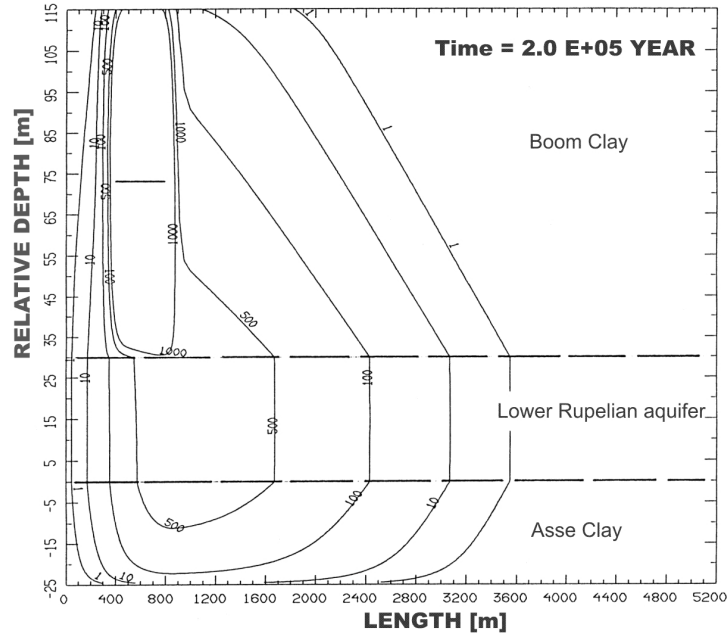


Figure 11.5.4-1: Schematic representation of the 'exploitation drilling' scenario.



The concentrations are expressed in Bq/m³

Figure 11.5.4-2: Calculated concentration distribution of ¹²⁹I after 200 000 years in the case of exploitation drilling.

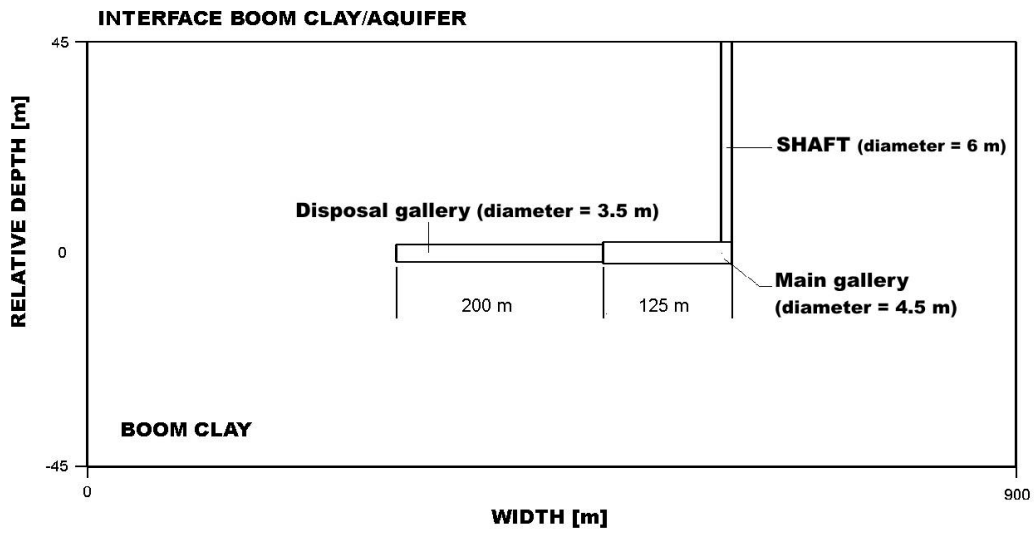


Figure 11.5.4-3: Simplified two-dimensional section through the disposal system.

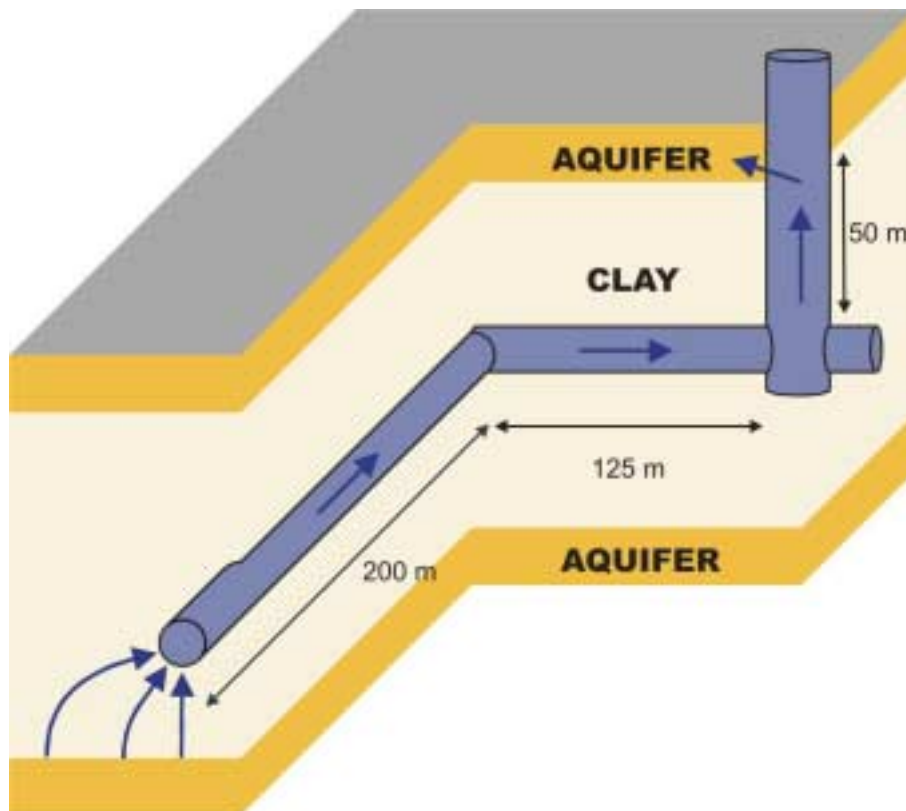
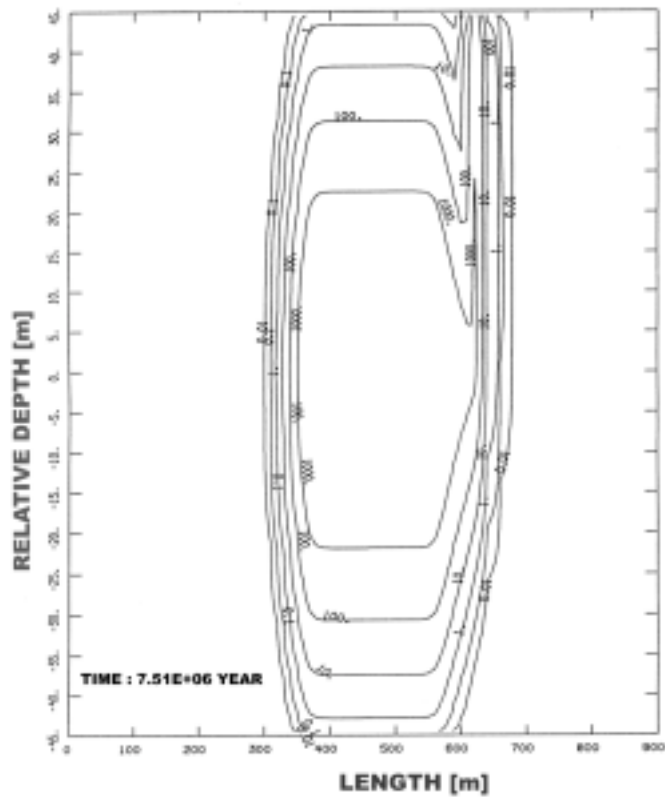


Figure 11.5.4-4: More realistic geometry for the influx of groundwater to the gallery.



The concentrations are expressed in Bq/m³

Figure 11.5.4-5: Concentration distribution in the aquifer due to poor sealing.

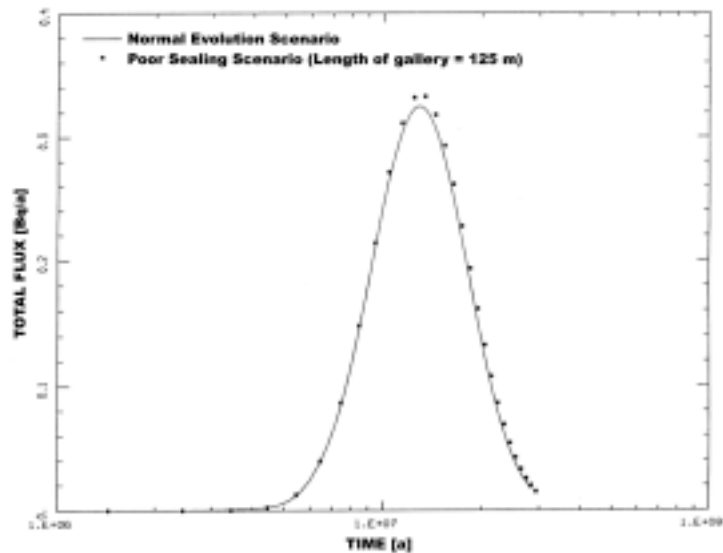


Figure 11.5.4-6: Flux of ²³⁷Np from the Boom Clay into the aquifer due to poor sealing.

