LETTERS TO THE EDITOR


Dear Editor:

We read with interest the report published in the Journal of Environmental Quality by M. Iggy Litaor (Litaor, 1995) dealing with actinide contamination around the Rocky Flats Plant (RFP). This article, however, presents some of our findings in a confusing and distorted manner. There are many statements in this report with which we would take issue but shall confine our comments to Litaor’s misuse of our data.

While we did report our Pu and Am soil measurements in units of activity concentration, dpm g⁻¹, as well as cumulative activity deposited, mCi km⁻², we stated clearly that concentration units are not useful for our study, and are difficult to compare without specifying depth of sampling and sample pretreatment (Krey and Hardy, 1970). Nevertheless, 25 years later, Litaor presents our Pu deposition contours, which he converted by an unspecified method to concentration units that are different from our published values, in his Fig. 1. In the same figure, he also plotted the deposition contours drawn by RFP personnel using other data sources, in concentration units (Seed et al., 1971), and emphasized the disparity between the two contour sets. The two data sets are not comparable in concentration units because our samples were taken from the surface to 20-cm depth and the Seed et al. samples were taken from the surface to 1-cm depth.

Converting our data and displaying our contours in this way is a misuse of published scientific information. Our objective was to sample the total amount of Pu and Am that had been wind suspended from the leaking barrel storage area and deposited downwind. We showed that there was measurable Pu penetration below the soil surface and extending beyond 10 cm, and chose a 20-cm depth to ensure sampling the total Pu deposit.

Litaor, on the other hand, limited his soil sampling to the surface 0.64 cm! This would preclude vegetated areas with a substantial root mat and hence a sample that would represent the integrated deposit. Therefore, it could be construed that most of his sampling was done in bare, wind-eroded areas. If indeed Litaor's sole purpose was to relate Pu and Am concentrations in surface soil to human exposure and subsequent risk assessment at the time of sampling, that rationale might not be in dispute. To compare his study, however, with ours for a different purpose, is simply wrong. Litaor does not reference the relatively fewer data points. Litaor seems to lack consistent logic in trying to discredit our findings on these grounds.

Had Litaor seen fit to discuss his objectives and data with us before publication, we believe we could have understood the important differences between his studies in the environs of the Rocky Flats Plant.

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References


