

An Updated Evaluation of Data from the 1980 Statistical Analysis of Plutonium in U.S. Autopsy Tissue

Dan C. Mecham¹, Joseph J. Shonka², Richard R. Brey¹, Anthony C. James³

¹*Idaho State University, Department of Physics/Health Physics, Pocatello, ID;* ²*Shonka Research Associates, Inc;* ³*United States Transuranium & Uranium Registries, College of Pharmacy, Washington State University, Richland, WA*

In a 1980 paper in Health Physics, T. Fox et al. analyzed the results from tissues of over 900 individuals from various regions in the United States. The objective was to determine the level of ²³⁹Pu in these tissues due to global fall-out from weapons testing. A comparison was made between 7 regions, including non-worker residents in the vicinity of Los Alamos National Laboratory (LANL). It was concluded that "...no geographic difference in any of the tissue concentrations of plutonium was observed amongst the regions." This study discusses a re-evaluation of the data from the Fox study. A regrouping of the residents living near LANL into pre and post 1960 sample groups, a reassessment of excluded outliers and an evaluation of liver to bone ratios of plutonium is evaluated to examine the hypothesis: Higher concentrations of ²³⁹Pu are present in residents living near LANL in the 1948-1960 time frame in comparison to those in the post-1960 time frame and residents living in the 7 other regions.

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