OAK RIDGE NATIONAL LABORATORY
MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

T. J. Phelps, Ph.D.
Env. Sciences Division
P.O. Box 2008
Oak Ridge, TN 37831-6036
(865) 574-7290

Dear DUSEL Selection Committee, February 20, 2005

I am a microbial ecologist quite experienced in the art and science of deep terrestrial subsurface investigations currently working with the Oak Ridge National Laboratory. I and many peers look forward to the Kimballton site being selected for further investigation as a U.S. Deep Underground Science and Engineering Laboratory (DUSEL). The Kimballton site is unique among candidate sites in that it is in a heterogeneous sedimentary environment, important for geological and microbial ecosystem diversity. Of considerable interest are the repeating sedimentary units providing numerous interfacial boundaries with increasing depth, pressure and temperature. The advantages of being relatively uncompromised with considerable subsurface heterogeneity and proximity to a major university are unsurpassed by other candidate sites.

As an employee of a Federally Funded Research and Development Center (FFRDC) and never supported by the NSF one can judge my interest and investment by service to the NSF community; including being the first DOE rep on the U. S. Science Advisory Committee of the Ocean Drilling Program (ODP) as it transitioned to the IODP. That era saw the incorporation of microbiology into the field of oceanic drilling, the participation of DOE scientists on cruises and post-cruise research, and DOE co-sponsorship of a fraction of ODP-related efforts. As an advocate for the U.S. DUSEL and a participant in the S1 DUSEL process I look forward to the scientific community and agency management yet again uniting to advance science through sharing of resources and expertise. In that regard, the heterogeneity of the Kimballton site maximizes interdisciplinary interactions and scientific advancements on more fronts than other proposed sites, and I look forward to participating in its progression as a DUSEL location.

The biogeoscience community, though poorly funded and with sporadic limited access to the deep subsurface has developed appropriate tools for investigation of life in extreme environments; has made significant strides in understanding limits of life on this planet and others; developing theories and rigorous investigations of evolution and adaptation; characterizing diversity and genomics in numerous surface and subsurface ecosystems; and accessing novel traits observed in extreme environments for societal benefits. As evidenced by the coauthors of Fredrickson, Onstott or myself it becomes evident that biogeoscience community represents hundreds of potential investigators poised for DUSEL collaborations.

I look forward to the development of the U.S. DUSEL concept at one or more locations and I am an advocate of the Kimballton site who looks forward to long term bio-geo-DUSEL collaborations. If you have any questions or comments please feel welcome to contact me.

Sincerely,

Tommy J. Phelps,

Tommy J. Phelps
Distinguished R&D Staff
Environmental Sciences Division
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6036
Email: phelpstj@ornl.gov
Ph: 865-574-7290