

## **L75 25005**

### **Abstract**

(Radiation Protection Ordinance, RPO) §95 (1) "Who does execute activities in his operating site, which is assigned to a field of work in attachment XI, has to realize a workplace oriented estimation of the Radon-222 exposition or the individual dose.

These quotation out of the Radiation Protection Ordinance says explicit, that in many fields of work not dedicated to radiation safety until now a estimation of the Radon-222 exposition or the individual dose must be made.

During water catchment out of soil, the naturally occurring radioactive inherent gas which is also dissolved in ground water, can reach the water works in different amounts. There it escapes in the air, so for the consumer it has no relevance. However, radon and his short life decay products can result in a significant radiation exposure in the water workers respiratory system. Employees in these plants are endangered by the radioactive inherent gas Radon.

The federal state Baden-Württemberg therefore has started a project within the BWPLUS sponsorship to determinate the radon exposure in all water works. The Forschungszentrum Karlsruhe executes these project. All water catchment facilities were invited to fulfil the obligation from §95 RPO. The Forschungszentrum Karlsruhe has done all measurements for free. The water workers simply had to wear a personal exposemeter while staying in the elevated tanks and water treatment plants for three months and hang out local exposemeters for two weeks in these places.

Within these project „Measurement of the radon exposure in waterworks in Baden-Württemberg“ comprehensive, methodical and comparable data was collected. The focus is to avoid every needless radiation exposure of employees in water catchment facilities.