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S.C.K./C.E.N. Mol, 23/03/79

L.H.M.A.

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HOT LABORATORIES COMMITTEE MEETING '79

Irradiation and contamination sources due to radon-emanations.

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Abstract

When chemical treatment of dissolved radium, actinium and thorium salts takes place, the waste (solid and liquid) formed in the alpha-tight hot-cells presents a permanent risk of contamination spread-out due to the gaseous radon isotopes and their daughter products.

By using completely tight PVC-tents this contamination is highly eliminated or at least circumscribed.

The experience acquired by such actions has allowed to solve the much easier contamination problems due to gaseous or volatile β-γ emitting isotopes such as Kr, Xe, T_2 and I_2.

Finally the prevention of contamination due to interventions upon installations bearing plutonium sources, creating fines plutonium oxide or dust, are majorly avoided using such tight and ventilated PVC-tents.