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Guide to The Manhattan Project Medical Group Collection

WA MSS S-4551

Compiled by Joleen Degradi

August 2023

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Collection Overview

REPOSITORY: Beinecke Rare Book and Manuscript Library
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CALL NUMBER: WA MSS S-4551

CREATOR: Manhattan Project Medical Group

TITLE: The Manhattan Project Medical Group collection

DATES: 1945-1946

PHYSICAL DESCRIPTION: 2.2 linear feet (4 boxes)

LANGUAGE: English (Latin script)

SUMMARY: The Manhattan Project Medical Group collection consists of memoranda, scientific sketches, graphs, notes, and reports related to Trinity, the code name of the first detonation of a nuclear weapon, conducted by the United States Army on July 16, 1945 at the White Sands Proving Ground in New Mexico (now known as the White Missile Range) as part of the Manhattan Project. Materials in the collection were created by the Manhattan Project Medical Group and document the group's process of researching the medical implications of the test. The collection includes documents that were previously classified.

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Key to the container abbreviations used in the PDF finding aid:

b. box
f. folder

Administrative Information

Immediate Source of Acquisition

Purchased from Barry Lawrence Ruderman Antique Maps, Inc. on the Frederick W. and Carrie S. Beinecke Fund for Western Americana, 2022.

Conditions Governing Access

This collection is open for research.

Conditions Governing Use

The Manhattan Project Medical Group collection is the physical property of the Beinecke Rare Book and Manuscript Library, Yale University. Rights, including copyright, belong to the authors or their legal heirs and assigns. For further information, consult the appropriate curator.

Processing Information

Collections are processed to a variety of levels, depending on the work necessary to make them usable, their perceived research value, the availability of staff, competing priorities, and whether or not further accruals are expected. The library attempts to provide a basic level of preservation and access for all collections, and does more extensive processing of higher priority collections as time and resources permit.

These materials have been arranged and described according to national and local standards. For more information, please refer to the Beinecke Manuscript Unit Processing Manual.

The titles of the folders are taken from original folder titles. The titles of series are taken from the original names of the groupings when the collection was received at the library.

Biographical / Historical

The Manhattan Project Medical Group was organized by United States Army General and director of the Manhattan Project, Leslie Groves in the months leading up to the Trinity test (July 16th, 1945). The Medical Group was established following concerns raised by scientists and military lawyers of the Manhattan Project about radiation exposure to personnel, nearby residents, and the environment. Other members of the Medical Group included physicians Stafford L. Warren, James F. Nolan, Joe Hoffman, and Lewis Hempelmann. The Trinity test was a purposeful detonation of an atomic bomb prototype, code named The Gadget, to observe the explosion of the bomb, the resulting detonation cloud, and environmental and medical impacts of post-detonation radiation in the area of the detonation. The environmental impact of the test has had longterm effects for the communities in that region, including high rates of illness and death.

The Medical Group was established following concerns raised by scientists and military lawyers of the Manhattan Project about radiation exposure to personnel on site, nearby residents, and the environment. As head of the Medical Group, Stafford L. Warren had the closest relationship with General Leslie Groves and was the one to gain approval for a monitoring plan on Trinity. The Medical Group was given a limited budget to prepare for possible radiation poisoning, detonation cloud tracking, and possible evacuation of military personnel and civilians within range of the detonation cloud should the wind push it in their direction.

While the Manhattan Project was formed in 1942 by President Franklin D. Roosevelt, it was not until the Smyth Report was released August 12, 1945 that the American public was made aware of its existence, as well as the United States' development of nuclear weapons and their use in bombing Hiroshima and Nagasaki during World War II.

Scope and Contents

The Manhattan Project Medical Group collection consists of memoranda, scientific sketches, graphs, notes, and reports related to Trinity, the code name of the first detonation of a nuclear weapon, conducted by the United States Army on July 16, 1945 at the White Sands Proving Ground in New Mexico (now known as the White Missile Range) as part of the Manhattan Project. Materials in the collection were created by the Manhattan Project Medical Group and document the group's process of researching the medical implications of the test. The collection includes documents that were previously classified.

Memoranda written in preparation for the Trinity test detail instructions to military personnel stationed near and around the test site for tracking the detonation cloud following the blast. Reports from meetings in preparation for the test illustrate concerns that the Medical Group had about the test. During the detonation, sketches and graphs were compiled in real time. Addional documents detail preparations for the possibility of evacuating military and civilian personnel near the test site.

Maps and diagrams in the collection were used for planning and stationing purposes leading up to Trinity, tracking of the detonation cloud alongside placement of personnel observing the test, the movement of the cloud, and radiation levels in the surrounding detonation area during the days after Trinity. Many of these maps have markings of potentially dangerous areas due to radiation levels and cloud movement after the detonation.

