

224

RECORD #224

TITLE: Blind Spiking of Personnel Dosimeters and the Inspection Program

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 27 1989

MEMORANDUM FOR: L. Robert Greger, Chief
Reactor Programs Branch
Division of Radiation Safety and Safeguards
Region III

FROM: James E. Wigginton, Section Chief
Radiation Protection Branch
Division of Radiation Protection
and Emergency Preparedness
Office of Nuclear Reactor Regulation

SUBJECT: BLIND SPIKING OF PERSONNEL DOSIMETERS
AND THE INSPECTION PROGRAM

John Buchanan

You asked whether, considering that 10 CFR 20.202(c) requires NVLAP accreditation for personnel dosimeters, inspectors should continue to inspect for blind spiking of personnel dosimeters by nuclear power reactor licensees.

Our answer is that given the coverage of personnel dosimetry QA/QC in the NVLAP program and in the ANI/MAELU inspections, there is no need for all NRC inspections of personnel dosimetry to cover blind spiking of dosimeters. However, there may be reasons to cover this topic on a case-by-case basis. Our answer is based in part on the following information.

To our knowledge, blind spiking of personnel dosimeters has never been included explicitly in an inspection procedure for power reactors; however, such spiking falls within the more general item of "quality assurance for dosimeter processing" (Inspection Procedure 83524, Section 3.03 a) and "quality assurance of personal dosimetry measurements" (Core Inspection Procedure No. 83750, Section 3.05 a.7). Apparently inspectors in Region III, and possibly other regions, have been looking to see if licensees are spiking badges. At least one region (Region I) has done NRC spiking of licensee personnel dosimeters using RESL to do the spiking.

To be accredited by NVLAP, a dosimetry processor must pass the proficiency test(s) and must satisfy documented NVLAP criteria. The NVLAP criteria for accreditation include general requirements for a quality assurance program but no specific requirement for dosimeter spiking. However, conformance to the NVLAP criteria is checked during onsite assessments by NVLAP assessors and the quality assurance checklist provided to the assessor (to "guide" the assessor) includes "#107. The processor's quality assurance program includes processing checks such as ... blind audit dosimeters unknown to the technician...."

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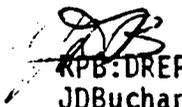
The ANI/MAELU inspection procedure on personnel dosimetry (dated October 1986) includes the requirement (Number 8.4.4.3): "There should be a continuing program of blind spiking TLDs or film badges. 1. Spiked badges should be included in each processing cycle. 2. A reasonable range of exposures for gamma and beta radiation energies should be included in the spiking program." Thus ANI/MAELU clearly expects nuclear power plants to do blind spiking.

Original signed by James E. Wigginton

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