The LBNL Low Background Facility - Services and Recent Updates

KEENAN THOMAS, UC Berkeley, LBNL, ALAN SMITH, LBNL, ERIC NORMAN, UC Berkeley, LBNL, YUEN-DAT CHAN, ALAN POON, KEVIN LESKO, LBNL — The Low Background Facility (LBF) at Lawrence Berkeley National Laboratory (LBNL) in Berkeley, California provides low background gamma spectroscopy services to a wide array of experiments and projects. The analysis of samples takes place within two unique facilities; locally within a carefully-constructed, low background laboratory on the surface at LBNL and at a recently established underground location (4300 m.w.e) at the Sanford Underground Research Facility (SURF) in Lead, SD (relocated from Oroville, CA). These facilities provide a variety of gamma spectroscopy services to low background experiments primarily in the form of passive material screening for primordial radioisotopes (U, Th, K) or common cosmogenic/anthropogenic products; active screening via neutron activation analysis for U, Th, and K as well as a variety of stable isotopes; and neutron flux/beam characterization through the use of monitors. A general overview of the facilities, services, and sensitivities will be presented. Recent activities and upgrades will also be described in detail including an overview of the recently installed counting system at SURF. The LBF is open to any users for counting services or collaboration on a wide variety of experiments and projects.

\textsuperscript{1}DENA0000979, DE-AC02-05CH11231

Keenan Thomas
UC Berkeley, LBNL

Date submitted: 26 Jun 2014

Electronic form version 1.4