

Monday 9 December 2019

Clearable Materials from Nuclear Plants and Nuclear Installations: ISIN and Arpa Piemonte published a study

It was presented, during the VII National Conference of Physical Agents of the AIRP, the article "Control Experiences Regarding Clearable Materials from Nuclear Power Plants and Nuclear Installations: Scaling Factors Determination and Measurements' Acceptance Criteria Definition".

It describes controls on clearable materials from nuclear power plants to verify compliance with clearance levels set by ISIN in the technical prescriptions attached to the Ministerial Decree decommissioning authorization or into category A source authorization (higher level of associated risk, according to the categorization defined in the Italian Legislative Decree No. 230/95).

This work is part of the agreement in place between ISIN and the Regional Agency for Environmental Protection of Piemonte. It was considered useful to make the scientific community participate in the acquired experiences.

The presence of very low radioactivity concentrations, often below the detection limits, can make it difficult to determine the related scaling factors. In this work, the results obtained and measurements' acceptability criteria are presented, defined with ISIN, that can be used for confirming or excluding a radionuclide presence in the process of verifying clearance levels' compliance. They are also exposed to evaluations regarding samples' representativeness chosen for scaling factors' assessment.



The article was also published on the scientific journal <u>"Environments" 2019, 6 (11), 120</u> [1]. It was signed by Luca Albertone, Manuela Marga, Laura Porzio, Giuseppe Tozzi and Pierangelo Tura of ARPA Piemonte and by Massimo Altavilla, ISIN.

Here the <u>summary</u> [2] of the article and its <u>whole version</u> [3], published in the Acts of the VII National Conference of Physical Agents of the AIRP. Both documents are in italian.

In the image, the correlation Sr-90 ~ Cs-137 in the liquid effluents of the "E. Fermi "di Trino.

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[2] https://www.isinucleare.it/sites/default/files/contenuto_redazione_isin/sintesi_articolo.pdf

[3] https://www.isinucleare.it/sites/default/files/contenuto_redazione_isin/vii_convegno_nazionale_agenti_fisici.pdf