

August 6, 1996

Dr. William H. Hannum
Argonne National Laboratory-East
9700 South Cass Avenue
Argonne, IL 60439

Re: Noncompliance Report NTS-CH-AA-ANLE-ANLEER-1996-0001

Dear Dr. Hannum:

This letter refers to the Department of Energy's (DOE) evaluation of Argonne National Laboratory-East's (ANL-E) report of a potential noncompliance with the requirements of 10 CFR 835 (Occupational Radiation Protection). This potential noncompliance, which involved the unexpected, uncontrolled radiation exposure of an ANL-E temporary employee during January- August 1995 was identified by ANL-E on December 11, 1995, and reported to DOE on March 1, 1996, in the Noncompliance Tracking System (NTS).

The exposure to the ANL-E temporary employee resulted from radiation streaming from a storage vault which was used to store a high level radioactive materials since 1988. Survey information from several years prior to the employee's exposure identified elevated radiation levels at the vault door and in the employee's work area but this information was not acted upon to post and control the areas properly. Specifically, 1988 radiation surveys results identified elevated readings of 60 mR/hour at the vault door; however, potential radiation streaming into the nearby [Room] was not evaluated at that time. Additionally, the vault was not posted as a High Radiation Area as required since one container had a surface reading of [a specified amount]. In 1991, a routine survey identified an elevated radiation level of 2 mR/hour in Room [] where the exposure occurred, but this room was not posted as a "Controlled Area" and personnel monitoring was not required. After 1991, required routine radiation surveys of uncontrolled areas were not performed.

Based upon our evaluation, we have concluded that noncompliances with 10 CFR 835 have occurred. Specifically, noncompliances with the Posting, Access Control, Monitoring in the Workplace, Individual Monitoring, and the Design and Control (As Low As Reasonably Achievable) requirements have been identified. Although the estimated total dose, [a specified amount], for this worker was below the allowable annual limits established by 10 CFR 835, this occurrence was an unplanned and preventable exposure. This occurrence raises a concern because it is indicative of a broader weakness in your radiation protection program. DOE recognizes however, that ANL-E was one of the few operators of DOE facilities that implemented 10 CFR 835 prior to the effective date of the rule. Additionally, DOE has evaluated the corrective actions and schedules provided in your NTS report and those corrective actions recommended in the joint DOE/ANL-E Inquiry Report of this occurrence. DOE has concluded that the joint DOE/ANL-E Inquiry Report was a thorough review of this event and that the corrective actions, including those recommended by the Inquiry Report, will provide a reasonable approach to correct the identified noncompliance and address the programmatic weaknesses.

DOE Enforcement staff has coordinated the review of field implementation of selected corrective actions with DOE-Argonne and concluded that these actions have been implemented at the facility level.

These corrective actions, coupled with a continuing effort to ensure the program is fully implemented at the facility level, meet the discretionary criteria described in DOE's nuclear safety enforcement policy. Therefore, the exercise of discretion not to undertake enforcement action at this time is warranted. However, ANL-E should continue monitoring program implementation since recurrence could indicate larger programmatic issues and/or inadequate implementation of lasting corrective actions. Ineffective implementation could warrant further enforcement review and action at a later date.

If you would like to discuss these matters further, please contact Susan Adamovitz at (301) 903-0125.

Sincerely,

R. Keith Christopher
Director
Office of Enforcement and
Investigation