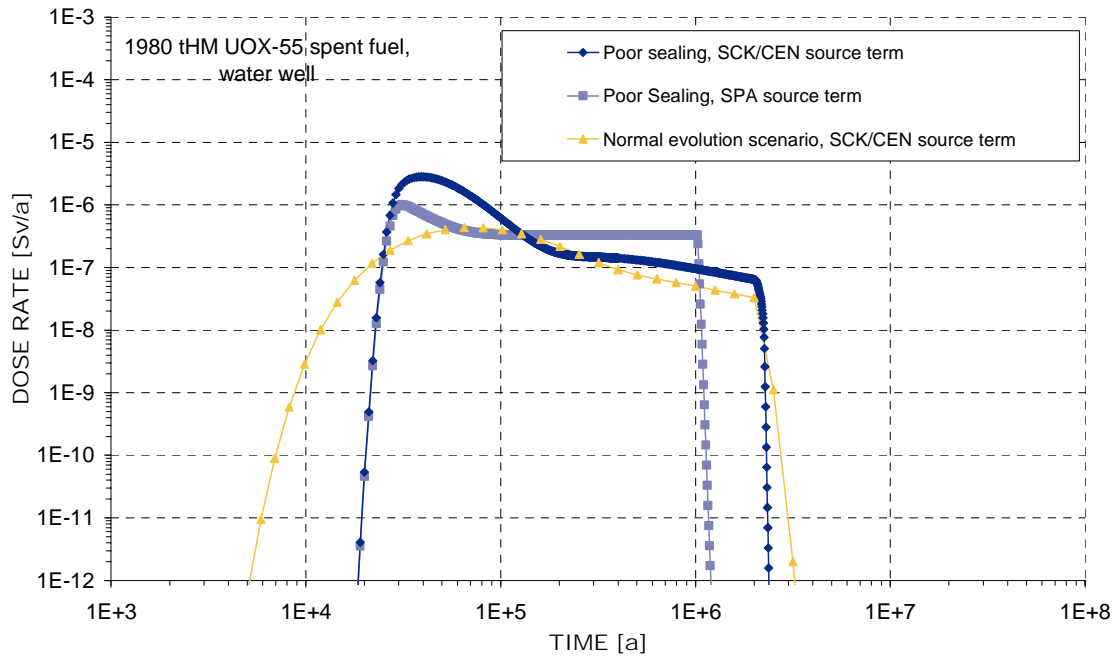


Figure 11.5.4-7: Evolution of the ^{129}I dose rate for 1980 tHM fuel with a burn-up of 55 GWd/tHM in the case of poor sealing.

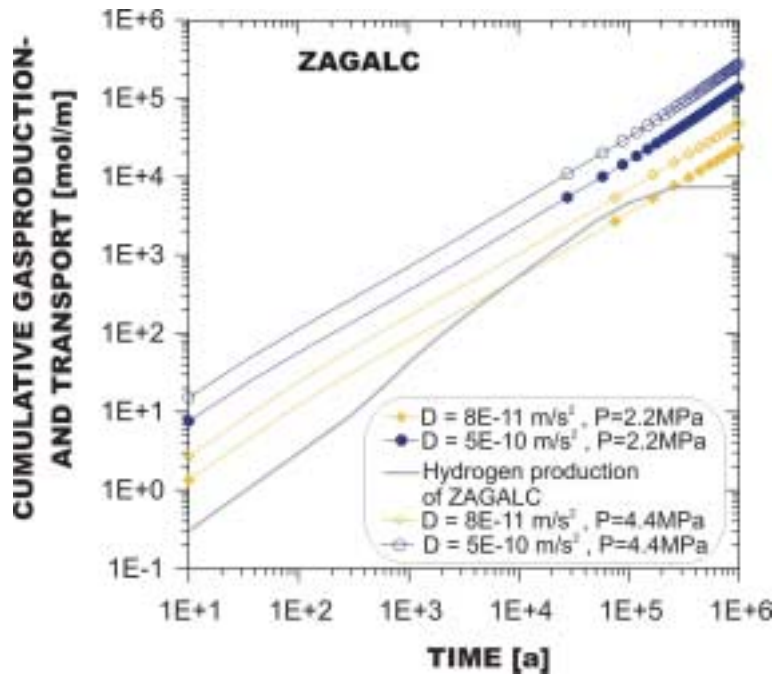


Figure 11.5.4-8: Cumulative hydrogen production due to the disposal of vitrified high-level waste (ZAGALC).

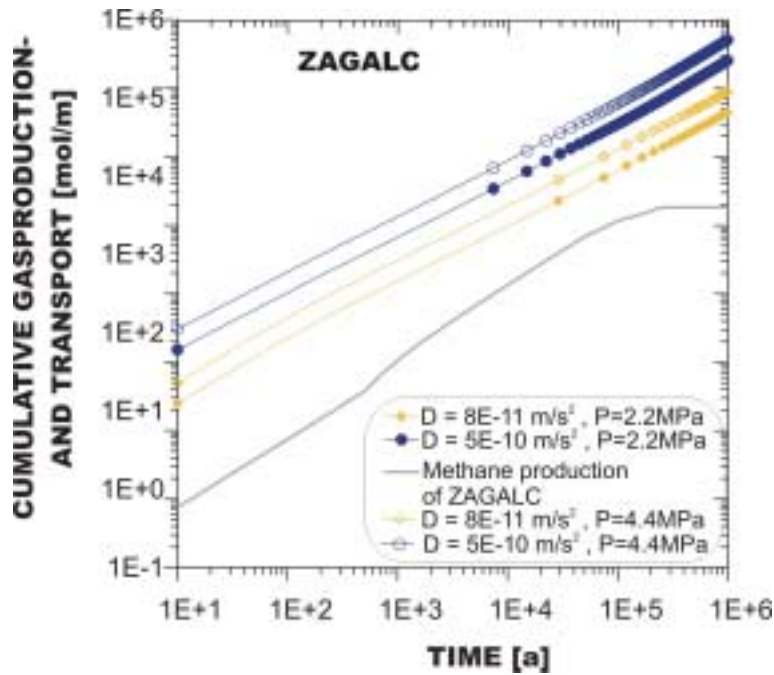


Figure 11.5.4-9: Cumulative methane production due to the disposal of vitrified high-level waste (ZAGALC).

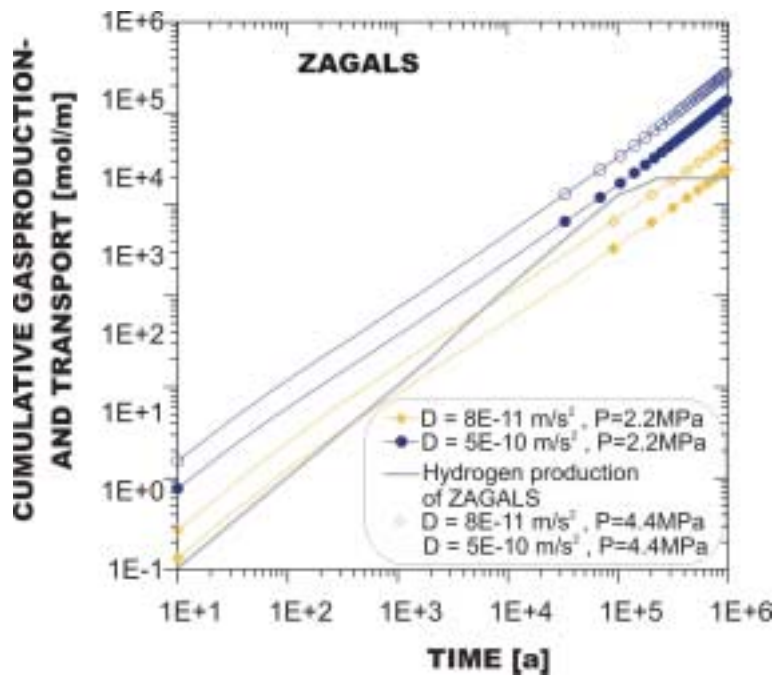


Figure 11.5.4-10: Cumulative hydrogen production due to the disposal of spent fuel assemblies (ZAGALS).

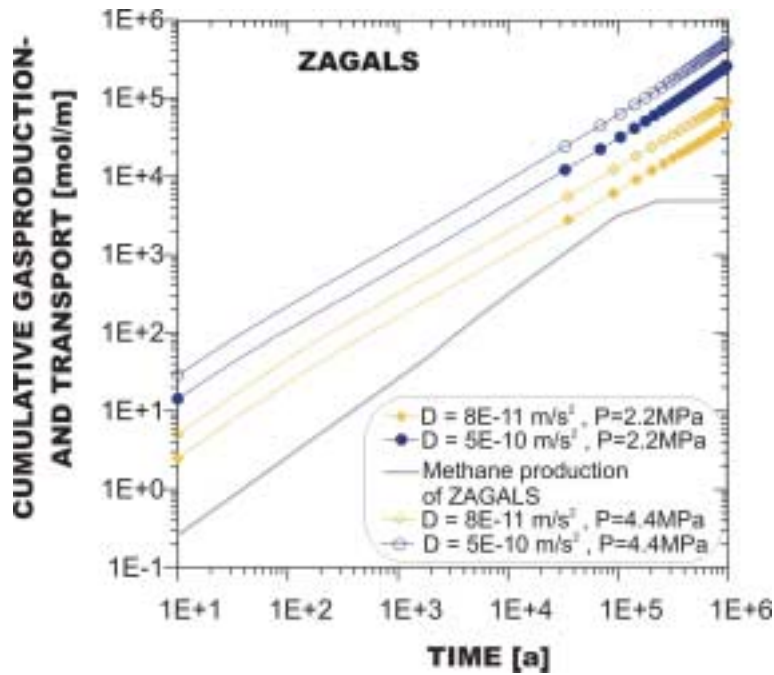


Figure 11.5.4-11: Cumulative methane production due to the disposal of spent fuel assemblies (ZAGALS).

