

OECD/NEA

CO-OPERATIVE PROGRAMME ON DECOMMISSIONING

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Comments on NRC Issues Paper on Release of Solid Materials at Licensed Facilities

(Federal Register: June 30 1999, Volume 64, Number 125, Pages 35090-35100)

The OECD Nuclear Energy Agency's Co-operative Programme on Decommissioning is an information exchange programme between major decommissioning projects. Today the Programme has 38 participating projects from 13 countries, thus making it the major forum and spokesman for the implementors of decommissioning. As early as in 1992, the Programme established a task group to study the recycling and reuse of the redundant material arising from the decommissioning of nuclear facilities. It noted, among other things, the lack of consistent, internationally accepted clearance (release) levels as a severe limiting factor, hindering the adoption of the recycling alternative, which can be advantageous both for natural resource conservation and for protecting the environment.

Work has been going on both internationally and in many individual countries on producing guides and recommendations for clearance levels. This work has covered both surface and volumetrically distributed radioactive contamination. The nuclear industry of the United States has hitherto only had specified release levels for surface contamination (Reg. Guide 1.86). The lack of volumetric release criteria in a country, where 25% of the world's nuclear power is produced, has been seen to be a retarding factor for recycling. We therefore consider the publication of the NRC issues paper on volumetric clearance criteria to be a highly welcome initiative.

A very interesting point made in the paper is the suggestion that the dose levels from the use of coal ash from power production in building materials "could be viewed as a precedent or benchmark for possible NRC release levels". The NEA task group has been actively campaigning for consistency in the regulatory treatment of radioactive material, irrespective of whether it arises in a nuclear or non-nuclear industry and therefore heartily supports this approach. In this connection, it would be useful to mention that:

- To a large extent, radiation protection regulators have been focussing on the artificial nuclides arising within the nuclear fuel cycle, with little attention given to the technological concentration of naturally occurring radioactive material (TENORM) in many non-nuclear industries. Coal ash is an example of such material. In the last few years, there has been increasing awareness of TENORM and its regulation is under way.
- The radioactivity levels in TENORM can be the same as in very low level redundant material arising from the decommissioning of nuclear facilities,

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but the quantities are some three orders of magnitude (i.e. thousands of times) larger than the candidate material for recycling from the nuclear industry.

- Hitherto, international organisations such as the International Atomic Energy Agency and the European Commission seem to be proposing a dual standard, i.e. treating radioactivity from the nuclear sphere and the non-nuclear industries on different scales of judgement, having extremely stringent release conditions for the material from the nuclear industries, while allowing up to 100 times higher exposures from the much larger quantities of arisings from non-nuclear industries.

It is against this background that the NRC suggestion is of special interest. The NRC proposal also seems to reflect the views of the US National Academy of Sciences, which, in its evaluation of EPA's guidelines for exposure to TENORM, states that there is no plausible difference in the judgement of risks due to exposure to natural or artificial radioactivity.

In the long term, a consistency in the regulatory treatment of radioactivity, irrespective of the industry it arises in, can be very important for all the industries concerned, for international transport of material and for public acceptance.

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