at his last birthday. If the review of exposure records indicates an increase in an

individual's whole body dose during his time at Arkansas Nuclear One, his accumulated occupational whole body dose would increase. This may also result in having exceeded 10CFR20 limits while here and could have resulted in excessive exposures at other facilities since that time. The limit that has been established for correction of the previous termination reports for whole body exposure is if the corrected dose exceeds the originally reported dose by AP&L's minimum detectable threshold for the TLD wear period. This threshold is 10 mrem beta or gamma exposure or 20 mrem neutron exposure. No corrected report will be made for a reduction of the original dose.

We will continue to inform you of the progress of this effort.

Sincerely,



Dan R. Howard
Manager, Licensing

DRH:PLM:djm

cc: U. S. Nuclear Regulatory Commission
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