**IMUG 2022 Workshop – ATMOS Demo**

**Start with NRC Sample Problem-Point Estimates LNT**

**Save As: ATMOS Demo**

**Change from: Uniform Bin Sampling to: Constant Weather**

**Change release description to model a one-hour release of 1017 Bq of Cs-137 at 10 m elevation from a 40-m wide by 50-m high building with no sensible heat content. (A rule of thumb is to set initial y = 0.23 x building width; initial y = 0.47 x building height.)**

**Release occurs at 10:00 AM on day 240.**

**Surface roughness near the site is 50 cm. (ZSCALE should be set to (50/3)0.2 to account for the effect of surface roughness on vertical dispersion.)**

**Weather at the time of release is as follows:**

**Mixing height is 1000**

**Stability class is F**

**No precipitation**

**Wind speed is 2 m/s**

**What is the value of the ground-level air concentration (Bq-s/m3) at 13.7 km downwind?**

**What is the mean centerline dose (peak dose found on spatial grid) for the entire population at 13.7 km downwind?**

**What is the total, population-weighted, early fatality risk within 16.1 km of the site for all cohorts?**

**What is the total, population-weighted, cancer fatality risk within 16.1 km of the site for all cohorts?**