



Shirt Pocket Dosimeter

TOXIC in TONAWANDA

Philip F. Sweet

City of Tonawanda Landfill Forum

City of Tonawanda High School

Thursday Night

February 8th, 2007

7 PM School Auditorium

Dear Phil,

The dosimeter appears to be calibrated for the "Standard Man" - namely, 20-to-30 years of age, Caucasian, in good health, basically the soldier. For example, a dose of 0.3 to 0.5 rad can cause leukemia in the unborn. The lethal dose begins at about 10 rad for the fetus.

Death of 50% within 60 days of exposure for adult males is caused at around 540 rads (with deaths between 150 and 650). For deaths of 50% within one year for the general public (all ages and states of health) the dose is about 350 rad. At 1000 rad, most of the ordinary people would be dead Rosalie

Dr. Rosalie Bertell Ph.D., GNSH- February 2007

Description/

Abstract At the request of the US Department of Energy (DOE), a team from Oak Ridge National Laboratory conducted a radiological survey at the Town of Tonawanda Landfill, Tonawanda, New York. The survey was performed in September 1991. The purpose of the survey was to determine if radioactive materials from work performed under government contract at the Linde Air Products Division of Union Carbide Corporation, Tonawanda, New York, had been deposited in the landfill. The survey included a surface gamma scan and the collection of soil samples for radionuclide analyses. Results of the survey suggest that material originating at the Linde plant may have been deposited in the landfill. Soil samples S54 and B12 contained technologically enhanced levels of [²³⁸U] not unlike the product formerly produced by the Linde plant. In contrast, samples B4A, B5A and B7B, containing elevated concentrations of [²²⁶Ra] and [²³⁰Th] with much lower concentrations of [²³⁸U], were similar to the residue or byproduct of the refinery operation conducted at the Linde plant. In 24 instances, soil samples from the Town of Tonawanda Landfill exceeded DOE guideline values for [²³⁸U], [²²⁶Ra], and/or [²³⁰Th] in surface or subsurface soil. Nine of these samples contained radionuclide concentrations more than 30 times the guideline value.

Country of Publication United States