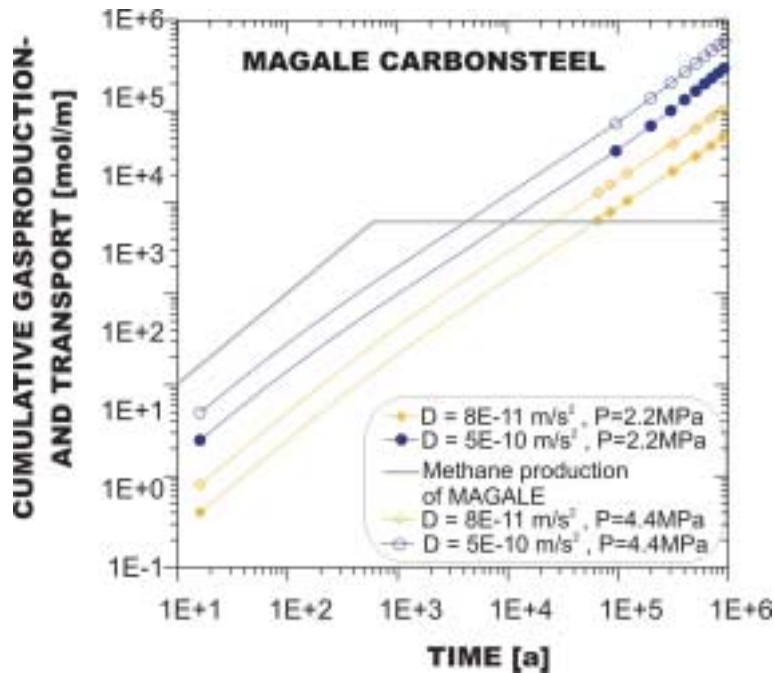


Figure 11.5.4-12: Cumulative methane production for Eurobitumen packed in carbon steel drums (MAGALE).

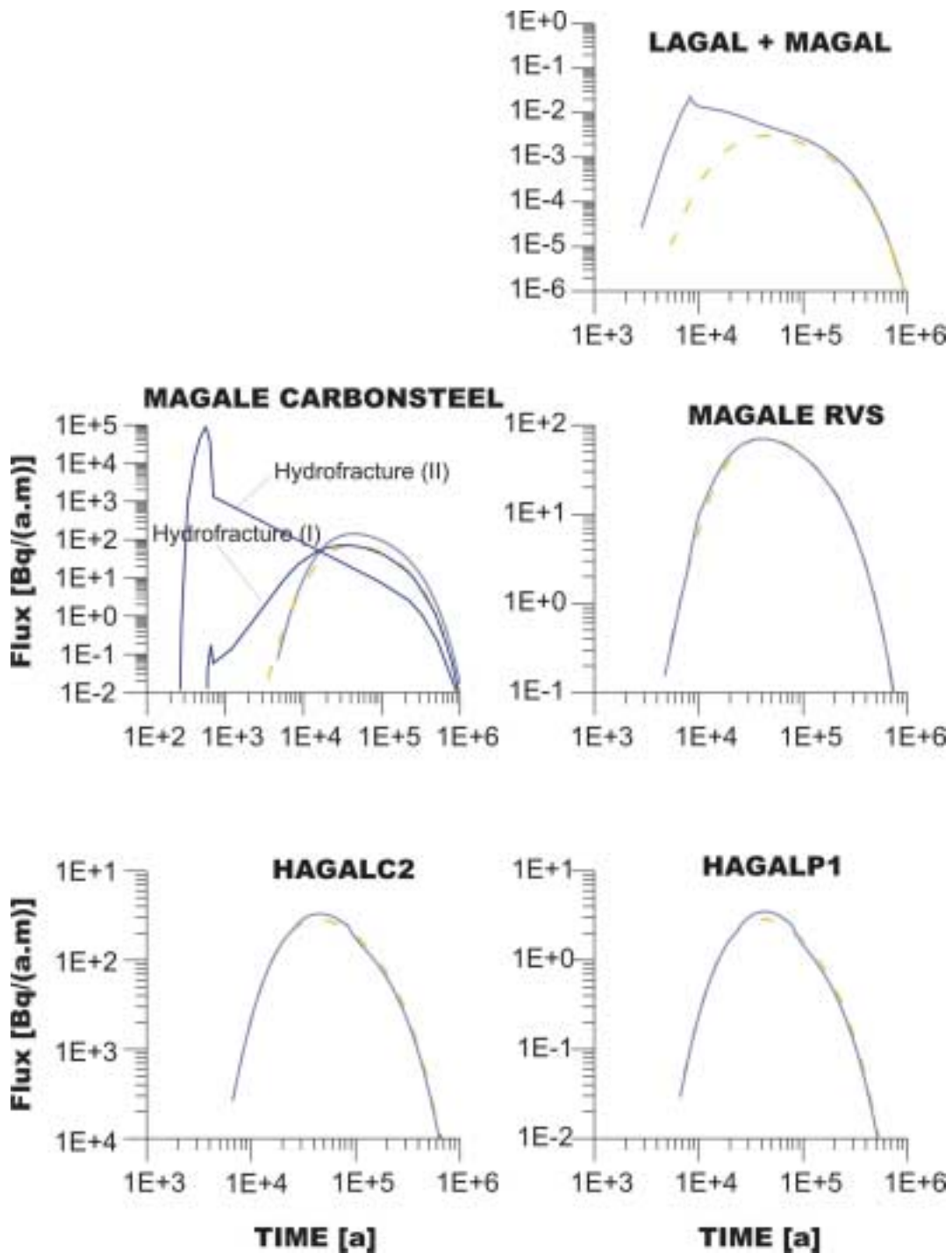


Figure 11.5.4-13: Calculated flux of ^{129}I from the Boom Clay to the Neogene Aquifer for the normal-evolution scenario (broken line), for the water expulsion scenario (unbroken line) and finally in the case of fissure formation, in which the migration-accessible porosity is 0.12 in case I and 0.012 in case II.

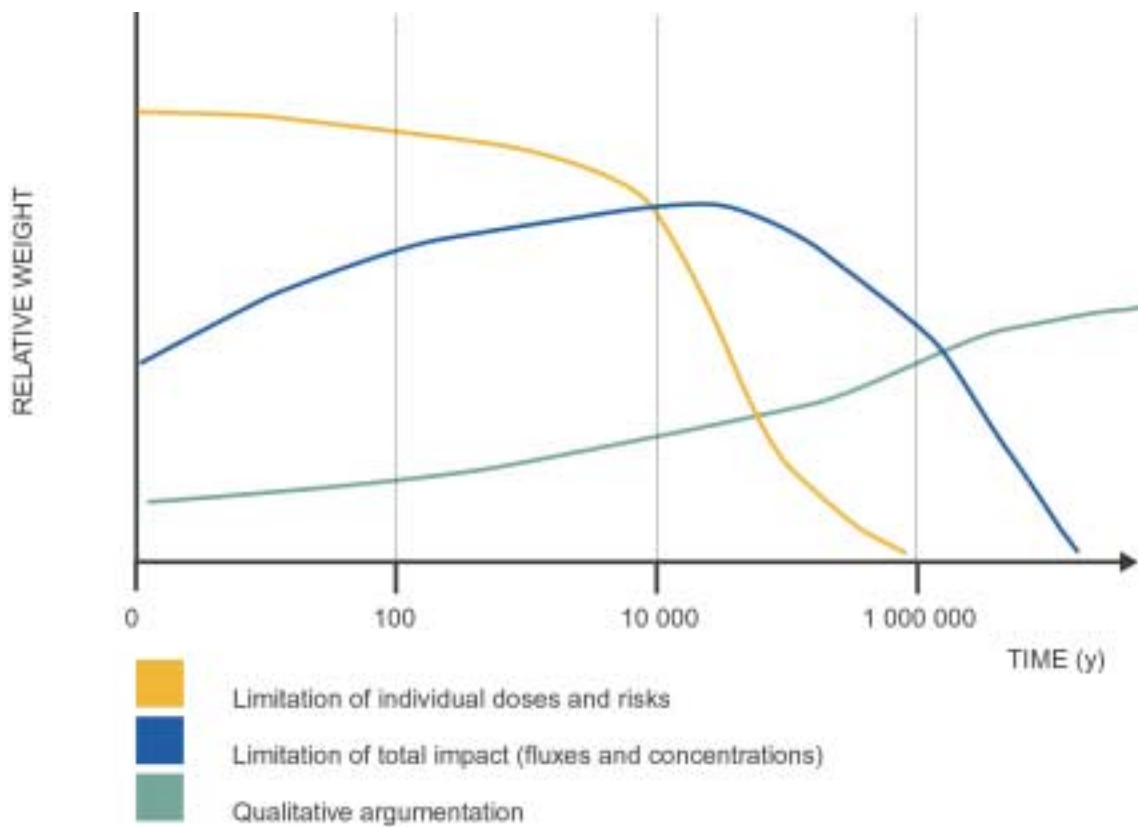


Figure 11.5.5-1: *Relative weight of various safety indicators and methods of reasoning.*

