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DRAFT MEMO, TOTTER TO BLOCH, CONCERNING ESTABLISHMENT OF INTERIM  
GROUND CONTAMINATION VALUES FOR ENVIRONMENTAL PLUTONIUM.

I attended the meeting of the Nevada Plutonium Committee, in which Chet sought advise on establishment of the subject interim values. The committee response is factually reported in the draft. As to the suggested approach, I have the following comments:

1. An interim guide is, a number or numbers one uses until something better is available. We need the guide now. The suggested approach, i.e., "approach the DOD," "evaluate existing information," "explore areas of required future research," seems to drop the notion of interim guide in order to go for "definitive guides or standards." I don't opt against such an effort, rather suggest that interim guides should be based on what is known now.
2. Cooperation with the DOD has been tried in order to get usable data (from field experiments such as plutonium scattering in Nevada), but such additional effort is not needed to get early interim numbers for AEC use. AEC should provide the leadership and set the precedence.
3. In my view, interim guides of two types are needed:
  - a. For cleanup of recent accidents, i.e., freshly deposited Pu. The numbers would be in units of quantity of Pu per unit area and actual values would probably be in the range of 0.4 to 40  $\mu\text{Ci}$  per square meter for  $^{239}\text{Pu}$  expressed as an average for an area. Choosing the numbers and assigning a proper context is more a matter of conscience than brains.
  - b. For cleanup of old debris like Bikini, Rocky Flats, and NTS, guides should be expressed in terms of average quantity of Pu per gram of soil. Actual values would probably lie in the range from 10 to 1,000 pCi/gm as an average value for zero to one inch depth. Levels of Pu in soil below one inch depth should be considered case by case.

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4. There have been working groups on Pu standards in the past and our files show numerous meetings and deliberations. Despite a noble effort on the part of at least one in Headquarters staff, we have little in the way of criterion for Pu in soil. To get numbers (if they can be got at all) from an interagency group, would probably take a year or more (the FRC PAG for <sup>131</sup>I took that long as I recall). And would it really have the force of an agency like EPA behind it or would they ignore the guide when in their best interest to do so? But, if we were on record with numbers, at least we would have some point to work from. A large AEC/Contractor-based committee would probably fair no better than a interagency committee.
5. In my view interim guides for Pu in soil, could be developed by a small group within DOS, possibly three or four members, reporting directly to you. The key question to be answered by this group would be:

Is there a level of Pu in soil above present world-wide levels that you would be willing to live with along with your family? If so, what level or levels?

The deliberations could proceed from that point.

The spirit of these deliberations would likely be quite different from that in the FRC working group where there were always two factions competing against one another, one shoving the number up the other down. Thus, the number would finally rest at or near a point where the forces upon it were about equal. The number sometimes ended up where no one tried to put it. Rather than finishing this work with agency staff in complete or near complete accord, these working group people ended off at a point of maximum antagonism. I sometimes felt that the greatest health risk from <sup>131</sup>I was to those who were trying to set the guide. What I have suggested is different, but it could hardly be worse than in the past. The approach relies on integrity and conscience rather than on balancing forces of personality and persuasiveness.

Original signed by  
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