Dr R. Cox,
Director, Centre for Radiation, Chemical and Environmental Hazards
Health Protection Agency
Chilton
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29 January 2009

Dear Dr Cox,

Relationship between HPA's Advice on the Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes and the Environment Agencies' Regulatory Guidance on Geological Disposal Facilities for Radioactive Waste

As you know, your staff and ours have been working closely together to ensure consistency between HPA's Advice on the Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes and the environment agencies' regulatory guidance on geological disposal facilities for radioactive waste. Both your document and ours are shortly to be published. The environment agencies' regulatory guidance includes an annex explaining the background to and reasons for the interpretation of HPA's advice chosen by the environment agencies.

We note three particular points, as follows:

1. HPA recommends that a dose constraint of 0.15 mSv/year should apply to exposure to the public from a new disposal facility for solid radioactive waste for the operational and active institutional control phases. The environment agencies' guidance refers both to the Directions and Regulations issued by Government, which specify a source-related dose constraint set at 0.3 mSv/year, and also to HPA's advice that a dose constraint of 0.15 mSv/year should apply. In our regulatory guidance we state that the developer/operator of a disposal facility may wish to take into account HPA's recommendation as well as the direction from the UK Government and Devolved Administrations.

   We recognise that a dose constraint is a prospective and source related restriction on the individual dose from a source, which provides a basic level of protection for the most highly exposed individuals from a source and serves as an upper bound on the dose in optimisation of protection for that source. For public exposure, the dose constraint is an upper bound on the annual doses that members of the public should receive from the planned operation of any controlled source. The dose constraint places a restriction on the annual dose to an individual from a particular source in order to ensure that when aggregated with doses from all sources, excluding natural background and medical procedures, the dose limit is not exceeded.

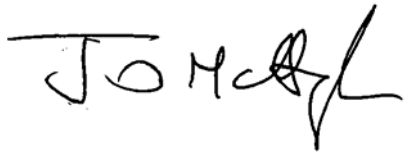
2. Once active institutional control has ceased, and for all events and processes that lead to exposure of individuals (other than human intrusion directly into a waste disposal facility), HPA recommends that a risk constraint of 1 in 100 000 per year is applied at the planning stage of a disposal facility to the exposure of an individual who is representative of the more highly exposed individuals in the population. For

regulatory purposes, the environment agencies have chosen a risk guidance level rather than a risk constraint, to guide the developers and operators of waste disposal facilities towards a level of risk that we consider appropriate for the period after active institutional control. That is why our risk guidance level is set an order of magnitude lower than HPA's risk constraint. It is neither a limit nor a constraint: it provides the environment agencies' broad expectations for the outcome of risk assessments relating to the period after active institutional control.

3. We agree that the principle of optimisation must be applied to all phases of the lifecycle of a disposal facility, including the operational period, any period of active institutional control and the subsequent evolution of the facility in its surroundings. We recognise that the primary aim of the optimisation principle is to minimise the possibility of cancer and heritable effects in people, by keeping doses or risks as low as reasonably achievable, economic and societal factors being taken into account. Our guidance makes the point that the optimisation principle should be applied in an iterative manner throughout the disposal system development process. We consider that the use of our risk guidance level in conjunction with optimisation will provide a suitable level of protection for members of the public.

We should be very grateful, please, if you would indicate whether you are satisfied that the radiological protection guidance contained in the environment agencies' document would, if properly implemented, afford the same level of protection for future generations as that given in the HPA Advice on the Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes.

Yours sincerely,



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