

Dr Jillian Spindura
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25 October 2004

Dear Dr Jillian Spindura,

**CODEX DRAFT REVISED GUIDELINE LEVELS FOR RADIONUCLIDES IN
FOOD FOR USE IN INTERNATIONAL TRADE**

Thank you for including The Society for Radiological Protection in the distribution of the above Draft Guidelines. The policy which the Council of the Society normally follows in relation to similar Consultation Documents is that it only responds on those matters which have a bearing on the professional activities and status of its members and those for whom they have responsibilities. This is on the basis that the firms and institutions from which our members are drawn are able to comment in their own name on the complete range of issues addressed in any such documents.

However on this occasion The Society for Radiological Protection wishes to provide the following comments in response to your consultation letter.

1. The proposed levels arrived at by the CODEX Committee appear to have been derived using a series of conservative assumptions which together have produced hyper-cautious results. This situation is not uncommon in radiation protection, but the results of such an exercise can only be used as a coarse screen. Relaxations have to be allowed for situations in which more appropriate assessments have been done. The implication of the proposals is that whilst different levels may apply internally to countries, there would effectively be a ban on international trading. This seems quite illogical and out of line with radiological protection practice; specific assessments should be allowed. The definition of "guideline levels" needs attention to allow countries to demonstrate that exceeding a guideline level should not automatically lead to a ban.
2. We should also point out that the revised ICRP proposals for 2005 contain recommended levels for exclusion of low levels of radioactivity from further consideration. The level proposed for artificial alpha emitters is 10 Bq kg^{-1} . This applies to all media including foodstuffs. Thus CODEX appear to be out of line with the primary international radiological protection authority. They need to go back and consult with ICRP over this discrepancy; it does radiological protection no credit.
3. We have some more detailed comments in the order of para 10 of the consultation letter of August 2004. Comments are limited to the derivation and technical application of the guideline levels though clearly there are trade implications and economic impacts which are more properly dealt with by others.

- (a) It seems quite unreasonable to apply post-accident guidelines to the case of continuing international trade. The calculations assume that 55kg (0.1 X 550kg) of food eaten per year by an adult, or 20kg eaten by an infant, is contaminated to the full extent of the guideline level. After an accident, multiple foods may be contaminated. This is unlikely to be the case for continuing international trade, and the calculations do not adequately reflect this. The 0.1 is very conservative. It assumes all imported food is contaminated. One might argue that perhaps one staple food type might be traded from a particular contaminated source if it were unavailable locally. This could reduce the 0.1 by a significant factor. It is likely that much of the imported 0.1 would be miscellaneous non-staples. This would make the chance of all the 0.1 being contaminated even less. What is needed is a way of putting this into a quantitative argument. Are there experts on FAO statistics who might be able to take this further?
- (b) Page 202 of the document (in the middle) admits that for many nuclides, particularly ²³⁹Pu, the dose assessment is especially conservative, because of assumptions made about doses to infants. (Yet for some reason they have given the actinide category an extra factor of 10 on top.) A more appropriate dose calculation is needed for the infants (can the NRPB do this?). Having done this and looked at the data, an alternative tack might be to argue for a separate category of baby food. Whilst this would hold some mileage in allowing increases in the adult actinide limit, other adult values might not change.
- (c) The additional safety factor of 10 for actinides does not seem justifiable, particularly if one addresses the point about infant doses above. Certainly one needs to probe the reasons for this additional safety margin.
- (d) In the interests of having rounded values which might look very attractive, numbers have been reduced downwards, often by a significant fraction. As such the values could be said to be unscientific or unrealistic. Should the levels go to 1 sig fig, as did CFILs?
- (e) All countries would need guidance on how the levels are to be applied. For example, if the doses are calculated over a year, are the concentrations annual averages? What sampling methodology is to be used to show compliance? Could the UK combine Irish Sea shellfish which on average (weighted by tonnages landed) might get within the limits?

4. Lastly, it should be said that a ban on trade of UK food, including fish/shellfish on the Cumbrian coast, and fish from the Severn Estuary, due to the current low levels of artificial radioactivity content, is not justifiable. This is demonstrated by the data for doses in the RIFE reports which show that doses from food, including that eaten by the high rate shellfish consumers, are well within ICRP limits. This also applies for purposes of the proposed 2005 revised ICRP in the case of the appropriate constraints. In 2003 the dose to high-rate consumers due to Sellafield was 0.21 mSv. This demonstrates the degree of overcaution in the CODEX proposals.

Please do not hesitate to contact me if any clarification is needed or if there is any other matter on which we can be of assistance.

Yours sincerely,

Pauline Powell
Honorary Secretary