

# OLD DOMINION UNIVERSITY

Office of Environmental Health and Safety  
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Environmental  
Health

Radiation  
Safety

Industrial  
Hygiene

Laboratory  
Safety

Hazardous  
Waste

Pollution  
Prevention

May 9, 1997

U.S. Nuclear Regulatory Commission, Region II  
Division of Nuclear Materials Safety  
101 Marietta St., Suite 2900  
Atlanta, GA 30323

Re: License No. 45-09599-03

*Doctet 100 30-16045*

Attention: Specialist, Division of Nuclear Materials Safety

I wish to report a detector cell that was found to have more than 0.005  $\mu\text{Ci}$  of removable contamination.

The leaking cell contains Nickel-63 foil and is used as an electron capture detector in a Varian 3600 gas chromatograph. The source activity was 7.52 mCi as of May 8, 1997; the cell serial number is A6479. The removable contamination was found on the column inlet of the detector cell.

Leak test information and calculations:

Sample gross cpm: 17,544

Background cpm: 24

Sample net cpm: 17,520

LSC efficiency for Ni-63: 24.1%

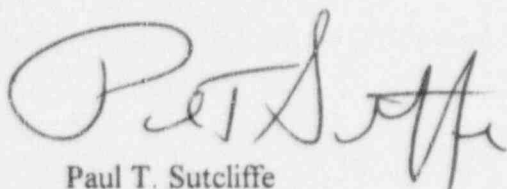
$$\text{Sample activity} = \frac{(17,520 / 0.241)}{2.22 \times 10^6} = 0.033 \mu\text{Ci}$$

The sample was counted with a Packard Tri-Carb 2300TR liquid scintillation counter using a counting window of 0 to 66.9 keV. Minimum detectable activity for the sample was  $1.15 \times 10^{-5} \mu\text{Ci}$ .

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The detector cell was immediately withdrawn from service and decontaminated by the Radiation Safety Office after learning that removable contamination levels exceeded reportable limits. Resurvey of the detector cell revealed no contamination above background levels.

I trust that my description of the situation and the corrective actions taken by my office were both appropriate and satisfactory. Please contact me at (757) 683-4495 if you should have any questions, or if I can be of further assistance.

A handwritten signature in black ink, appearing to read 'Paul T. Sutcliffe', with a stylized, cursive script.

Paul T. Sutcliffe  
Radiation Safety Officer, Old Dominion University  
License No. 45-09599-03

c.c.: Dr. Laura Moen, Chair RSC