

Soil Radiological Characterization and Remediation at CIEMAT

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Located in Madrid, CIEMAT is the Spanish Centre for Energy-Related, Environmental and Technological Research. It used to have more than 60 facilities in operation that allowed a wide range of activities in the nuclear field and in the application of ionising radiations.

At present, the centre includes several facilities; some of them are now obsolete, shut down and in dismantling phases. In 2000 CIEMAT started the "Integrated plan for the improvement of CIEMAT facilities (PIMIC)", which includes activities for the decontamination, dismantling, rehabilitation of obsolete installations and soil remediation activities.

A small contaminated area named with the Spanish word "Lenteja" (Lentil), has had to be remediate and restored. In the 70's, an incidental leakage of radioactive liquid occurred during a transference operation from the Reprocessing Plant to the Liquid Treatment Installation, and contaminated about 1000 m³ of soil.

Remediation activities in this area started with an exhaustive radiological characterisation of the soil, including surface samples and up to 16 meters boreholes, and the development of a comprehensive radiological characterization methodology for pre-classification of materials. Once the framework was defined the following tasks were being carried out: preparation of the area, soil extraction activities and final radiological characterisation for release purposes. Next step will be the refilling of the resulting hole from the removal soil activities.

This paper will describe the soil radiological characterization and remediation activities at the Lentil Zone in Ciemat Research Centre.