General

Items in the collection are assigned a unique number that corresponds to identifying numbers assigned by Barry Lawrence Ruderman Antique Maps, Inc. in the pamphlet, "Zero Hour: Documenting the Dawn of the Nuclear Age, The Trinity Test Archive of the Manhattan Project Medical Group". There is a copy of this pamphlet in the first folder of boxes 1-3 for researcher use.

Arrangement

Organized into four series: Series I: Materials related to preparations for the Trinity test, 1945. Series II: Materials related to the Trinity test, 1945. Series III: Materials related to the aftermath of the Trinity test, 1945. Series IV: Maps and Diagrams, 1945.

Collection Contents

Series I: Materials related to preparations for the Trinity test, April 1945- July 1945

Series I includes memoranda, graphs, and other materials that document preparations for the Trinity test from April to July, 1945.

b. 1, f. 1	"Zero Hour: Documenting the Dawn of the Nuclear Age, The Trinity Test Archive of the Manhattan Project Medical Group"	1945 April 12-1945 July 1
b. 1, f. 2	Meeting notes on Hazards of Trinity Experiment 79786	1945 April 12
b. 1, f. 3	The Rat Test Graph 79787	circa 1945 May
b. 1, f. 4	Chain of Command (I) hand notes 79788	1945 May 20
b. 1, f. 5	Sketch of Oil Burning Experiment 79789	1945 June 5
b. 1, f. 6	Procedure for Monitoring Dwellings notes 79924	1945 June 9
b. 1, f. 7	Map Test I Contemporary Photocopy (#79995) 80000	circa 1945 June
b. 1, f. 8	Graph and Notes on Effects of Radioactivity on Humans 79793	circa 1945 June
b. 1, f. 9	Chain of Command (II) typed notes 79790	1945 June 19
b. 1, f. 10	Notice on Danger to Personnel in Nearby Town 79791	1945 June 22
b. 1, f. 11	Memorandum on Oil Burning Experiment 79792	1945 June 25
b. 1, f. 12	Notes on Chain of Command (III) 79794	1945 June 30
b. 1, f. 13	Memorandum on the Properties of sand at Trinity Site 79795	1945 July 7
b. 1, f. 14	Notice on Changes and Supplement to Town Monitoring 79796	1945 July 7
b. 1, f. 15	Calendar for Arrival of Medical Group Personnel at Trinity Site 79797	1945 July 9
b. 1, f. 16	Notes on Meterological Observations 79798	1945 July 9-1945 July 14
b. 1, f. 17	Sketch of Jumbo Device 79876	circa 1945 July 10

b. 1, f. 18	Sketch of Locomotive Steam 79799	1945 July 10
b. 1, f. 19	Instructions for Monitors 79800	1945 July 10
b. 1, f. 20	Instructions Town Monitoring 79801	1945 July 10
b. 1, f. 21	Pre-test Meteorology Monitoring notes 79802	1945 July 10-1945 July 11
b. 1, f. 22	Assorted Notes, Including Change of Test Date 79803	1945 July 11
b. 1, f. 23	Assorted Notes on Blast 79813	1945 July 12-1945 July 13
b. 1, f. 24	Major Wallace's Meteorology Prediction notes 79814	1945 July 12
b. 1, f. 25	Qualitative Wind Prediction notes 79815	1945 July 12
b. 1, f. 26	Monitor Location notes 79804	1945 July 12
b. 1, f. 27	Sketch Map of Telephone Lines 79806	1945 July 12
b. 1, f. 28	Wind Measurements at Altitude notes 79809	1945 July 12
b. 1, f. 29	Meteorological Prerequisites for Shot 79805	1945 July 12
b. 1, f. 30	Sketch of Wind Measurements at Altitude 79807	1945 July 12
b. 1, f. 31	Sketch of Wind Measurements at Altitude 79808	1945 July 12
b. 1, f. 32	Notes on Plans for Monitoring 79810	1945 July 13
b. 1, f. 33	Minutes of Meeting with High Level Personnel Notes 79811	1945 July 12-1945 July 13
b. 1, f. 34	Telephone Instructions Notes 79812	1945 July 12-1945 July 13
b. 1, f. 35	Printed Meteorological Forecast 79816	1945 July 13
b. 1, f. 36	Qualitative Descriptive of Present Atmosphere Structure Notes 79817	1945 July 13
b. 1, f. 37	Notes on Assignments for Monitoring Route 380 79818	1945 July 13

