

## (5) Transition out of regulatory control and post-closure institutional control – what can be expected in the long term

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**Abstract**—Radioactive waste that is generally considered internationally to be suitable for disposal near or on the surface is characterised by a radionuclide content of primarily short-lived radionuclides, that is less than a radioactive half-life of around thirty years, and containing limited amounts of longer lived radionuclides. Near surface is generally considered to be within a few tens of metres of the surface and a region within which human intrusion could reasonably be expected to take place. The underlying basis for this thinking is that most of this radioactivity will decay within a period of around three hundred years, during which time it is reasonable to assume that society will maintain some form of control over the disposal facility site, that will be aimed at preventing any inadvertent human intrusion into the waste disposed of at the site. The radiological impact of any intrusion beyond this period will not be high because of the radioactive decay of the radionuclides within the waste, hence the need for control over the site beyond such time becomes less important. Questions that need to be addressed in respect of near surface disposal facilities in terms of this approach are; Should the control in place after closure of an operational facility be the same as that during operation? When can control over a site be removed? What, if any control should remain in place in the longer term, i.e. beyond around three hundred years? The presentation addresses these issues and the basis for deciding on the nature and duration of control following closure of a near surface radioactive waste disposal facility. It will address the reducing level of hazard with time and the considerations that need to be given to the associated reduction in risk and the need for balanced judgements to be made concerning the nature and duration of control, in consultation with all relevant stakeholder at the time such decision are to be made.