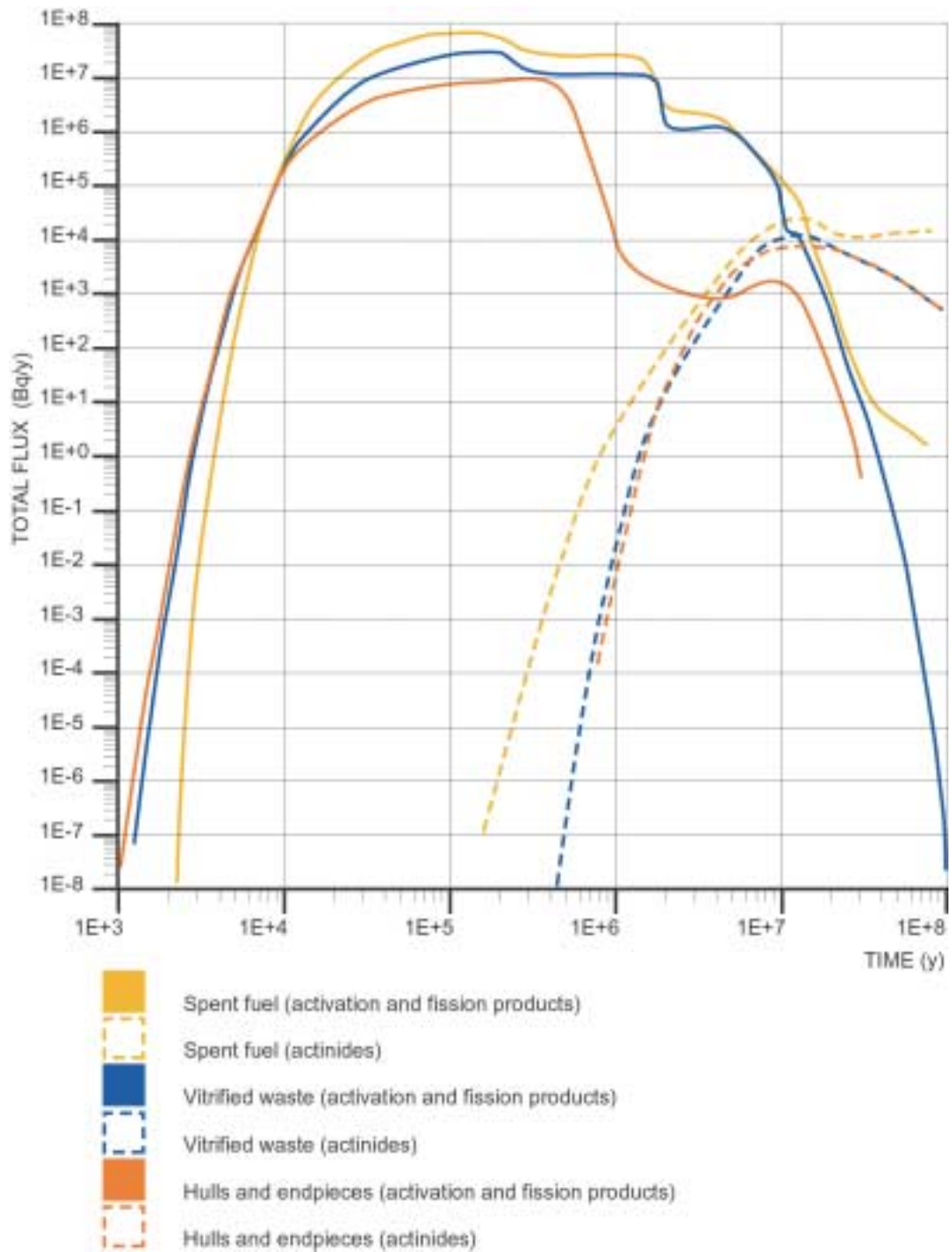


Figure 11.5.5-2: Activity fluxes to aquifers for vitrified high-level waste (ZAGALC), spent fuel (ZAGALS) and hulls and endpieces (HAGALC2).

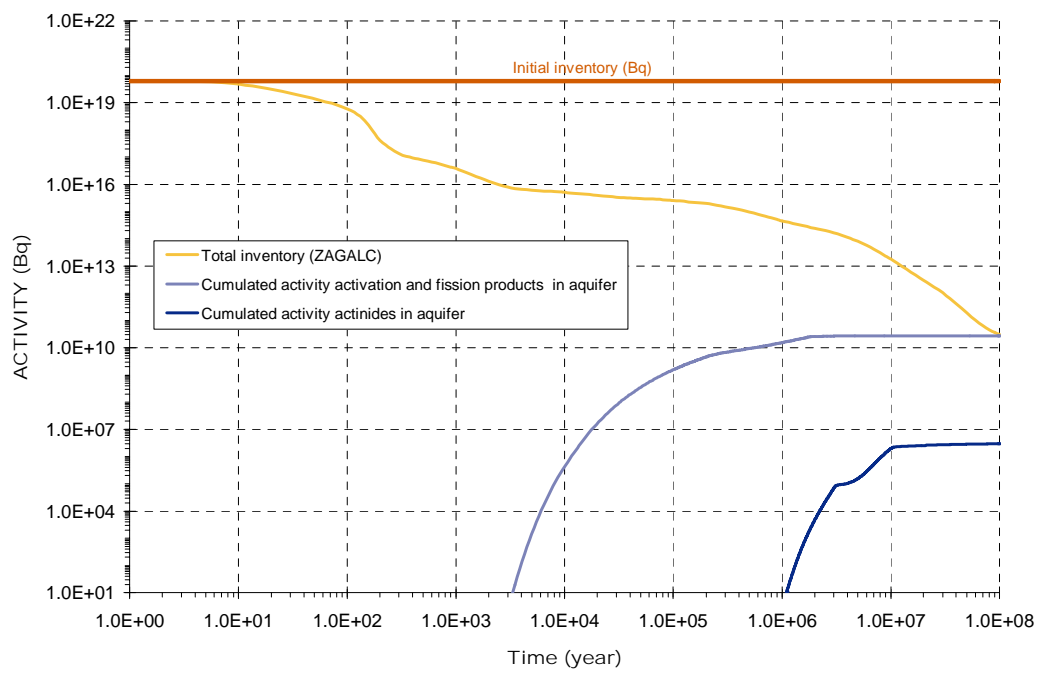


Figure 11.5.5-3: *Cumulative activity that reaches the aquifer. Radioactive decay in the aquifer is disregarded.*

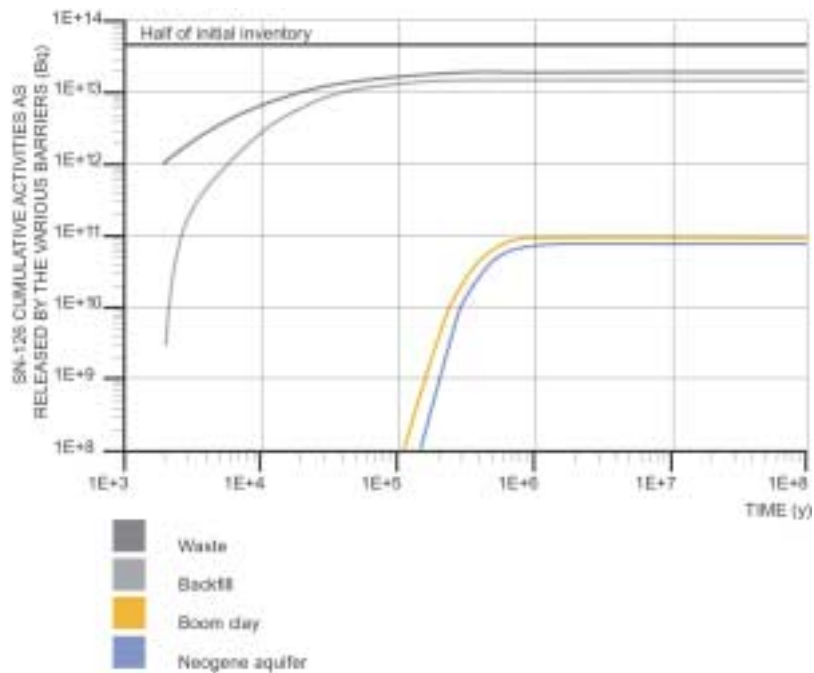


Figure 11.5.5-4: Cumulative quantities of ^{126}Sn released by the different barriers of the disposal system and by its environment for the disposal of 1980 tHM of spent fuel with a burn-up of 55 GWd/tHM.

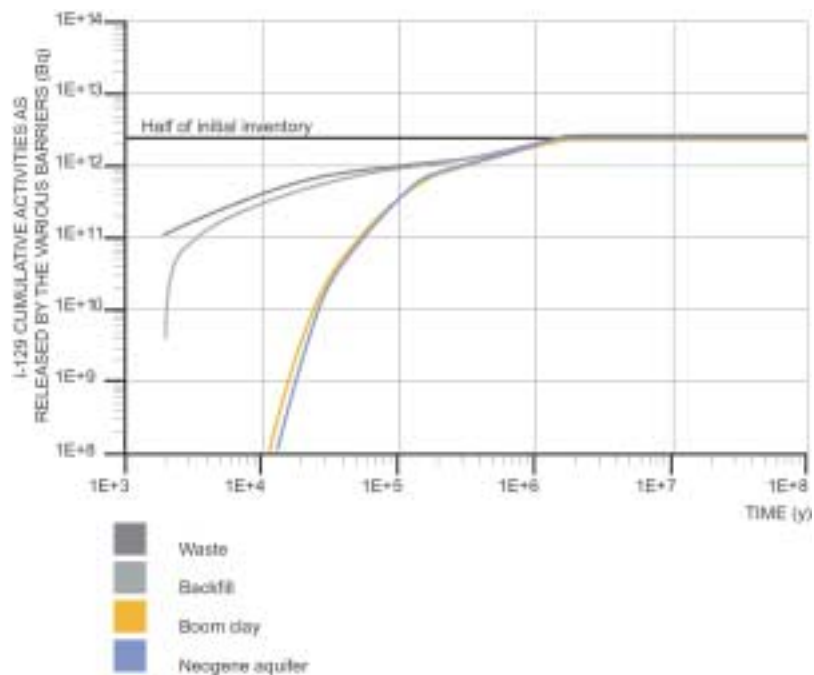


Figure 11.5.5-5: Cumulative quantities of ^{129}I released by the different barriers of the disposal system and by its environment for the disposal of 1980 tHM of spent fuel with a burn-up of 55 GWd/tHM.

