EMORY L. BROWN, JR.
ROUTE 4, 200 22
SQUANKUM ROAD
FARMINGDALE, NOW JEPSEY 6/7027

Laich 20, 1973

Mr. Marion Johnson National Archives and Records Service Pennsylvania Avenue and Seventh Street N. W. Washington, D. C.

Dear Mr. Johnson:

Subject: ASSASSINATION OF PRESIDENT KENNEDY; Spectrographic Examination of Bullet Fragments

In regards to obtaining a copy of the various spectrographic examinations performed upon the various bullet fragments and Commission Exhibit 399, Mr. Gray has referred me to you. I would like to purchase one copy each of the revelant pages Commission Document 81 b and Commission Document 205 Section II. Please advise me of your fee and I will forward a check.

Sincerely yours,

Attachments

7-12 (Avv. 3-7-60)

- 1007AT07T

FEDERAL BUREAU OF INVESTIGATION VASMINGTON, D. C.

Chief of Police
Dallas, Texas

November 23, 1963

This examination has been made with the understanding that the evidence is connected with an official investigation of a criminal matter and that the imboratory report will be used for official purposes only, related to the investigation of a subsequent criminal prosecution. Authorization caused be granted for the use of the independent report in connection with a civil proceeding.

ASSASSINATION OF PRESIDENT JOHN F. KENNEDY

John Edgar Houver, Director

YOUR NO. FBI FILE NO.

LAS.NO.

PC-78243 BX

D-436451 AX

Francisco recuested by: Addressee

See below

Transaction requested:

Firearms - Spectrographic - Microscopic Analyes -

- Fingerprint - Document

Specimenas

Evidence received from Special Agent Elmer L. Todd, Washington Field Office of the FBI on 11/22/63:

Q1 Bullet from stretcher

Evidence received from Special Agent Orin Bartlett of the FBI on 11/22/63:

- Q2 Bullet fragment from front seat cushion
- Q3 Bullet fragment from beside front seat

2-Chief, U. S. Secret Service

2-FBI, Dallas

(continued on next page)

Page I

Evidence received from Special Agent James W. Sibert and Special Agent Francis O'Neill, Jr., of the Baltimore Office of the FBI on 11/23/63:

- Q4 Metal fragment from the President's head
- Q5 Metal fragment from the President's head

Evidence received from Special Agent Vincent E. Drain of the Dallas Office of the FBI on 11/23/63:

- Q6 6.5 millimeter Mannlicher-Carcano cartridge case from building
- Q7 6.5 millimeter Mannlicher-Carcano cartridge case from building
- Q3 6.5 millimeter Mannlicher-Carcano cartridge from rifle
- Q9 Metal fragment from arm of Governor John Connolly
- Q10 Wrapping paper in shape of a large bag
- Qll Suspect's shirt
- Q12 Blanket
- Q13 Bullet from Officer Tippett
- Kl 6.5 millimeter Mannlicher-Carcano rifle, with telescope sight, Serial No. C2766
- K2 Paper and tape sample from shipping department, Texas Public School Book Depository
- K3 .38 Special Smith and Wesson revolver, Serial No. V510210, Assembly No. 65248

Evidence obtained by FBI Laboratory personnel during examination of the President's limousine:

Q14 Three metal fragments recovered from rear floor board carpet Q15 Scraping from inside surface of windshield

Also Submitted: Photograph of rifle, KI
Finger and palm prints of Lee Harvey Oswald

Results of examinations:

The bullet, QI, is a 6.5 millimeter Mannlicher-Carcano rifle bullet. Specimen QI weighs 158.6 grains. It consists of a copper alloy jacket with a lead core.

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(continued on next page)

Specimen Q2 is a portion of the core of a rifle bullet. Specimen Q2 weighs 44.6 grains and is composed of a portion of the copper alloy jacket and a portion of the lead core. Specimen Q3 is a portion of the base section of a copper alloy rifle bullet. Q3 weighs 21.0 grains and is composed of a section of the jacket from which the lead core is missing. It could not be determined whether specimens Q2 and Q3 are portions of the same bullet or are portions of two separate bullets.

The rifle, Kl, is a 6.5 millimeter Mannlicher-Carcano Italian military rifle Model 91/38. Test bullets were fired from this rifle for comparison with specimens Ql, Q2 and Q3. As a result, Ql, Q2 and Q3 were identified as having been fired from the submitted rifle.

Specimens Q6 and Q7 are 6.5 millimeter Mannlicher-Carcano cartridge cases. They were manufactured by the Western Cartridge Company, East Alton, Illinois, as was the 6.5 millimeter Mannlicher-Carcano cartridge, Q8.

