FINAL DETERMINATION
UNCLASSIFIED
L. M. Redman
[redacted]
July-17, 1979
UNCLASSIFIED

2 4 2 A

27 July 1945.

Lt. Taylor, USA

Captain Larkin, USN

Description of Trinity Test, as Observed From Coordinating Council Area

1. The area assigned to the Coordinating Council, from which I observed the Trinity Test Shot, was understood to be approximately 20 miles from point of detonation. The intervening landscape was quite flat, and a clear but distant view of the explosion was possible.

2. At the moment of detonation I was seated on the ground facing in the general direction of the test setup, with my eyes fixed on the ground immediately in front. This I did deliberately, in order to avoid the blinding flash which I expected at the instant of detonation.

3. My first impression was of sudden brilliant lighting of the surrounding landscape, accompanied by a momentary flash of heat. I remember a feeling of surprise as the illumination, initially quite brilliant, continued to increase for a brief interval. After raising the dark filter to protect my eyes, I looked in the direction of the light. Although the filter provided was designed to eliminate over 99% of the light, the intensity of illumination was such that there was a momentary sensation of blinding, similar to that following a close flash of lightning on a dark night.

4. Within perhaps two seconds after the initial flash, it became possible to distinguish details of the explosion without the use of the filter. A ball of light about three or four hundred yards in diameter, was clearly evident about a thousand feet above the ground. Beneath this ball there appeared to be a column of red flame about 150 or 200 yards in diameter. Flickering red reflections were distinctly seen on the clouds above the ball of light.

5. As the intensity of light diminished, a smokey, grayish-brown ball took shape. It was noted that a fringe of violet light surrounded this ball and that the ball was rising rapidly, with some increase in diameter. The column beneath the ball darkened until it appeared to be a dense black pillar under the grayish-brown ball. At about ten seconds after detonation, the top of the ball seemed to flatten, and the ball and column took on the shape of a vast mushroom.

6. Close to the ground and slowly spreading out on all sides from the point of detonation, was a white cloud which looked much like ground fog. This cloud, I assumed, was composed of dust raised by the blast wave. The maximum diameter of this cloud I estimated to be about two miles.

VERIFIED UNCLASSIFIED
LMR 7-17-79
JUL 9 1981
SPECIAL RE-REVIEW
FINAL DETERMINATION
UNCLASSIFIED, DATE: JUL 9 1981

7. The sound wave when it reached my position, was unexpectedly sharp. I would describe the sound as being similar to the crack of thunder following a near stroke of lightning. It was sharper and lacked the booming sound of a large gun firing. There was no perceptible earth shock felt at any time.

8. Ten minutes after the detonation the mushroom-like cloud was still quite distinct and rising rapidly, with very little tendency towards dissipating horizontally. About fifteen minutes after the explosion, the pillar under the cloud had faded. The cloud, now a light brownish color, began to fade. The cloud faded from view at about thirty minutes after the explosion.

RAL/hg

R. A. Larkin
Captain, USN

cc: Oppenheimer

UNCLASSIFIED

Classification changed to
by authority of the U. S. Atomic Energy Commission,
Per R. D. Krohn 1-31-73
(Person authorizing change in classification) (Date)
By H. R. Blamlett 4-3-75
(Signature of person making the change, and date)

2252 041

CLASSIFICATION CANCELLED
PER DOC REVIEW JAN. 1973

UNCLASSIFIED