

Performance of Chemical Processing and Analytical Measurements for the Plutonium Determination in Support of the Los Alamos National Laboratory Bioassay Program Before and After the Cerro Grande Fire

Deward W. Eford, Diana L. Kottmann, Stephanie Boone, Fred R. Roensch, Sandra E. Wagner, Dawn Lewis, Clarence J. Duffy, Robert E. Steiner, Donald E. Dry, Peter C. Lindahl, Nancy L. Koski and Diana L. Decker, Los Alamos National Laboratory, Chemistry Division, Los Alamos, NM 87545

Chemical analyses for the determination of plutonium in urine in support of the Los Alamos National Laboratory's Bioassay Program are performed in the Clean Chemistry and Mass Spectrometer Laboratory. This facility received extensive smoke damage during the May 2000 Cerro Grande Fire. Refurbishment of the facility required over 1 year. The presentation will describe the methodology used to maintain the plutonium bioassay measurement program in the Clean Chemistry and Mass Spectrometer Laboratory during the building refurbishment efforts. Performance of alpha spectrometry and thermal ionization mass spectrometry analyses before the fire and during and after the fire recovery efforts will also be presented.