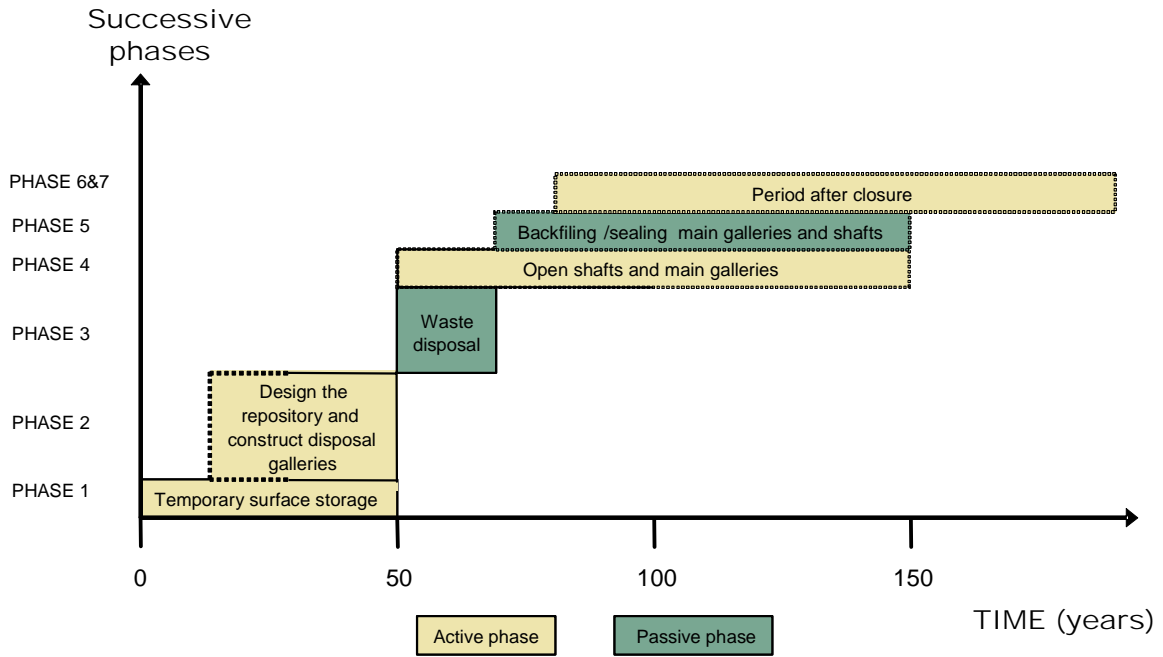


Figure 12-1: The successive phases in the implementation of a disposal system for high-level vitrified waste (ZAGALC) and spent fuel (ZAGALS).

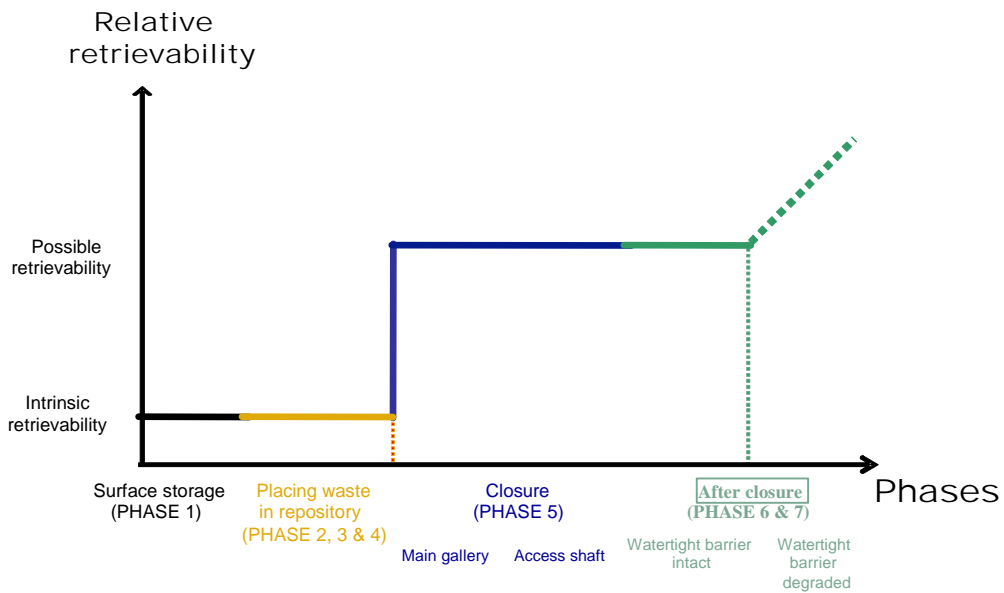


Figure 12-2: Schematic representation of changes in retrievability through the different phases of the repository life.

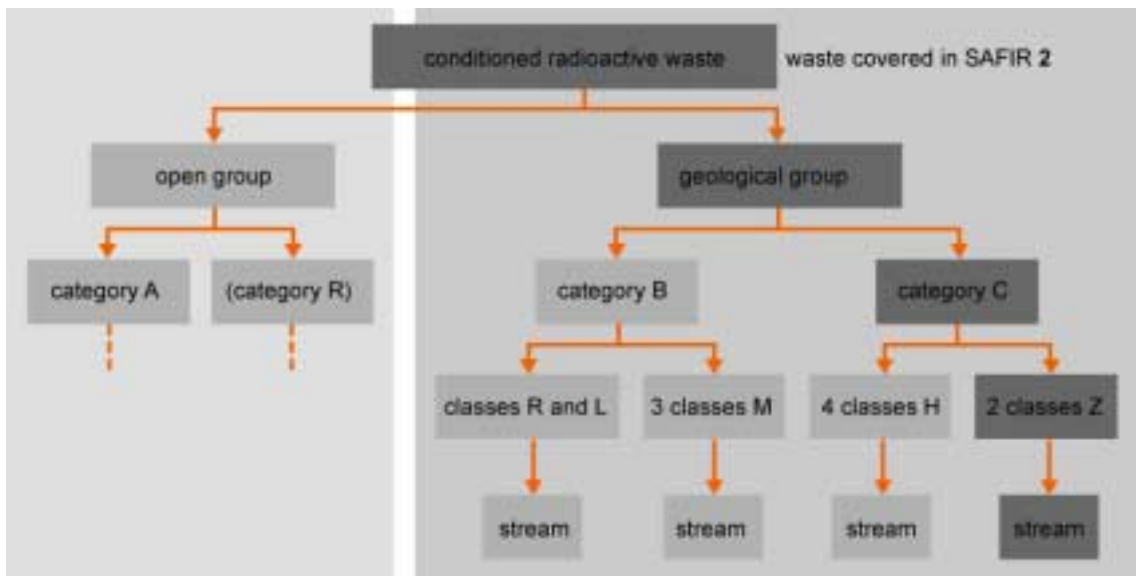


Figure 13-1: *Classification of conditioned radioactive waste in Belgium. While the SAFIR 2 report covers all of the waste in the geological group, it deals more specifically with the long-term management of very high-level vitrified waste and non-reprocessed spent fuel, that is, waste from the Z-classes, these being the most demanding classes in radiological and thermal terms.*

