Notes on the Trut Test held at almagarde bomby ray 125 miles (onth Earl & albergue M. M. RESTRICTED 5:30 A. M. Minday July 16 the document of the contents of the content V. Bush, gen. genus & J.B.C arrivel at the Bose Comp locatel 10 miles for the bout atte about 8 PM Sunday energy Cyter dumment the mens and some thing this course explanation by & in the second Offenbering, tohuan, Kintichanf + Robbi one in E very informal conversations we went to fail. the atmosfeed was a lit tense as mught le us f but everyone gelt confinent that the bruk und inflode The food on the singe of the inflain rou for O (a few ferenint) to 18,000 Killi) al pellips some one al 50,000 SENSITIVE INFORMATION DELETED My an figure use 4400 hit I never signal up. Hereas a bal night thingh the weather freed had been formalle for a clean eaf anong with to byst wind (the cleans very hand this preventy sheep in on tent and promising a postformed of the Tal. Then it pours for about an hour ! SANITIZED COPY NNO 82605 THE MAR BONG 84

at IA.M. gen. grove and and ment and to the forward barreads with the key personal. There were two forward boses located 10, voo geb. N. + S. of the boul The wing for the paint in the test and to the camp was fautoatie in the water the maturementation of the bet included a vert are arrang of equiprimed. at 3:15 A.M., the sain having just cearl kalli came into on tent (V. Bul + JAC) and sail that there had been much talk of a postforment. became of the weather but the spect indreated u 75 p. chance I gong through with it hel at SAM instal of the schedular 4 X. M. W. We get up + dend and had tout - erne ciffe about 7 8 M and would around. The shy was stil one could at her not ramel homen at the zero print (the bruk) out the live ver O.K. Wed their came thingh about 7:30 that 5:10 would be the time. about 5 PM or a little after word came that the fing well every at 5:30, Shortf after gen. groves came bank for the forward and the preparel to mie the sing for a slight nice near the camp. Col. S. Women in change of health, Then, Hall's ge give + W J. B c were rinsor los logither. It was agreed that thears of the

er fatel (" hoped !) tiget flost al the alter ridet light (no ogne to about) it much be advaidle to he flat and had away at the start, them look things to beau dark glass. The at \$ 28 the second blue the 10 min signed then another at 5:25 and I think another 2 min life. We long tell down for 1800 array for the stud on a traf tarpention. I to kept my eyes often looks at the horizon officents the sport. It was beging to be light hit was still the general stay was still donte franticular in the general dructure I was looks. The time speaker rear & & I heard allians county the secondo numes 45, runs 40 min 30, run 20, min 10. (The forgers due by some time of times cleanie stand at rum 15 ser.) These we long seconds! The came a built prolite light that seemed to fill the sty a seemed to lost for seemide. I but probably latte and mue I had infected a relating quick and light flowly. The enoung of the light and To high got strung me. My instantanen and that the themal mulen transforme al

of the atimospher, one discussed as a possibility and joining referred to and fire num ate sand, had antical occurd. Stight blinded for second, a l turned on my book of grull is proster and rains my dank glass. at that story it landed like an enormes pysteline diplay will great boiling of humin vapors, some sports being trypter them alter. a pielous for menny is so seen they'r hearing dail glame. Very shorty this view to good and mitted viewed with the name age. The tall of goo was enlarg naprelly and turing with a muslivon It was red hich purple and against the east dawn vez lunion, that I winterty thight fit as colored survey. Some They some on shouth wat and for the delinalus wave (this was 40 sec after zen time). Still many fail it head the deter alin but was send in a further to notice any bland (there are relating tottlet for bitte filt here). The sound was loss loud a stally than I expected had the shart of the severy impression

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was still dominant in my rind. The I got up and untiled the spend of the colored of humin gos. There were time seen refloring, after the detrate wave reached to a jul type. The cloud helowed upwar when the occurd and very soon thereft pilloul up or would an al fine the colon purcher color became bes and the which looked more like a warful fire (though on an enormous reale) The column of smalle the begin to des spread and took on a Z & form which furnited for some time. The spectrules part much have free carful to about 90 search , They water The phones observed of the eye were as follows for Seo. wifen and 90 sec . personal way minute. about Jose.

