

Experiences on Environmental Radiological Monitoring for Nuclear Emergency Exposures Situations, resulting from field exercises: lessons learned and proposals for improvement with a sustainability perspective

Cerullo, A¹; Rodriguez, M¹; Truppa, W¹.

¹Autoridad Regulatoria Nuclear (ARN)

The Nuclear Regulatory Authority of Argentina (ARN) establishes and supervise the application of the national safety standards, including those to maintain an appropriate level of protection for people, the environment, at present and for future generations, from the harmful effects of ionizing radiation. Moreover, according to the national legal framework, ARN has responsibilities to cover the intervention for emergency exposures situations, in cooperation with operators and other national agencies. At the ARN's Division for Intervention in Radiological and Nuclear Emergencies (SIERYN), EPR tasks are carried out in order to avoid and mitigate adverse consequences for health and the environment in case of an emergency, including environmental monitoring.

As part of these preparedness for response activities, SIERYN performs environmental radiological monitoring tasks for emergency situations, trough the involvement in the Nuclear Emergency Exercises organized by the operator of the Argentinean NPPs (Embalse NPP and Atucha Nuclear Complex) and supervised by ARN.

This paper will develop the following aspects:

- Description of the experiences of aerial, ground vehicular and ground on foot Environmental Radiological Monitoring applied for nuclear emergency situations, and carried out in the proposed scenarios of the nuclear power plant emergency plan application exercises.
- Case study analysis, identifying strengths and difficulties observed.
- Proposal for improvements and future actions to be developed in the SIERYN, in order to ensure and provide a correct management for decision making in the event of a possible and/or real emergency, proposing protective measures focused on sustainable solutions justified under the premise that they are harmonious with the environment, natural resources, society and that contemplate risk tolerability.



Illustration 1- Ground Vehicle Monitoring



Illustration 2- Ground Monitoring

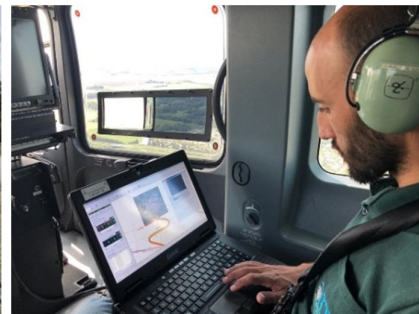


Illustration 3- Aerial Monitoring