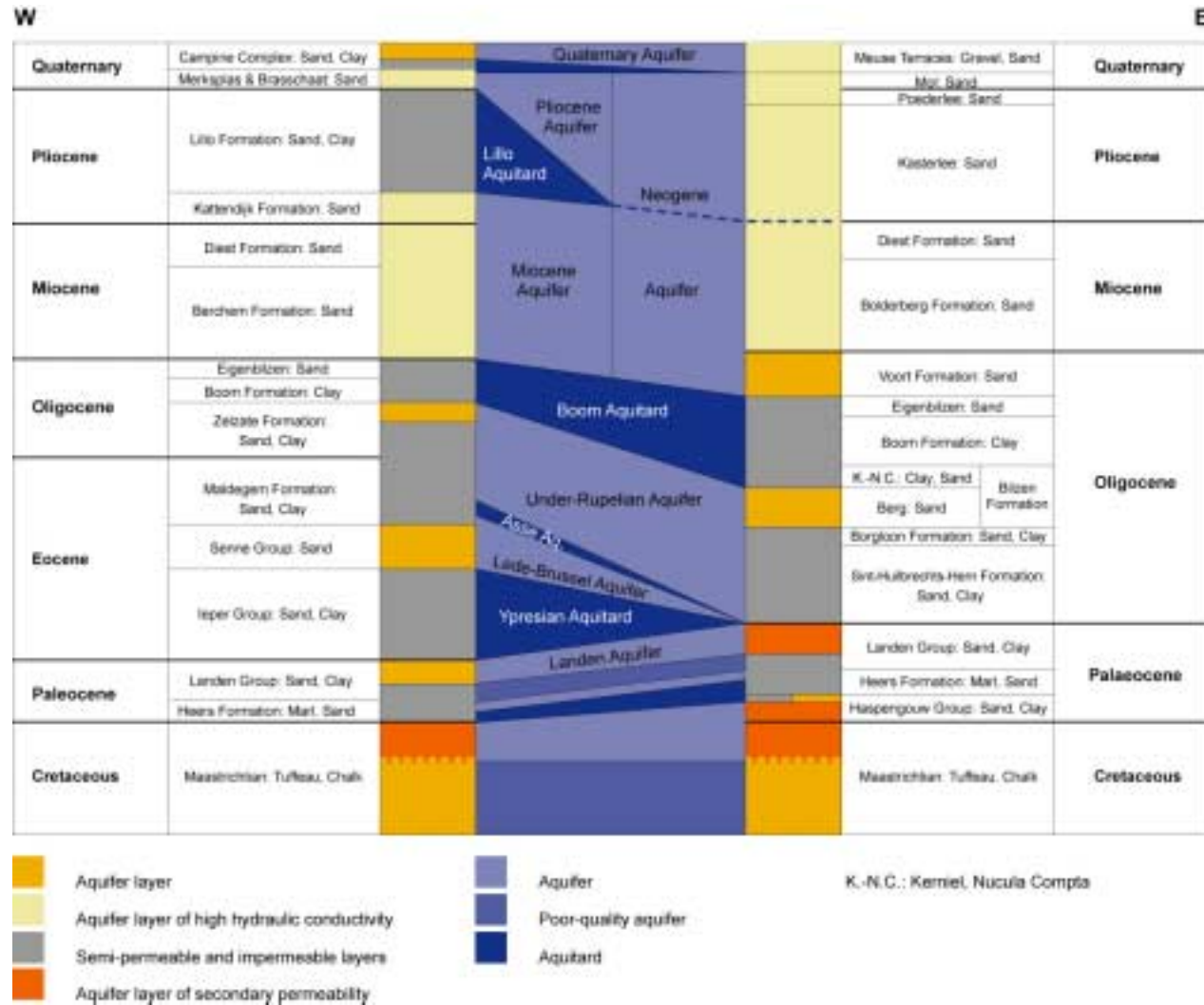


Figure 13-2: Schematic succession (stratigraphy, lithology, and representation for the hydrogeological modelling) of the aquifers and aquitards of the Campine Basin from the Cretaceous to the Quaternary.

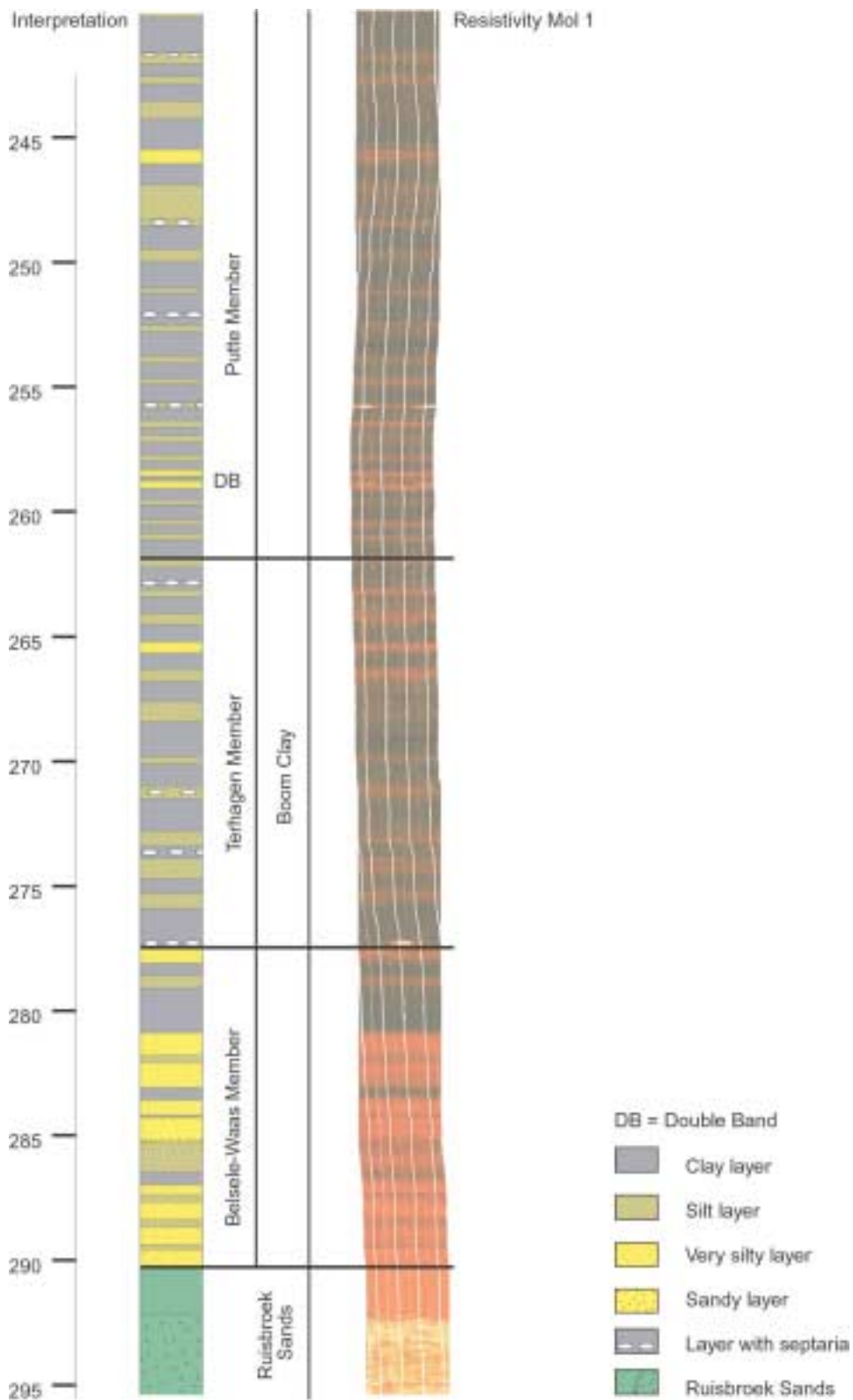


Figure 13-3 Resistivity imaging in the Mol-1 borehole and interpretation based on different wireline loggings and observations on site.

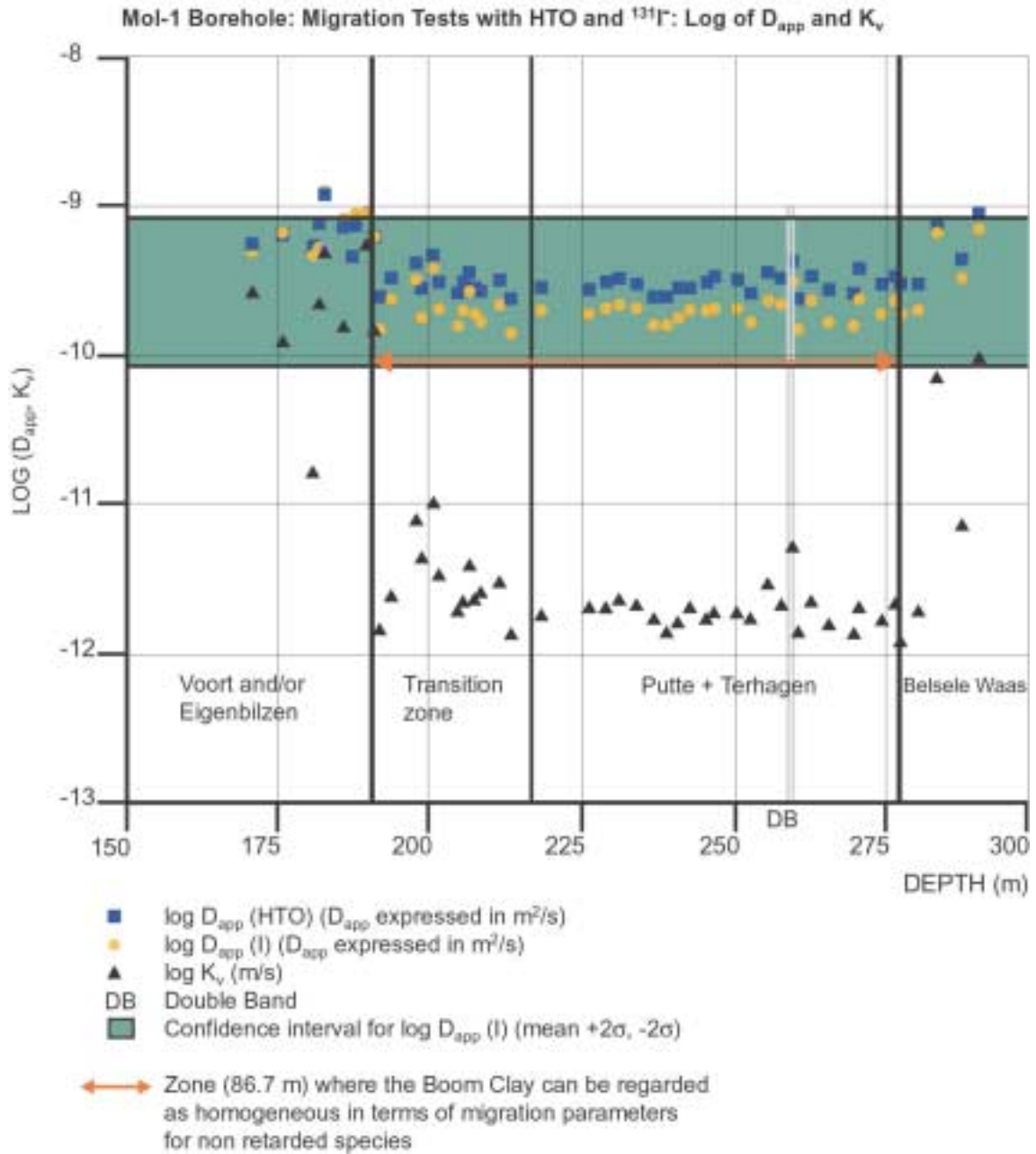


Figure 13-4: Variation in migration parameters for the species HTO and Γ and in hydraulic conductivity over the thickness of the Boom Clay at the site of the Mol-1 borehole.

