

## Oral 2.1

### DEVELOPMENT OF NORM MANAGEMENT IN AUSTRALIA

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Australia has had a long involvement with NORM, mainly because of mining and processing of mineral ores. Radium mining was carried out in the early 20<sup>th</sup> century. After 1949, there was a rapid expansion in uranium mining (particularly in the Northern Territory) and mineral sand mining.

Australia is a Federation of the Commonwealth, six States and two Territories, which independently regulate within their jurisdiction. Early mineral extraction and processing operations were unregulated, resulting in the existence of a large number of legacy sites. Regulation of uranium mining started in the 1970's, and mineral sand mining after 1980. The regulations vary in detail between jurisdictions. Most other NORM situations are not regulated in any of the States or Territories.

A major review of the Western Australian mineral sand industry in the 1980's led to considerable reductions in doses to workers. Remediation of many of the old uranium mine sites in the Northern Territory has been carried out over the last fifteen years and is continuing.

International awareness of NORM as a potential source of risk to workers, members of the public and the environment has increased significantly in recent years. After an extensive stakeholder consultation process and the development of a position paper summarising the NORM situation in Australia, a Safety Guide was developed, to enhance awareness and provide general guidance on NORM management.

The Safety Guide recommends a graded approach to NORM management, based on exclusion, exemption, clearance and regulation. It includes sections on general radiation protection principles, impact assessment, assessment of the need for regulation, development of a NORM management plan, and annexes on NORM management in the oil and gas, bauxite processing and phosphate industries, written by experts from the industries. These industries were chosen because of their experience with NORM management and the availability of good data.