



DoNuTS Technical Meeting

Time: 1600 Wednesday, 2 April 2008

Place: NE Conference Room, 4101 Etcheverry

Speaker: Erik Swanberg, UC Berkeley Nuclear Engineering

Subject: Radionuclide Monitoring for Nuclear Weapons Tests

Atmospheric radionuclide monitoring is part of the verification system of the Comprehensive Nuclear-Test-Ban Treaty (CTBT). The four components of the system, radionuclide, seismic, hydroacoustic, and infrasound, combine to give very sensitive detection of clandestine nuclear tests. This presentation will look first at the CTBT and the verification regime, focusing on the radionuclide components. Next the RASA particulate monitoring system and the ARSA radionuclide monitoring system will be discussed. There will be a brief overview of radionuclide generation and transport. Lastly will be a discussion of using atmospheric modeling and isotopic ratios to determine where the source might be located, and if the source was a reactor or nuclear weapon.