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PERSONAL NUCLEAR ACCIDENT DOSIMETRY

AT

SANDIA NATIONAL LABORATORIES*

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ABSTRACT

DOE installations possessing sufficient quantities of fissile material to potentially constitute a critical mass, such that the excessive exposure of personnel to radiation from a nuclear accident is possible, are required to provide nuclear accident dosimetry services. This document describes the personal nuclear accident dosimeter (PNAD) used by SNL and prescribes methodologies to initially screen, and to process PNAD results. In addition, this report describes PNAD dosimetry results obtained during the Nuclear Accident Dosimeter Intercomparison Study (NAD23), held during 12-16 June 1995, at Los Alamos National Laboratories. Biases for reported neutron doses ranged from -6% to +36% with an average bias of +12%.

*Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under Contract DE-AC04-94AL85000.

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