

Environmental Radioactivity Section

The Environmental Radioactivity Section of ARPANSA (ERS) is divided into two work areas. The Radiochemistry Laboratory is managed by Ms Sandra Sdraulig, and the Health Impact Assessment group is headed by Dr Richard O'Brien. The Section Manager is Dr Geoff Williams.

Radiochemistry Lab

The Radiochemistry Lab performs a range of radioactivity analyses on a commercial and regulatory basis. These include assays of radioactivity levels in drinking water (to confirm compliance with the Australian Drinking Water Standard), analyses of samples to monitor ANSTO environmental discharges to air and water, and measurements of radioactivity levels in Australia's soils and air.

As well, the Lab is involved in developing sensitive methods to detect radioactivity in the Australian environment. Current interests are in determining the chemical characteristics of uranium (both at the former Maralinga nuclear-weapons test site and in the vicinity of uranium mines) to aid in dose and health impact assessments; and development of methods to determine plutonium and strontium-90 concentrations in soil, water and on air-filters.

Health Impact Assessment

Current research includes development of methods and models to determine dose and health impacts in the vicinity of the ANSTO site from measurements of environmental levels of radioactivity, and in industries (such as oil and natural gas) where NORM (naturally-occurring radioactive material) wastes are produced. The group provides advice to government, the public, and to industry on a range of radiation protection and radioactive waste disposal concerns. Recently, advice has been given on potential dose and health implications for nuclear veterans from Maralinga and Hiroshima.

A dose assessment has recently been completed for Aboriginals who may reoccupy the recently remediated Maralinga lands. The group also maintains expertise in radioactive waste disposal, and represents Australia on various national and international committees dealing with radioactive waste. The group assists in the development of national standards in areas of radioactive waste management.

The Health Impact Assessment group also conducts environmental audits at sites including Maralinga, ANSTO, radioactive waste storage facilities (eg. the two interim storage facilities currently at Woomera), in the vicinity of uranium mines and tailings dams, and areas where NORM waste may have accumulated. The group also maintains a network of air-samplers to check on fallout levels over Australia.