

SPAIN

Palomares

Environmental radioactivity monitoring arrangements

Monitoring of radioactivity in foodstuffs

Art. 35 Technical Report – ES 19-01

FOLLOW-UP OF THE 2019 RECOMMENDATIONS

Implementation of the alpha spectrometry determinations of $^{239+240}\text{Pu}$ (measurements performed, procedures used, type of samples)

Following the interruption of the alpha spectrometry plutonium determinations due to the improvement works performed in the laboratories of RERA (Programa de Recuperación Radiológica Ambiental/Environmental Radiological Recovery Program) such tasks were recently resumed. Radiochemical analyses began to be carried out on September 1, 2020. Up to now (November 17, 2020), the following number of samples has been treated:

- 72 Air filters (dust particles).
- 28 Foodstuffs (cultivated vegetables).
- 7 Bioindicators (flora and fauna).

These 107 analyses have resulted in 72 alpha sources (electroplated stainless steel discs) out of which, 25 measurements have been completed.

The implemented procedures are:

- PT-RERA-37. Determinación de la concentración de actividad de $^{239+240}\text{Pu}$, en muestras de aire, mediante radioquímica y posterior medida por espectrometría alfa, 2015. (Determination of $^{239+240}\text{Pu}$ activity concentration in air samples using radiochemistry and alpha spectrometry, 2015)
- PT-RERA-36. Determinación radioquímica de $^{239+240}\text{Pu}$ en muestras de alimentos y organismos indicadores y su posterior medida por espectrometría alfa, 2020. (Radiochemical analyses of $^{239+240}\text{Pu}$ in foodstuffs and bioindicators, followed by alpha spectrometry determination, 2020)

State of the art of the sampling/measurement of rabbit meat samples

In the Palomares Environmental Radiological Surveillance Program (PVRA Palomares), the annual collection and analysis of rabbit meat samples is planned in the stations listed below:

- E20 (surroundings of zone 6).
- E25 (surroundings of zone 2).

The mandatory permit needed for hunting the mentioned samples has been obtained through the Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible (Agriculture, Farming, Fishing and Sustainable Development Department) from the Junta de Andalucía in the Almería Delegation.

To ensure the performance of this work, a local hunter has been contacted, his weapon and hunting permits checked. It should be noted that this collaboration with CIEMAT is voluntary and altruistic.

Up to now, the rabbit samples from E20 and E25 have been obtained, treated (skinned/entrails emptied) and frozen in Palomares, awaiting their further transport to CIEMAT laboratories in Madrid where they will be processed.