IMBA Expert[™]: Internal Dosimetry Made Simple

Alan Birchall¹, M. Puncher¹, A. C. James², J. W. Marsh¹, N. S. Jarvis³, M. S. Peace⁴, K. Davis¹ and D. J. King¹

¹National Radiological Protection Board Chilton, Didcot, Oxon, UK; ²ACJ & Associates, Inc., Richland, WA, USA; ³1096 Covington Place, Allison Park PA, USA; ⁴British Nuclear Fuels plc, Sellafield Seascale, Cumbria, UK

In 1997, a collaboration between British Nuclear Fuels plc (BNFL), Westlakes Research Institute and NRPB started, with the aim of producing IMBA (Integrated Modules for Bioassay Analysis), a suite of software modules that implement the new ICRP models for estimation of intakes and doses. This was partly in response to new UK regulations, and partly due to the requirement for a unified approach in estimating intakes and doses from bioassay measurements within the UK. Over the past 5 years, the IMBA modules have been developed further, have gone through extensive quality assurance, and are now used for routine dose assessment by approved dosimetry services throughout the UK. More recently, interest in the IMBA methodology has been shown by the United States Department of Energy (USDOE), and in 2001 an ambitious project to develop a software package (IMBA ExpertTM USDOE Edition) which would meet the requirements of all of the major USDOE sites began. Interest in IMBA Expert is now being expressed in many other countries. The aim of this paper is to outline the origin and evolution of the IMBA modules (the past); to describe the full capabilities of the current IMBA Expert system (the present) and to indicate possible future directions in terms of capabilities and availability (the future).

USTUR-0298A-10