Abstract Submitted for the APR09 Meeting of The American Physical Society

Long baseline neutrino oscillation experiments with massive detectors at DUSEL TO BE DETERMINED, DUSEL COLLABORATION — We review the prospects of a very long baseline neutrino oscillation experiment based at the Deep Underground Science and Engineering Laboratory in Homestake, SD. The experiment is designed to utilize a high power neutrino beam from Fermi National Accelerator Laboratory at a baseline of 1300km. We present updated experimental sensitivities to CP violation effects in the neutrino sector and precision measurements of neutrino mixing matrix parameters from a simulation of the proposed 300 kton scale DUSEL water Cerenkov detector.

> Mary Bishai Brookhaven National Laboratory

Date submitted: 13 Jan 2009

Electronic form version 1.4