

INTERNATIONAL MINERALS & CHEMICAL CORP.
5401 Harrison Street
Skokie, Illinois

405030

July 6, 1954

Halross Instrument Corporation, Ltd.
Winnipeg, Canada

Gentlemen:

On June 16 and 17 I was using your Model 939 Scintillometer in the vicinity of Columbia, Tennessee, and June 18 in an area north of Nashville in Tennessee and Kentucky. These areas are underlain with phosphate limestone and limestone. The instrument was kept on for a period of four hours each of the first two days and there was a gradual constant increase in background count from about normal to twice normal in the four-hour period. The third day the background count doubled in less than two hours. In the first two cases the area was doubled back on so that the doubled background count was occurring in the identical place of origin. The time of day apparently had no effect as the first day the recording was from 2 P. M. to 6 P. M., the second day 11 A. M. to 4 P. M., and the third day 8 A. M. to 10 A. M.

I have never used this instrument for such long periods before but I have never noticed a change in background such as this. I am wondering if the electronic circuit in the instrument is subject to such drifting, if there might be something wrong with the circuit, or if there was possibly an atmospheric change in background. I am writing the Atomic Energy Commission to determine, if possible, whether or not there were any reasonable atmospheric changes which might make such a recording although the times of day do not indicate this.

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The batteries are quite new having been replaced recently and, as far as is known, the instrument has never been jarred.

Any suggestions or ideas that you might have on this would be greatly appreciated.

Very truly yours,

F. R. Hunter
Section Leader
Geology Research

FRH:h

cc: Atomic Energy Commission, Oak Ridge, Tenn.
" " " , Washington, D. C. ✓

Engineers Syndicate, Ltd., Att: Walter Billicki

A. E. C. - Washington, D. C.

Note: I have a "Q" clearance and am wondering if you can shed any light on the above. I have also sent a copy of this letter to Oak Ridge hoping that they might offer some suggestions.

F. R. H.