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Rulemaking and Directives Branch,
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Reference: U. S. NRC Draft Regulatory Guide DG-8036. Personnel Monitoring Device—Direct-Reading Pocket Dosimeters. April 2010.

Subject: CORAR Comments on Draft Regulatory Guide DG-8036.

The attached comments are submitted on behalf of the Council on Radionuclides and Radiopharmaceuticals (CORAR)¹. Pocket dosimeters are used extensively in the radiochemical and radiopharmaceutical manufacturing and distribution industry, mostly in gamma radiation fields but also in mixed gamma/beta radiation field. CORAR shall be glad to provide clarification or further information on this subject as needed.

Yours sincerely,

Leonard R. Smith, CHP.
Co-chair CORAR Manufacturing Quality and Safety Committee.

1. CORAR members include the major manufacturers and distributors of radiopharmaceuticals, radioactive sources and radiochemicals used in the US for therapeutic and diagnostic medical applications and for industrial, environmental and biomedical research and quality control.

SONSI Review Complete
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F-RIDS = ADM-03
Add = H. Karagiannis (hxx)

**CORAR COMMENTS ON DRAFT REGULATORY GUIDE DG-8036,
“Personnel Monitoring Device--Direct -Reading Pocket Dosimeters”**

Page 3, item 3, “...days for excessive affect their usefulness...capable of reading the leakage that could full scale.”

Remove “leakage that could” from the second sentence and insert between “excessive” and “affect” in the first sentence.

Page 3, item 4, “The storage place should be dry. Radiation free, and cool...”

Replace “radiation free” by “low radiation background” as in page 3, item 3. Consider adding “low radioactive contamination” to this sentence.

Page 4, item 5, “...the individual’s personnel dosimeter must be sent for processing within 24 hours...”

Replace “processing within 24 hours” by “emergency processing by the end of the next business day.”

Page 4, item 6, “...and investigate the reasons for differences that are greater than 20 percent.”

Recommend replacing “20” by “25” considering the differences due to energy response and the geometry of dosimeter placements and in non-uniform and mixed radiation fields.

Also, when direct reading personnel dosimeters are used to track and provide feedback to control dose, their response to the occupational radiation field compared with the NVLAP accredited personnel dosimeter should be considered. For example, if an administrative control limit of 100 mrem is applied to a dosimeter wear period and the direct reading personnel dosimeter under responds by 20% the appropriate administrative control for the direct reading personnel dosimeter should be 80 mrem for the duration of the same wear period.

Consider providing guidance on positioning direct reading dosimeters with respect to personnel dosimeters to ensure similar radiation exposure conditions.

Page 4, item 7, “...charging, reading, and recording readings from the pocket dosimeter.”

Add to the end of this sentence “and the proper location of the pocket dosimeter during specific radiation exposure conditions.”

Page 4, item 9, "Mixed Radiation Fields."

Consider additional guidance on mixed gamma/beta radiation fields. It would be useful to recommend the use of appropriate electronic personnel dosimeters instead of direct reading pocket dosimeters when the shallow dose approaches or exceeds ten times the deep dose.