b. 1, f. 38	Deployment of Monitors Notes 79819	1945 July 13
b. 1, f. 39	Minutes of meeting on Evacuation and Monitoring Plan Notes 79821	1945 July 13
b. 1, f. 40	Weather Predictions and Prediction for the Path of the Cloud 79822	1945 July 13-1945 July 14
b. 1, f. 41	Contigency Plans for Different Wind Conditions 79820	1945 July 14
b. 1, f. 42	Graph Predictions for Shot Conditions 79823	1945 July 14
b. 1, f. 43	Sketch Plan for Monitoring Between Bingham and Carthage 79824	1945 July 14
b. 1, f. 44	Memorandum to Personnel on Short 79825	1945 July 14
b. 1, f. 45	Contigency Plans for Evacuation 79826	1945 July 14
b. 1, f. 46	Graph on Rate of Radiation Dispersal Prediction Following Blast 79828	circa 1945 July 14
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b. 1, f. 49	Graph Predictions Radiation Dispersal and Monitoring Instructions 79836	1945 July 14
b. 1, f. 50	Last Minute Instructions to Personnel and Predicted Radiation Readings 79827	1945 July 15
b. 1, f. 51	Notes on Last Minute Updates for Monitors 79830	circa 1945 July 15
b. 1, f. 52	Graph Predictions for the Decaying Height of the Cloud 79829	circa 1945 July 15
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b. 1, f. 54	Directions for Personnel at Base Camp at time of Shot 79832	1945 July 15
b. 1, f. 55	Notes on Meterological Predictions for Shot 79833	1945 July 15
b. 1, f. 56	Notes on the Plans for Communications following Shot 79865	circa 1945 July 15

Series II: Materials related to the Trinity test, 1945 July 16

Series II includes reports, notes, and graphs from the day of the Trinity test, July 16, 1945.

b. 2, f. 1	"Zero Hour: Documenting the Dawn of the Nuclear Age, The Trinity Test Archive of the Manhattan Project Medical Group"	1945 July 16
b. 2, f. 2	Stafford Warren's Test Diary (I) 79842	1945 July 15-1945 July 16
b. 2, f. 3	Stafford Warren's Test Diary (II) 79843	1945 July 16
b. 2, f. 4	Stafford Warren's Test Diary (III) 79844	1945 July 16-1945 July 18
b. 2, f. 5	Warring Signals for Zero 79838	1945 July 16
b. 2, f. 6	Graph of Final Predictions for Shot 79839	1945 July 16
b. 2, f. 7	Wind Readings Immediately Prior to Zero Hour 79840	1945 July 16
b. 2, f. 8	Windspeeds Graph at Altitude on Day of Test 79841	1945 July 16
b. 2, f. 9	Discovery of Hot Canyon 79846	1945 July 16
b. 2, f. 10	Victor Weisskopf's Calculations on Decay of Radioactive fallout 79847	1945 July 16
b. 2, f. 11	Table of Cumulative Radiation Calculations 79848	1945 July 16
b. 2, f. 12	Preliminary Measurements (I) 79849	1945 July 16
b. 2, f. 13	Notes on Increased Deployment of Radiation Monitors 79850	1945 July 16
b. 2, f. 14	Communication Instructions 79851	1945 July 16
b. 2, f. 15	Preliminary Measurements (II) 79852	1945 July 16
b. 2, f. 16	Monitor Map-graph for the area between Corrizoza and Gallinas 79853	1945 July 16
b. 2, f. 17	Notes on Search for People in Affected Area 79854	1945 July 16
b. 2, f. 18	Preliminary Measurements (III) 79855	1945 July 16

b. 2, f. 19	Preliminary Measurements (IV) 79856	1945 July 16
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b. 2, f. 22	Radiation Report from Palmer 79859	1945 July 16
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b. 2, f. 24	Map of Search Light Positions (I) 79862	1945 July 16
b. 2, f. 25	Map of Search Light Positions (II) 79863	1945 July 16
b. 2, f. 26	Early Notes on Discovery of Hot Canyon 79869	1945 July 16
b. 2, f. 27	Master Sheet for Monitoring Assignments 79877	1945 July 16
b. 2, f. 28	Radiation report from the Vicinity of New and Old Journada 79879	1945 July 16
b. 2, f. 29	Freidell's Assignments for Monitor 79861	1945 July 16-1945 July 17
b. 2, f. 30	Graph-Map of Radiation Monitoring for the Area Northeast of Bingham 79866	1945 July 16-1945 July 17
b. 2, f. 31	Radiation Measurements near Corona 79864	1945 July 16-1945 July 17

Series III: Materials related to the aftermath of the Trinity test, 1945 July 16-1946 March 9

