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IN 86-41

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

June 9, 1986

IE INFORMATION NOTICE NO. 86-41: EVALUATION OF QUESTIONABLE EXPOSURE READINGS
OF LICENSEE PERSONNEL DOSIMETERS

Addressees:

All byproduct material licensees.

Purpose:

This notice is (1) to alert licensees of cases reported to the NRC where questionable exposure readings have been recorded for personnel dosimetry devices used by licensee personnel and (2) to provide recipients with information on evaluation methodology used by some licensees to evaluate and report such readings. It is expected that recipients will review this notice for applicability to their facilities. However, suggestions contained in this information notice do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

The NRC has encountered a number of cases in which byproduct material licensees have received TLD or film badge reports showing a questionable high-exposure reading. Licensees' evaluations found such readings to be erroneous since the exposure purportedly was recorded on the dosimeter while it was not being worn by the individual. The majority of these cases have involved dosimeters that were inadvertently left in high-radiation areas or left for long periods of time near byproduct material storage containers. Notwithstanding the requirements for proper use of personnel dosimeters, many licensees do not know how these cases should be evaluated and reported to NRC.

Discussion:

Surveys are necessary to evaluate questionable exposure readings on licensee personnel dosimeters. Improper evaluation of such readings may lead to a citation for violation of an NRC requirement and possible enforcement action. Byproduct material licensees should be aware of their responsibilities with respect to 10 CFR Part 20.101, which requires that licensees control radiation exposure to individuals so that no individual receives an exposure in excess of the radiation dose standards. 10 CFR 20.201 requires that licensees make or cause to be made such surveys as may be necessary for the licensee to comply with the radiation dose standards specified in 10 CFR 20.101 and that the surveys are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As used in the regulations, "survey" means an

evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radiation under a specific set of conditions. In some cases, the evaluation may be supported by a physical survey. 10 CFR 20.401 requires each licensee to maintain records showing the results of surveys required by 10 CFR 20.201.

The information that has been documented by some licensees that meets NRC's requirements for a reasonable evaluation of questionable exposure readings is as follows:

- ° Signed and dated statements from individuals present at the time of the possible false exposure, including helpers or witnesses. Such statements have been written by the individuals independently and have included all pertinent information known by them.
- ° Documentation of the Radiation Safety Officer's evaluation and conclusions, including results of interviews of personnel involved, records of telephone conversations, examination of equipment (when applicable), surveys, and corrective action to prevent recurrence.
- ° Estimation of the actual exposure by measurement, calculation, or other appropriate methods.

In addition to the above, reviews of existing documentation have been made to ensure that records are complete and up to date. Such documents include utilization logs, dosimeter logs, exposure files, equipment maintenance checks, calibrations, and training.

If a Radiation Safety Officer's evaluation of a high TLD or film badge reading cannot conclusively prove that the reading was erroneous, a report is made to the NRC in accordance with 10 CFR 20.403 or 20.405.

No written response to this information notice is required. If you have any questions regarding this matter, please contact the Regional Administrator of the appropriate NRC regional office or this office.



James G. Partlow, Director
Division of Inspection Programs
Office of Inspection and Enforcement

Technical Contact: H. Karagiannis, IE
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Attachment: List of Recently Issued IE Information Notices

LIST OF RECENTLY ISSUED
 IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
86-32 Sup. 1	Request For Collection Of Licensee Radioactivity Measurements Attributed To The Chernobyl Nuclear Plant Accident	6/6/86	All power reactor facilities holding an OL or CP
86-40	Degraded Ability To Isolate The Reactor Coolant System From Low-Pressure Coolant Systems in BWRs	6/5/86	All power reactor facilities holding an OL or CP
86-39	Failures Of RHR Pump Motors And Pump Internals	5/20/86	All power reactor facilities holding an OL or CP
86-38	Deficient Operator Actions Following Dual Function Valve Failures	5/20/86	All power reactor facilities holding an OL or CP
86-37	Degradation Of Station Batteries	5/16/86	All power reactor facilities holding an OL or CP
86-36	Change In NRC Practice Regarding Issuance Of Confirming Letters To Principal Contractors	5/16/86	All power reactor facilities holding an OL or CP
86-35	Fire In Compressible Material At Dresden Unit 3	5/15/86	All power reactor facilities holding an OL or CP
86-34	Improper Assembly, Material Selection, And Test Of Valves And Their Actuators	5/13/86	All power reactor facilities holding an OL or CP
86-33	Information For Licensee Regarding The Chernobyl Nuclear Plant Accident	5/6/86	Fuel cycle licensees and Priority 1 material licensees

OL = Operating License
 CP = Construction Permit