as woon as I had haven my dant glass and before view I alwah gen. gover hand when raid old". Tolwan as we nose said, that is something vez different for the 100 in TNI shal intel diffet There is no quela but rebut they god a muchen worth" Then sevent people began says. "He much days than unfell kabli seil it ma 15 me Tone squalit of least," and to at afort 60 see on the cland pulliving up the assembled group include men MPs' gave out a sportaneous cheer. Then the reput top leger to come in Offiching equil was 2100 Too which was queled with good shifting. It affer times and he had rund an ever in convert the first black measured and the fight shoul 7, 000 Tors. The next earty news uns that the steel tower over "Junto" story yes any but disaffend. This was repeted by some we with a tile and som reinfind of all. This was more formful affect the infaited . (et

Before we left at som, the that estimate seend to is believe 10,000 - 15,000 that Rabbi mantend 18,000 until yet from synd. O Careful upperal of the cealer strend 1200 yeb. again nine than infalled. The torain further proved not series. There is to, or Matt greverated in a hung as their much wend of the reals almost at once al the cloud found is and to chose them they dealand ! all evolution was of car, former. One was at the camp site who look it the esflorin ruther dal glande get a had ege from quel was quien monfluir ; the programs was that to would read for his angel. 9. Kistialing all beams came in the reput that the detender was head had humbed his donn as he stool notsile the barriale at 10,000 S, There were report of two other heing heralist down I the some aport. The find unpression remain the simp mind. a cosmi plummena the an subpe the whole shy madel fill what light the the end of the world . 18 public my impression ver auf fremature in for on a time cuele f years! J.B. Count Wood fin : 9:30 J.B. Count Wood fin : 9:30

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ACCESS RESTRICTED

The item identified below has been withdrawn from this file:

File Designation

Bush, V. DSM 17 Jul. 45 J.B. Conant: Wates on the Date From _____ Tristy test"

In the review of this file this item was removed because access to it is restricted. Restrictions on records in the National Archives are stated in general and specific record group restriction statements which are available for examination. The item identified above has been withdrawn because it contains:

Security-Classified Information

Otherwise Restricted Information

<u>1972(67 AEC</u>) Date

GENERAL SERVICES ADMINISTRATION

GSA FORM 7117 (2-72)

125 miles south east of Alburquerque

5:30 a.m. Monday, July 16

V. Bush, Gen. Groves, and J.B.C. arrived at the Base Camp located 10 miles from the bomb at about 8 p.m. Sunday evening. After dinner at the mess and some brief explanation by [J.R.] Oppenheimer, [R.C.] Tolman, [G.] Kistiakowsky, and [I.I.] Rabbi [*sic*] in very informal conversation we went to bed. The atmosphere was a bit tense as might be expected but everyone felt confident that the bomb would explode. The pool on the size of the explosion ran from 0 (a few pessimists) to 18,000 (Rabbi [*sic*]) and perhaps someone at 50,000 [*several words censored*]. My own figure was 4400 [tons of T.N.T.] but I never signed up. It was a bad night though the weather forecast had been favorable for a clear early morning with light winds (the desired condition). From about 10:30 to 1 a.m., it blew very hard thus preventing sleep in our tent and promising a postponement of the Test. Then it poured for about an hour!

At 1 a.m. General Groves arose and went out to the forward barricade with the key personnel. There were two forward bases located 10,000 yds. N. & S. of the bomb. The wiring from this point to the test and to the camp was fantastic in [their extent?]. The instrumentation of the test included a vast array of equipment. At 3:15 a.m., the rain having just ceased, Rabbi [*sic*] came into our tent (V. Bush and JBC) and said that there had been much talk of a postponement because of the weather but reports indicated a 75% chance of going through with it but at 5 a.m. instead of the scheduled 4 a.m.

We got up & dressed and drank some coffee about 4 a.m. and wandered around. The sky was still overcast. It had not rained however at the zero point (the bomb) and the lines were O.K. Word then came through about 4:30 that 5:10 would be the time. About 5 p.m. [*sic* — *a.m.*] or a little after, word came that the firing would occur at 5:30. Shortly after, General Groves came back to the forward area. We prepared to view the scene from a slight rise near the camp. Col. S[*tafford*]. Warren [*was*] in charge of health,<u>T</u>olman, Rabbi [*sic*], Gen. Groves & J.B.C. were more or less together. It was agreed that because of the expected (or hoped!) bright flash and the ultra violet light (no ozone to absorb it) it would be advisable to lie flat and look away at the start, then look through the heavy dark glass.