Series III inlcudes notes, maps, and reports produced following the Trinity test, from July 1945 to March 1946.

b. 3, f. 1	"Zero Hour: Documenting the Dawn of the Nuclear Age, The Trinity Test Archive of the Manhattan Project Medical Group"	1945 July 17-1946 March 9
b. 3, f. 2	Notes on Flash at Zero (I) 79873	1945 July 17
b. 3, f. 3	Notes on Flash at Zero (II) 79867	1945 July 17
b. 3, f. 4	Radiation Monitoring Plans for 7/18 (I) 79868	circa 1945 July 17
b. 3, f. 5	Search Light Report 79870	1945 July 17
b. 3, f. 6	Wind and Cloud Data Tables 79871	1945 July 17
b. 3, f. 7	Sketch Map of the area around Carthage and Gonzales 79874	1945 July 17
b. 3, f. 8	Plot of Captain Allen's Monitoring Data 79872	1945 July 17
b. 3, f. 9	Radiation Monitor report for Vicinity of Bingham 79878	1945 July 17
b. 3, f. 10	Radiation Monitor report from Santa Rosa 79880	1945 July 17
b. 3, f. 11	Radiation Monitor report from Highway 380 79881	1945 July 17
b. 3, f. 12	Radiation report from Santa Fe (I) 79882	1945 July 17
b. 3, f. 13	Radiation report from Santa Fe (II) 79883	1945 July 17
b. 3, f. 14	Monitor Sketch Map for Highway 380 79884	1945 July 17
b. 3, f. 15	Monitor Sketch Map around Carthage 79885	1945 July 17
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b. 3, f. 19	Sketch of a Roentgen Meter 79890	1945 July 18
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b. 3, f. 21	Radiation monitor report for Vicinity of Bingham and Hot Canyon 79897	1945 July 18
b. 3, f. 22	Calculations of Radiation Decay 79897	circa 1945 July 19
b. 3, f. 23	Reports on Donkeys Blinded by Shot 79891	circa 1945 July 19
b. 3, f. 24	Master Table for Monitor Reports 79892	1945 July 19
b. 3, f. 25	Measurements at Site Y 79893	1945 July 19
b. 3, f. 26	Notes on Monitor Meeting 79895	1945 July 19
b. 3, f. 27	Bingham Graph of Accumulated Dose 79896	1945 July 19
b. 3, f. 28	Map of Hot Canyon Area (I) 79898	1945 July 19
b. 3, f. 29	Table of Calculations 79899	1945 July 19
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b. 3, f. 31	Map of Entrance to Hot Canyon 79901	1945 July 19
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b. 3, f. 33	Map of Hot Canyon Area (II) 79903	1945 July 20
b. 3, f. 34	Cloud Observations and Radiation Measurements 79904	1945 July 20
b. 3, f. 35	Official preliminary report on Shot 79905	1945 July 20
b. 3, f. 36	Handwritten draft for Report on Test II of Trinity 79907	circa 1945 July 21
b. 3, f. 37	Hand-corrected Type Report on Test II at Trinity 79908	1945 July 21
b. 3, f. 38	Graph of Possibility for an air-detonation of Bomb 79909	1945 July 22

b. 3, f. 39	Target committee conclusions graph 79911	1945 July 22
b. 3, f. 40	Post-Trinity Medical Group Assignments 79906	circa 1945 July 23
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Series IV: Maps and Diagrams, July 1945- August 1945

Series IV includes maps and diagrams of the test site and the fallout area.

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b. 4 (Oversize), f. 3	Annotated Trinity site Evaluation Map (I) 79998	circa 1945 July
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b. 4 (Oversize), f. 5	Trinity test Master Map 79990	1945 July 16
b. 4 (Oversize), f. 6	Radiation monitoring map for Northeast sector 79991	1945 July 16
b. 4 (Oversize), f. 7	Hoffman's Master Map 80001	1945 July 16-1945 July 18
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b. 4 (Oversize), f. 13	Dimensions of Cloud and Interactions with Aircraft 80002	1945 July 27
b. 4 (Oversize), f. 14	Map of Trinity Radiation Fallout 79994	1945 August 6
b. 4 (Oversize), f. 15	Pressure effects of an Air-detonated Bomb Graph 80003	1945 August 8

Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

Subjects

Atomic bomb
Atomic bomb -- Health effects
World War, 1939-1945 -- Environmental aspects
World War, 1939-1945 -- Health aspects

Geographic Names

United States -- Army -- Medical personnel

Corporate Body

Manhattan Project (U.S.)

Names

Groves, Leslie R., 1896-1970
Warren, Stafford L. (Stafford Leak), 1896-1981