JOURNEY MONITORING METHODOLOGY FOR RADIOLOGICAL MEASUREMENT OF LARGE AREAS

Ana Castellanos, Ariel Novello,
Marianela Domínguez, Hernán Spinelli,
et al.
Comisión Nacional de Energía Atómica, Unidad Seguridad
Centro Atómico Ezeiza
Argentina

Abstract

In this paper is presented a methodology used to assess the Envirnomental base-line of the Ezeiza Atomic Centre.
This centre, located in the Buenos Aires province of Argentina Republic, has a surface of 840 has and is 33 Km from the Federal District of Buenos Aires.
The area is divided in two parts by a road, and into the site, are located several facilities, which involve the management of open and sealed radioactive sources.
Among them, we have a 10 MW Research Reactor for radioisotopes production, the Nuclear Power Plants Fuel Elements Manufacturing Plant, three Radioisotopes Production Plants for medicine and industry and the Wastes Interim Storage and Conditioning Facility.
It was founded in the late 50´s, and because of it, has a historic and great developing.
With the objective of enviromental monitoring of the site, and to design the Surveillance Plan, the first thing we had to assess was the base-line and this method emerged as one of the most suitable to do it, since we realized that it is fast, suitable, and effective, taking the large areas where we have to perform the measurements into account.
What we intend with this paper, is to show the employed method, that involves the use of radiation detectors, a GPS, and free software available for everyone in the net.
At the present, we are journeying the stage of training, developing and test to decide if this method is the best to be used in our Environmental Surveillance Plan.
Taking into account that the main characteristic is its simplicity, the method can be applied to the assessment of large contaminated areas as a first monitoring of the site, and to evaluate the remediation progress or decontamination factors established by the procedures of remediation.