

# Castle Romeo

Information From: <http://nuclearweaponarchive.org/Home.html>

Test: Romeo  
Date: March 26, 1954  
Time: 18:30:00.4 (GMT) 06:30:00.4 (local)  
Location: On barge in crater created from previous test shot (Bravo), Bikini Atoll  
Test Height/Type: Barge shot 14 feet above surface  
Yield: 11 Megatons

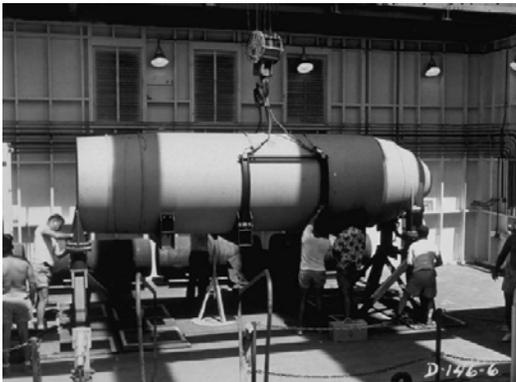
Like Bravo, Romeo's explosive power far exceeded original projections - in fact it did so by an even larger factor, almost tripling the best guess yield. At 11 megatons Romeo was the third largest test ever detonated by the United States. The original yield estimate for this test device, known as Runt (and later Runt I) was only 4 megatons (with a range of 1.5-7 Mt). As the large uncertainty range indicates, the performance of this device was highly uncertain. The reason for this was that it used inexpensive and abundant unenriched natural lithium (7.5% Li-6) in the lithium deuteride fusion fuel. In fact as late as October 1953, Los Alamos was considering not even testing this device. The decision to include it was thought to be a crap-shoot to see if this cheap fusion fuel would be useful.

The spectacular results of Bravo - which was a scaled down version of the Runt device with partially enriched lithium fuel - caused the expected and maximum yields for Runt to be doubled to 8 and 15 Mt respectively. It also led to Runt being moved up in the test schedule to the second shot rather than the sixth.

Runt I was a proof test of the Mk-17 bomb (which was deployed as the emergency capability EC-17 in a matter of months). 7 Mt of the yield was from fast fission of the natural uranium tamper.

Romeo was the first nuclear test conducted on a barge. Since high yield thermonuclear tests were blowing vast holes in the reefs at Bikini and Enewetak this was imperative - otherwise the U.S. test program would soon run out of islands. The Runt I test device weighed 39600 lb., and was 224.9 inches long with a diameter of 61.4 inches.

Runt I Test Device



Romeo after Detonation



The Deployed Weapon

(This is how the deployed Mk-17/24 weapon family appeared)

