

## **KRYPTON-85 AND OTHER AIRBORNE RADIOACTIVITY MEASUREMENTS THROUGHOUT IRELAND**

**SMITH, K.J., MURRAY, M., WONG, J., SEQUEIRA, S., LONG, S.C. & RAFFERTY, B.**

Radiological Protection Institute of Ireland, 3 Clonskeagh Sq, Dublin 14, Ireland, Ksmith@rpii.ie

In compliance with articles 35 and 36 of the EURATOM Treaty, the Radiological Protection Institute of Ireland (RPII) undertakes a comprehensive programme of radioactivity monitoring in the Irish terrestrial environment. Radioactivity is present in the terrestrial environment due to natural processes, the testing of nuclear weapons in the atmosphere, accidents such as the Chernobyl accident and the routine discharge of radionuclides from nuclear installations.

The RPII monitors airborne radioactivity concentrations at ten stations throughout Ireland, of which, nine are equipped with low volume particulate samplers and one, in Dublin, with a high volume particulate sampler. The low volume particulate samples are assessed for total beta activity and high volume samples for gamma emitting radionuclides such as caesium-137 and beryllium-7. In addition, air sampled at the RPII's laboratory in Dublin, is monitored for krypton-85, a radioactive noble gas, released into the environment primarily as a result of the reprocessing of nuclear fuel at installations such as Sellafield in the UK and La Hague in France.

Since the inception of the krypton measurements in 1993 a trend of increasing atmospheric concentrations has been observed. The results of the krypton-85 monitoring, as well as the airborne radioactivity concentration measurements, will be presented and discussed in this paper.