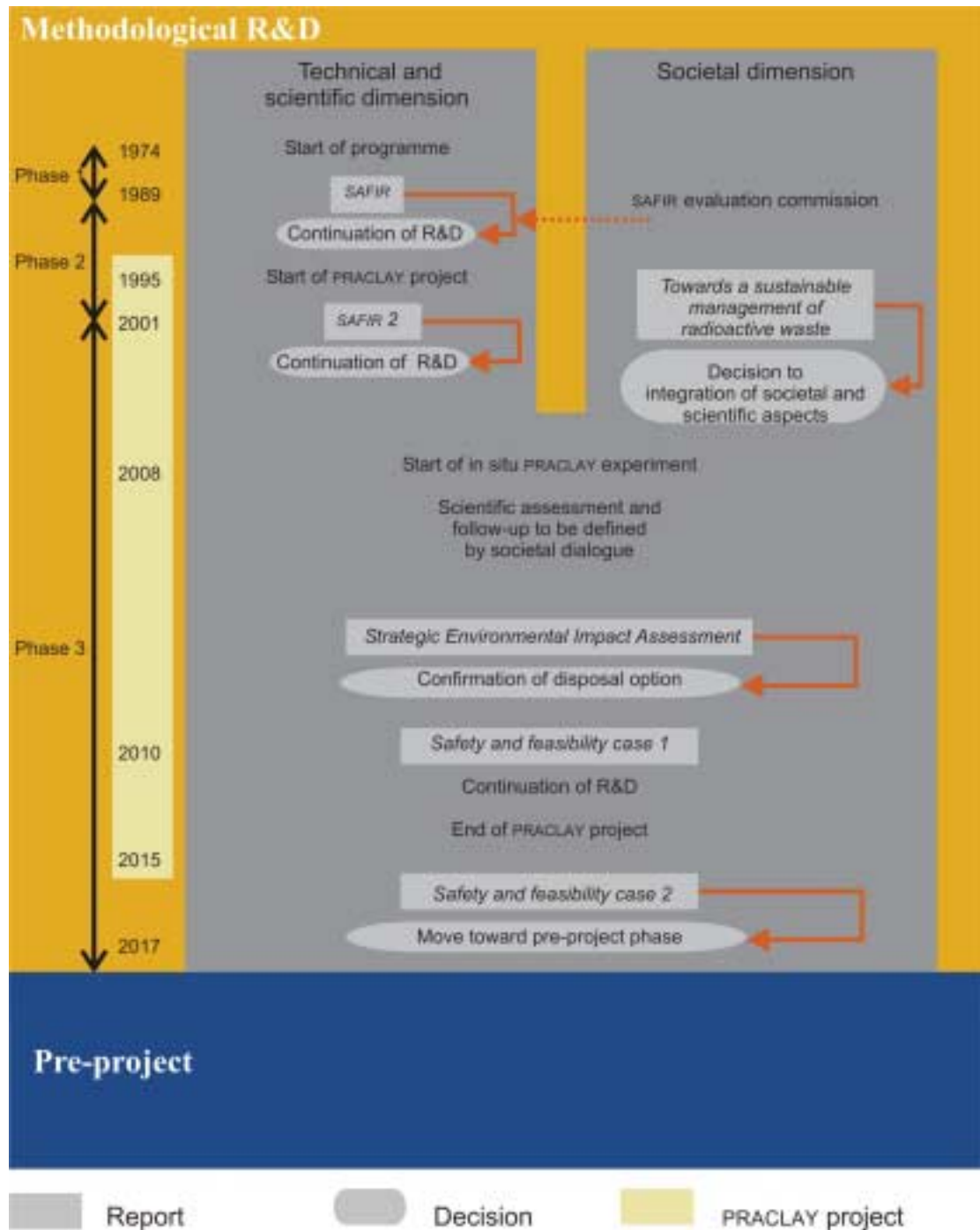


Figure 13-5: Schematic of the various phases of the programme of deep disposal into the Boom Clay as proposed by ONDRAF/NIRAS (without prejudging the decisions that will be taken on this matter).

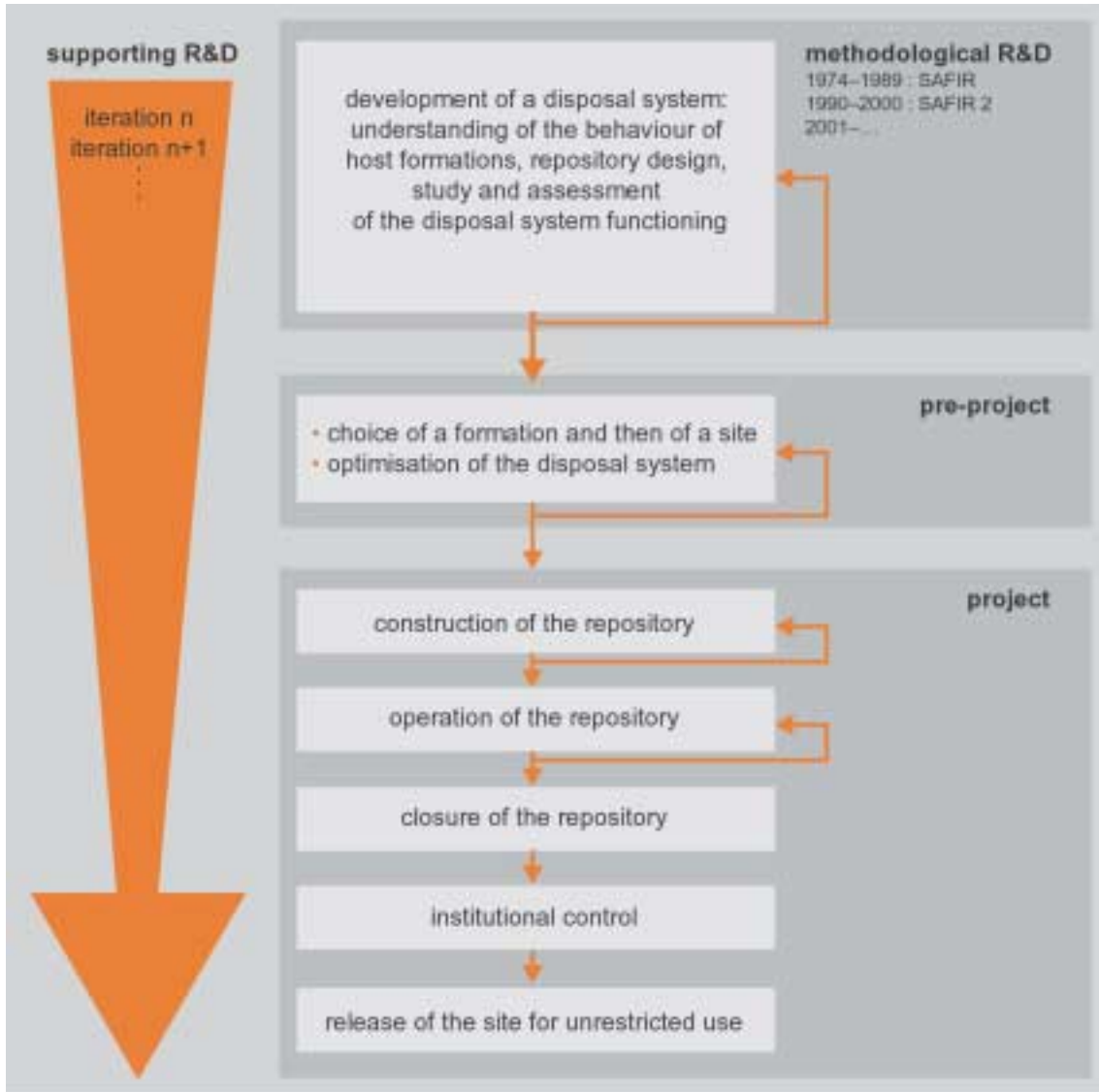


Figure 13-6: The main phases of the stepwise implementation of a disposal system.

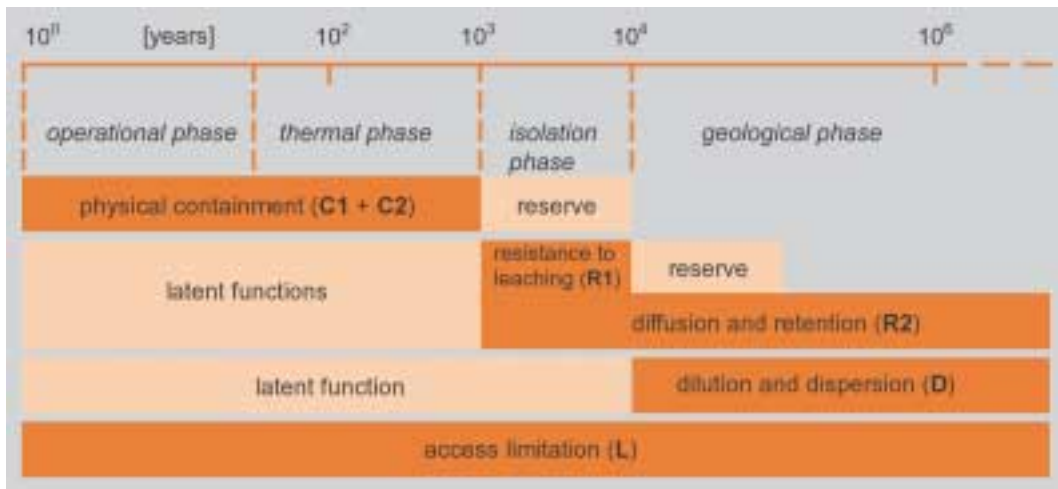


Figure 13-7: Illustration of the long term safety functions and the ‘safety reserves’ for the different periods of a repository

