

ESTABLISHMENT OF A CENTRE FOR RADIATION PROTECTION TRAINING

(SAF/9/002) II New

MODEL PROJECT

CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp	TOTAL
	m/d	US \$	US \$	US \$	m/d	US \$	m/d	US \$	US \$	US \$	US \$	US \$
1997	0/28	12,320	0	100,000	6/0	18,900	0/28	8,960	0	0	0	140,180
1998	0/28	13,020	0	100,000	6/0	19,800	0/28	9,520	0	0	0	142,340

First Year Approved 1997

OBJECTIVES: The regional development objective is to increase awareness of and adherence to international standards of good practice in radiation protection. The project's specific objective is to establish a regional, university-based centre for education and training in all aspects of radiation protection at the basic, professional, and specialization levels.

BACKGROUND: South Africa is the most advanced country in Africa in nuclear science and technology and operates a nuclear power plant, a 20 MW(th) research reactor, particle accelerators, radioisotope production facilities and gamma irradiators. Nuclear techniques are also applied widely in industry for non-destructive testing, nuclear medicine, radiation processing, and food irradiation. The Government, through several statutory and parastatal bodies, including the Atomic Energy Corporation, the national electricity utility, the Department of Health and the Council for Nuclear Safety, is supporting a number of nuclear technology programmes and promoting further development of the nuclear industry, including the mining sector. To sustain these activities, adequately trained staff qualified in radiation safety are essential for the effective enforcement of the safety and regulatory functions. The Agency has been requested to assist in the establishment of a national centre for training in radiation protection at the Schonland Research Centre for Nuclear Sciences, University of Witwatersrand, which will also make its facilities and training courses available on a regular basis to Agency-supported fellows and trainees from other African countries. This project proposal falls in line with the Agency's General Conference Resolution on Education and Training in Radiation Protection and Nuclear Safety (GC XXXVI/RES/584) which, inter alia, stresses the importance of educational courses and urges the Secretariat to maintain the current efforts in this area and to arrange for such courses to be conducted in appropriate official languages of the Agency. This is also fully consistent with the IAEA relevant programme (GC XXVII/1067, paragraph 11).

PROJECT PLAN: The workplan to develop the necessary in-house expertise for the Centre is based on substantial input provided by the counterpart. A regular post-graduate education course of one semester on radiation protection will be delivered starting from 1999, using the Agency Standard Syllabus. As a part of this project, training materials will be established in modules which will be amenable for integration into specialized training courses using available resources. The Syllabus will be incorporated in the curriculum for the post-graduate educational course (basic professional training) in radiation protection and will be utilized for specialized training courses organized by the Centre at the national and regional levels.

NATIONAL COMMITMENT: The Government will provide qualified teaching and support staff, a lecture theatre, laboratories and facilities for training courses including accelerators, an environmental monitoring laboratory, an activation analysis laboratory, neutron sources, a gamma irradiation facility and an electron microprobe, operating costs during and after establishing the centre. The Centre will hold regular training courses which will be accessible to Agency sponsored trainees in the region. The counterpart is also committed to ensure that following the completion of the project, the Centre's programme for post-graduate education and specialized training in radiation protection will be delivered on a self-sustainable basis.

AGENCY INPUT: The Agency will assist in establishing a coherent structure for specialized training consistent with the national human resources development programmes. Expert services will advise on the development and management of post-graduate professional and specialized training courses and assist in the preparation of course materials. Nuclear radiation detection and spectrometry equipment will be provided. Agency experts will help in preparing timetables, laboratory set-up, material presentation and examination sessions and will advise on specialized training courses derived from IAEA Standard Syllabus. Effective utilisation of the Centre will also include the Agency providing support for trainees coming there from African countries through its fellowship or training course programmes.

PROJECT IMPACT: Regular specialized training courses on radiation protection will contribute to sustained availability of expertise and trained personnel, to the effective implementation of radiation safety standards and to the enforcement of regulatory control and operational supervision on the numerous applications of nuclear technology in South Africa. The major impact will be in the inculcation of safety culture in the radiation workers who face the risk of exposure, thereby minimizing the potential radiation hazard. The Centre could also be used to educate the general public on the beneficial effects of using nuclear energy and radiation sources in various fields of application and impress upon them the safety precautions taken by the nuclear industry in the interests of environmental protection. In fact, many misgivings about the use of nuclear energy are due to lack of education and this project could help to alleviate fears in minds of the public. One of the most important features of the project is that it is highly relevant, not only to South Africa, but to the region as a whole. In the medium range, other countries in the region will be able to benefit from South Africa's experience in holding national training courses in radiation protection. The project will thus contribute, both directly and indirectly, to the development of the regional human resources required for the enactment and enforcement of radiation safety standards.