



FIELD ANALYSIS OF PARTICULATE AIR SAMPLE

Name _____ Date _____

Location of Sample and Reason _____

Sample Run Time time off - _____ Starting Flow Rate _____ (FT³/MIN)

Sampler Serial No. time on - _____ Ending Flow Rate _____ (FT³/MIN)

_____ elapsed - _____ (min) Avg. Flow Rate _____ (FT³/MIN)

Counts per minute above background _____ (cpm) at time _____

For 4 inch sample filter (unfolded) counted with a 2 inch pancake probe

$$\frac{(\text{cpm})}{(\text{ft}^3/\text{min})(\text{min})} (6.4 \times 10^{-10}) = (\text{ }\mu\text{Ci}/\text{cm}^3)$$

(If 2 inch dia. sample counted with 2 inch probe or 4 inch sample folded, use 1.6×10^{-10} instead of 6.4×10^{-10})

Counts per minute above background _____ (cpm) approximately 30 minutes later

(Half-life of radon daughters is approximately 30 minutes)

Comments _____

Action limit: If greater than $1 \times 10^{-8} \mu\text{Ci}/\text{cm}^3$ clear area and contact RSO.

NOTE: Above assumes typical beta-gamma efficiency of 10% for pancake probe, efficiency will vary for various isotopes (see Appendix 5E of the Fermilab Radiological Control Manual.).