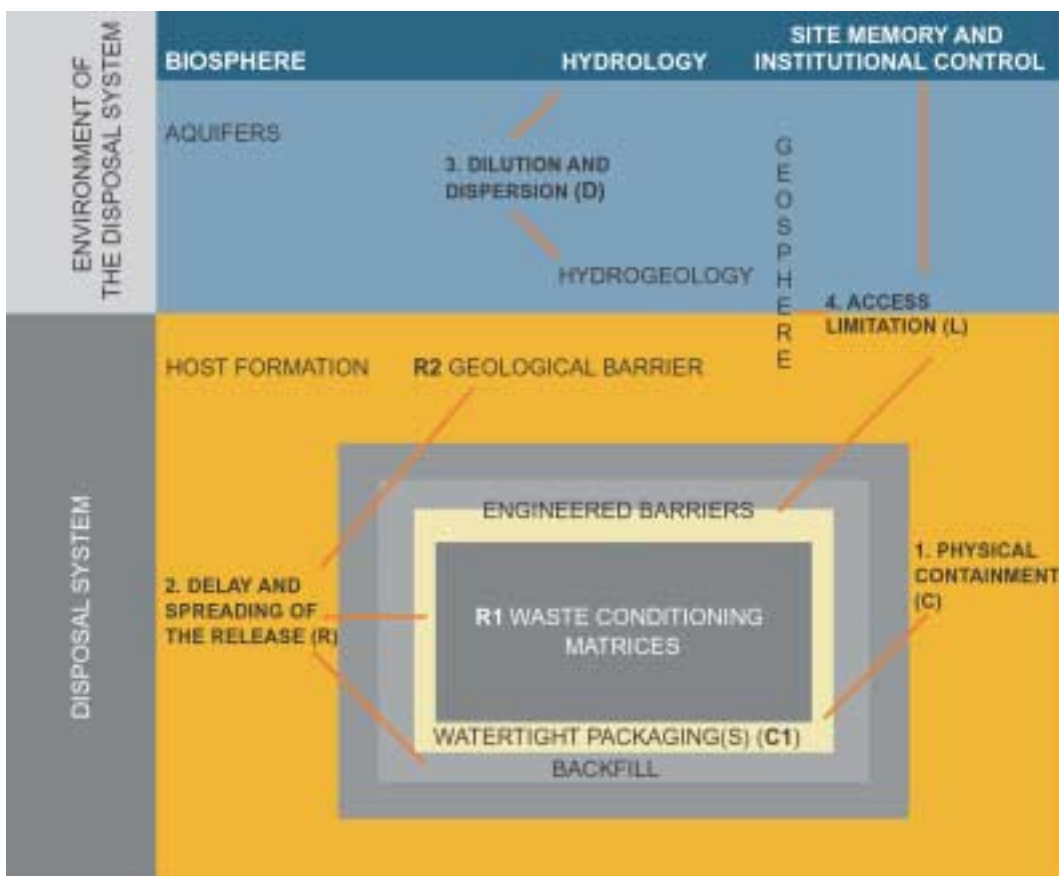


Figure 13-8: The long-term safety functions of the deep disposal system under study that are considered in the long-term safety assessments for the normal-evolution scenario.

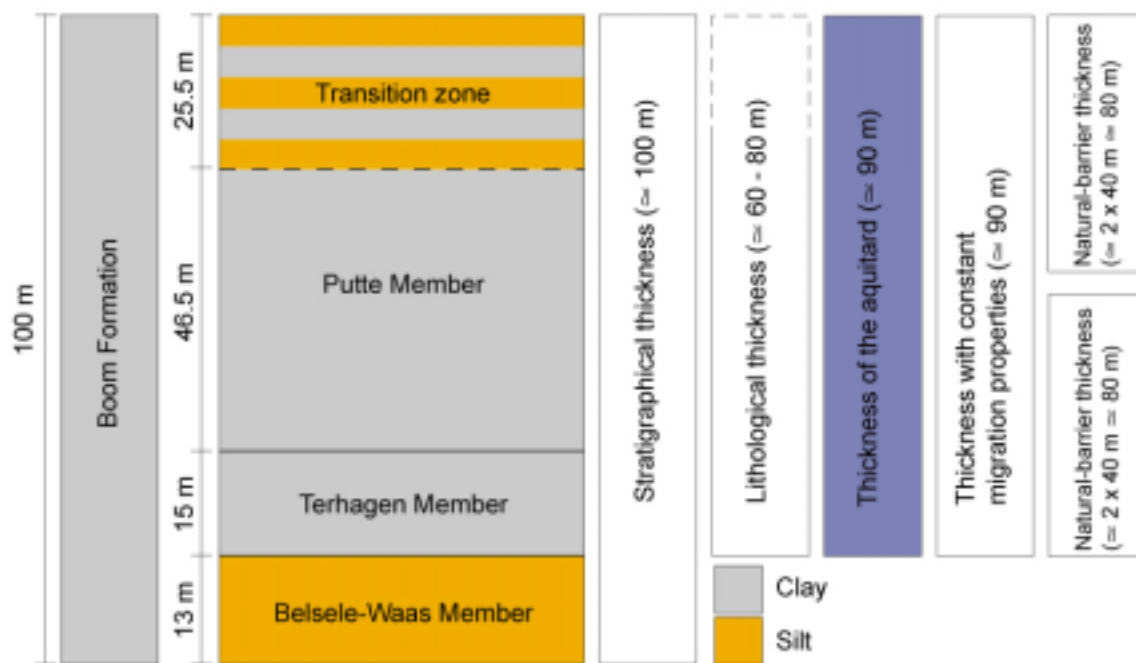
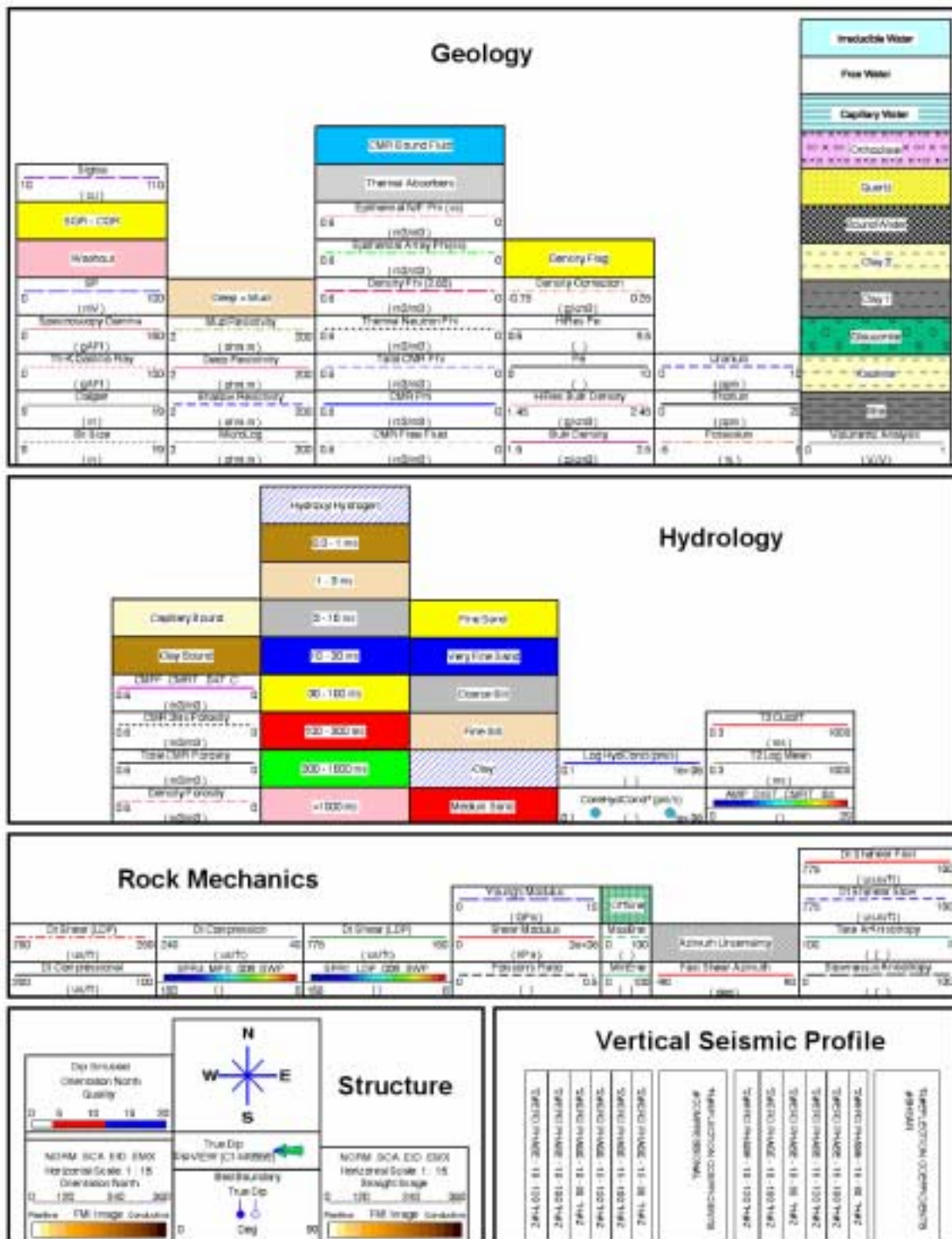


Figure 13-9: The different thicknesses of the Boom Clay layer beneath the Mol-Dessel nuclear zone.



Poster 1: Mol-1. Composite of geophysical measurements. During the final editing of the SAFIR 2 report, the stratigraphy was updated on the basis of a new interpretation and new data. Irregularities in the poster lines are caused by computer file conversions.

