

Krakatau Test

On 23rd February Krakatau will erupt 1000 feet below the ground at the Nevada test site.¹ Krakatau is a joint British and American “sub-critical” nuclear test. It involves part of a nuclear weapon. The name is the correct spelling of the volcano that erupted in Indonesia in 1883.

The test device consists of plutonium surrounded by high explosives. The explosive is detonated to compress the plutonium. The experiment is not designed to produce a nuclear yield but it is a key part of nuclear weapons’ research. Krakatua is the latest in a series of tests called Stallion. The first test in the Stallion series, Vito, was a joint US/UK experiment on 14 February 2002. A second name used for this test was “Etna”. Vito/Etna was “designed to answer questions about ejecta and spall associated with plutonium. Ejecta is a violent spray of particles propelled from a material’s surface when it is compressed by a powerful shock wave.”² The focus on ejecta explains why these tests were named after volcanoes.

The US carried out tests in the Stallion series on 29 August 2002 (Mario), 26 September 2002 (Rocco) and 25 May 2004 (Armando). After Krakatua, the final test, Unicorn, will be carried out later in 2007.

The latest US nuclear weapons budget shows expenditure on the tests under the heading *Pit Certification* and says “The major focus of FY 2007 activities is completion of data analysis and post-shot reports for the Unicorn and Krakatau and small-scale experiments”³ The *Pit Certification* heading is described – “The Pit Certification subprogram objective is to confirm the nuclear performance of a W88 warhead with a Los Alamos National Laboratory (LANL) manufactured pit by the end of FY 2007 and to *establish certification processes for future replacement pits.*”⁴

The new W88 pits from LANL will use cast plutonium, whereas older W88 warheads used wrought plutonium. The Mario, Rocco and Armando tests compared the response of cast and wrought plutonium. The whole Stallion series is linked to W88 certification and the cast/wrought issue. The British tests probably used cast plutonium.

These tests will provide data for the US nuclear weapons programmes: “Krakatau and Unicorn will provide the critical real-time performance data the national laboratory’s 3-D computer codes need to certify our nation’s nuclear deterrent”.⁵

The Ministry of Defence said that the test was to ensure the safety and reliability of the existing Trident warhead. But this is only part of the truth. The computer codes can be used both to verify existing weapons and also to model new warheads. In the case of the US programme the data will play a key role in the Reliable Replacement Warhead (RRW) study. RRW is a major new project in the US to design future nuclear weapons. The initial focus of RRW will be to design a plutonium pit for a new Trident warhead that may replace W76. The study has been asked to design a warhead that would be available by 2012. Britain uses a copy of the W76 and the scientists at Aldermaston will be very interested in RRW.

¹ Nevada Sitelines December 2005/January 2006; NNSA Nevada press release 21 February 2006.

² NNSA Nevada press release 12 February 2002.

³ NNSA budget FY2007 p191, February 2006

⁴ *ibid*

⁵ Nevada Sitelines December 2005/January 2006

wash + dry.

Make sure the sea is at the bank

Excess moisture → you can also use

(Zoom in on detailed work)

'This is my favourite bit'

You could get this for a auto shop
(or a for my slopes -)

- 'you don't have to use a ...'

If you buy in shops until you

when you're thirsty it is stored like

cool smells like this

foil - use it on the wall side

'Here's a nuclear bomb I made earlier'

If you paid a bit more - no-one will be
able to tell it for the price you'd buy
you buy in the shops for £1000.

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