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Directorate of Regulatory  
Operations Bulletin 74-7

PERSONNEL OVEREXPOSURE - IRRADIATION FACILITY

A recent investigation of a serious overexposure of an employee at an Irradiator Facility revealed safety problems which may exist at other plants where radioactive materials are similarly utilized.

A. Description of Circumstances:

An experienced operator received a whole body exposure of from 300 to 400 rems when he entered a cell where a 120,000-Curie cobalt 60 source was in the unshielded position.

This entry resulted from several significant contributing causes which included:

1. A radiation alarm circuit required by the license had been deactivated. If operating it would have alerted the operator to an unsafe condition.
2. The operator failed to perform a physical radiation survey as he entered the cell.
3. The operator failed to follow approved pre-cell-entry operating procedures, which required visual assurance that the source had been returned to its shielded position.
4. The cell operator was unaware that the radiation alarm circuit had been or could be deactivated.

B. Action Requested:

In view of the above you should take the following steps:

1. Perform a complete operational test of all interlocks, radiation alarms and other devices which have been installed to prevent radiation exposure of personnel.
2. Review your administrative controls to assure that all regulatory requirements are being met. Such controls, if license conditions permit, must provide conservative criteria under which any protective devices may be bypassed or reduced in effectiveness.

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3. Conduct special training of all operating personnel on the proper operation of all protective devices and safety related procedural requirements to assure that these devices are properly operated and procedures are followed.
4. The above actions along with any necessary repairs, should be completed within ten (10) days of the receipt of this notice. A record detailing the actions taken, findings, and corrective measures if any, shall be retained for review during the next inspection.