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OFFICE MEMORANDUM

TO : Tom Keenan, Group Leader, H-7, MS 518 DATE: March 2, 1978
THRU : R. D. Baker, CMB-Division Leader, MS 756
FROM : G. R. Waterbury and Al Zerwekh
SUBJECT : TRANSURANIC WASTE RESEARCH & DEVELOPMENT PROGRAM (A412)
MONTHLY REPORT FOR FEBRUARY 1978
SYMBOL : CMB-1
MAIL STOP: 740

ANALYTICAL CHEMISTRY

1497
Report

1. Radiolysis Studies: Three additional stainless-steel, 300-cm³, laboratory cylinders have been prepared that contain various contaminated waste matrices to be tested at one atmosphere pressure. One contains utility wipes, another polyethylene, and the third a mixture of cellulose, plastics, and rubbers, each of which is contaminated to 4 x 10⁵ nCi/g. The experimental temperature will be 70°C. Drum No. 415, containing 20.4 kg of rags, paper, plastic, and graphite powder, and contaminated with 13.2 g of radioisotope heat source grade ²³⁸Pu, was sampled for gas composition on its 33rd day in storage. The ambient temperature was 9.5°C, the soil temperature under the cask 5°C, and the temperatures inside and outside the drum were equal at 7.5°C. The gas composition in the drum, in mol per cent, was as follows: H₂, 2.2; CH₄, < 0.1; O₂, 16.8; CO₂, 3.9; CO, 1.1; N₂, 75. This is moderate, but definite, gas generation. Outside the drum, the gas mixture in the cask was essentially air, however, it contained 0.6% CO. The gaseous contents of this drum will be analyzed again 90 days after closure.

2. Waste Isolation Pilot Project (WIPP): Continuing the experimental program for testing WIPP contaminated wastes

