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2007 Inventory of Radiochemistry Detector Elements and Compounds

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Since the last report, there have been no material changes in the detector element inventories in buildings 151 and 332 at LLNL. Stable element inventories in building 151 have remained stable since the inventory in September 2005. For the first time in many years, Stockpile Radiochemistry personnel viewed radioactive tracer materials that reside in building 332. A list of LLNL tracers and locations are available under separate cover.

Despite the recent NNSA agreement to retain 2.8 kg of ^{233}U for programmatic purposes, we have yet to identify a location that is appropriate and will accept the material. A recent visit to the Oak Ridge National Laboratory (ORNL) in September 2006 revealed nearly 190 kg of material with very high ^{233}U content scheduled for down-blending in various chemical and isotopic forms. The chemical form, isotopic and chemical purities of this material were such that roughly 150 kg of the material was of comparable composition to the desired tracer package material and would be acceptable for use in an underground test, should the US even conduct such a test. Efforts continue to remove 2.8 kg of material from the down-blend cue and reserve it for the Test Readiness mission.