Dear Committee Member,

An important part of my research activities is in neutrino physics and especially in double-beta decay. The Kimballton site offers a preferred location for this research to be pursued, and I will work as a member of the Kimballton team to help make this a reality.

The features of Kimballton which appeal to me are: proximity, easy access and low radioactivity from Uranium and Thorium decay products.

The research community I am a member of should be represented in DUSEL because double-beta decay studies are the number one recommendation of the recent American Physical Society neutrinophysics study.

The TUNL group, consisting of undergraduate and graduate students under my leadership, is part of the larger Majorana Collaboration. The goal of the Majorana Collaboration is to determine the neutrino mass from the neutrinoless double-beta decay search on ^{76}Ge. The Standard Model of Particle Physics assumes that neutrinos are massless. However the recent neutrino oscillation experiments clearly showed that neutrinos have mass. Only the observation of the neutrinoless double-beta decay can provide an accurate determination of the neutrino mass, assuming that the neutrinos are their own antiparticles.

The TUNL group focuses on double-beta decay to excited states of the daughter nucleus. For this type of experiment the Kimballton mine is ideal.

Sincerely,

Werner Tornow