



LOS ALAMOS STUDY GROUP

LANL - Plutonium Hydrotesting

[home](#) [calendar](#) [multimedia](#) [contribute!](#) [store](#) [sitemap](#) [search](#) [contact](#)



The Plutonium Hydrotesting Program

**Subcritical Nuclear Testing
at Los Alamos National Laboratory**

Los Alamos National Laboratory (LANL) has begun a secret program of subcritical nuclear tests--code-named "Appaloosa"--using plutonium in steel vessels. (Subcritical means that no self-sustaining fission reaction takes place). A special isotope of plutonium (Pu-242) is used in at least some of the tests, making it possible to test a exact copy of any fission explosive (or nuclear weapons "primary"). The imploding devices are photographed using high-powered X-rays and the resulting sequence of precision images are analyzed to produce a very exact physical history of the implosion. This history, in turn, is used to predict the nuclear performance of the device with unprecedented confidence. At present, three or four photographs can be taken in rapid succession along a single axis. By late 2002, repeated simultaneous photos along two axes will be possible using the Dual-Axis Radiographic Hydrotest (DARHT) facility, now under construction at Los Alamos. A six-axis machine is under design. This web page provides readers with background documents on this evolving method of testing primaries with high confidence in the absence of nuclear explosions.



Vessels previously used for plutonium hydrotests.
(Click image for full screen version.)

- [Background Information](#)
- [Safety Concerns](#)

[June 1999 Update](#)

- [January 1999 Press Release](#)

- [May 1997 Press Release](#)

- [News Articles](#)

- [Hydrotesting Image Gallery](#)

- [LANL & DOE Hydrotesting Document Archives](#)

- [Explosive Above-Ground Contained Plutonium Experiments Make Test Ban Verification More Difficult](#)

[^ back to top](#)

2901 Summit Place NE Albuquerque, NM 87106, Phone:
1207

505-265-1200 , Fax: 505-265-