At 5:20 the sirens blew the 10 min signal then another at 5:25 and I think another 2 mins. before. We lay belly down facing 180 [degrees] away from the spot on the tarpaulin. I kept my eyes open looking at the horizon opposite the spot. It was beginning to be light, but the general sky was still dark particularly in the general direction I was looking. Through the loud speaker nearby I heard [Samuel] Allison counting the seconds minus 45, minus 40, minus 30, minus 20, minus 10. (The firing was done by some kind of timing devices started at minus 45 sec.) These were long seconds! Then came a burst of white light that seemed to fill the sky and seemed to last for seconds. I had expected a relatively quick and bright flash. The enormity of the light and its length quite stunned me. My instantaneous reaction was that something had gone wrong and that the thermal nuclear transformation of the atmosphere, once discussed as a possibility and jokingly referred to a few minutes earlier, had actually occurred. Slightly blinded for a second, I turned on my back as quickly as possible and raising my head slightly, could see the "fire" through the dark glass. At that stage it looked like an enormous pyrotechnic display with great boiling of luminous vapors, some spots being brighter than others. A picture from memory is as seen through *heavy* dark glass.

Very shortly this view began to fade and without thinking the glass was lowered and the scene viewed with the naked eye. The ball of gas was enlarging rapidly and turning into a mushroom. It was reddish purple and against the early dawn very luminous, though I instantly thought of it as colored [*somewhere*?]. Then someone shouted watch out for the detonation wave (this was 40 sec after zero time). Still on my back I heard the detonation but was not in a position to notice any blast (there was relatively little felt here). The sound was less loud or startling than I expected, but the shock of sensory impression was still dominant in my mind. Then I got up and watched the spread of the colored luminous gas. There was two secondary explosions, after the detonation wave reached us or just before. The cloud billowed upward when these occurred and very soon thereafter billowed up as would an oil fire, the color became less and the whole looked more like a [*unintelligible*] fire (though on an enormous scale). The column of smoke then began to spread and took on a Z form which persisted for some time. The spectacular part must have been confined to about 90 seconds. The phases observed by the eye were as follows from memory.

As soon as I had lowered my dark glass and before rising I shook Gen. Groves hand who said "Well, I guess there is something in nucleonics after all." Tolman as we rose said, that is something very different from the 100-ton TNT shot, "entirely differently, there is no question but what they got a nuclear reaction." Then several people began saying, "Very much larger than expected. Rabbi [*sic*] said it was 15,000 Tons equivalent at least."

At about 60 sec. as the cloud billowed up, the assembled group including many MPs' gave out a spontaneous cheer.

Then the reports began to come in. Oppenheimer arrived in about 5 or 10 minutes and said the equivalent was 2100 Tons which was greeted with great skepticism. It afterwards turned out he had made an error in converting the first blast measurement and the figure showed 7,000 tons.

The most exciting news was that the steel tower over "Jumbo" 800 yards away had disappeared. This was reported by someone with a telescope and verified by all. This was unexpected and showed a very much more powerful effect than expected.

Before we left at noon, the best estimate seemed to be between 10,000–15,000 though Rabbi [*sic*] maintain 18,000 would yet prove right. Careful exploration of the crater showed 1200 yards again more than expected. The toxicity problem proved not serious. Thought at 10,000 [*yards*] North evacuated in a hurry as their meter went off the scale almost at once and the cloud of smoke seemed to chase them they declared! All evacuation was by car, of course. One man at the Camp Site who looked at the explosion without dark eye glasses got a bad eye burn and was given morphine: the prognosis was that he would not lose his sight. G. Kistiakowsky, all [frowns?], came in to report that the shock wave had knocked him down as he stood outside the barricade at 10,000 S. There were reports of two others being knocked down at the same spot.

My first impression remains the most vivid, a cosmic phenomena like an eclipse. The whole sky suddenly full of white light like the end of the world. Perhaps my impression was only premature on a time scale of years! J.B. Conant, Washington, D.C. July 17, 1945 4:30 p.m.

[First version of transcript prepared by Professor James Hershberg, George Washington University, with later edits by Alex Wellerstein, Stevens Institute of Technology, and William Burr, National Security Archive]