

Distribution of bomb-produced Cl-36 in the Oderbruch Aquifer, Germany

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The potential use of bomb-produced ^{36}Cl as a dating tool for modern groundwater has been investigated recently [1]. The obtained results provided support for the contention that the variations of ^{36}Cl in groundwaters reflect the input of bomb pulse ^{36}Cl , and hence, that the variations of $^{36}\text{Cl}/\text{Cl}$ in modern groundwaters should reveal groundwater ages and flow systems in a region. However, previously measured groundwater samples did not capture the most diagnostic portion of the ^{36}Cl fallout pulse. For further investigation and development of a dating method using the ^{36}Cl fallout pulse, ^{36}Cl measurements of bomb peak groundwater are necessary. In August 2005 and March 2006, groundwater samples were collected from several piezometers in the Oderbruch Aquifer in northeastern Germany. Distributions of ^{36}Cl , ^3H , tritiogenic ^3He and SiO_2 in the Oderbruch groundwaters will be reported and a groundwater dating method will be discussed.

[1] Y. Tosaki et al. (2005): Application of bomb- ^{36}Cl in dating modern groundwater. 2005 Japan Earth and Planetary Science Joint Meeting, H060-010.