Test cartridge cases obtained from the submitted rifle were compared with specimens Q6 and Q7. As a result, specimens Q6 and Q7 were identified as having been fired in this rifle. The bullet, Q13, from Officer Tippett, is a .38 Special copper-coated lead bullet. Q13 weighs 156.6 grains and possesses the physical characteristics of 158 grain Western-Winchester revolver bullets. The surface of Q13 is so badly mutilated that there are not sufficient individual microscopic characteristics present for identification purposes. It was determined, however, that the .38 Special Smith and Wesson revolver, K3, is among those weapons which produce general rifling impressions of the type found on Q13.

The lead metal of Q4 and Q5, Q9, Q14 and Q15 is similar to the lead of the core of the bullet fragment, Q2.

A small tuft of textile fibers was found adhering to a jagged area, on the left side of the metal butt plate on the Kl gun. Included in this tuft of fibers were gray-black, dark blue and orange-yellow cotton fibers which match in microscopic characteristics the gray-black, dark blue and orange-yellow cotton fibers composing the QlI shirt of the suspect. These fibers could have originated from this shirt.

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(continued on next page)

A single brown viscose fiber and several light green cotton fibers were found adhering to the Q10 paper bag. These fibers match in microscopic characteristics the brown viscose fibers and light green cotton fibers present in the composition of the Q12 blanket and could have originated from this blanket.

It is pointed out, however, that fibers do not exhibit sufficient individual microscopic characteristics to be positively identified as originating from a particular source to the exclusion of all others.

No fibers were found on the KI gun that could be associated with the Q12 blanket and no fibers were found on the Q10 paper bag that could be associated with the Q11 shirt.

The debris, including foreign textile fibers and hairs, removed from the Q12 blanket and Q11 shirt has been placed in pillboxes for possible future comparisons. These pillboxes and the glass microscope slides containing fibers removed from K1 and Q10 are being temporarily retained in the Laboratory for possible future comparisons with additional items of the suspect's clothing should they be recovered.

The Q12 blanket has been folded double and one corner has been folded in and pinned with a safety pin. A length of white cotton cord has been tied around this corner giving it a triangular-shaped appearance as if it had once contained a long object.

The paper of the wrapping and the tape, Q10, were found to have the same observable physical characteristics as the known wrapping paper and tape, K2, from the Texas Public School Book Depository.

The inside surface of specimen Q10 did not disclose markings identifiable with the rifle, Kl. A number of indentations, folds and extraneous markings appear on the inner surface of the Q10 wrapping.

The latent prints appearing in the photograph taken of the rifle, KI, by the Dallas Police Department, are too fragmentary and indistinct to be of any value for identification purposes. Photographs of this weapon taken by this Bureau also failed to produce prints of sufficient legibility for comparison purposes.

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(continued on next page)

A latent fingerprint was developed on the wrapping paper, Q10, which was identified with the left index finger impression of Leo Harvey Oswald. In addition, one latent palm print developed on specimen Q10 was identified with the right palm print of Oswald.

No latent prints of value woro dovoloped on Oswald's revolver, the cartridge cases, the unfired cartridge, the clip in the rifle or the inner parts of the rifle.

Specimens Ql through Q5, Q14 and Q15 are being retained in the Laboratory until called for by a representative of the U.S. Secret Service.

Specimens Q6 through Q13, K1, K2 and K3 are being returned to the Dallas Police Department by Special Agent Vincent E. Drain of the Dallas Field Office of this Bureau. The photograph of the latent print on the rifle is being returned separately. The fingerprints and palm prints of Oswald are being retained.

PC-78243 BX

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EMORY L BROWN, JR. ROUTE 4, BOX 82 SQUANKUM ROAD FARMINGDALE, NEW JERSEY 07727

March 22, 1974

Office of the Director Federal Bureau of Investigation United States Department of Justice Washington, D. C. 20535

Dear Sir:

I would like to put the following question to you in hopes that, through your laboratory technicians, you can offer an opinion on this particular matter of ballistics.

If several bullet fragments were submitted for test and the mutilation was such that they could not be matched one to another or to a weapon (no clear rifling marks), can spectroanalysis determine whether or not they were produced by the same manufacturer? To be more specific, would it be possible to;

- Determine the different trace elements (minerals) and amounts of each that are contained in the manufacturing materials (core and jacket)?
- If the above (a) could be established, would it be possible to identify the manufacturer through comparison with known samples of similar whole bullets?

Any information with which you may be able to supply me will be very much appreciated.

Sincerely,

THIS IS A TRUE COPY OF A LETTER DATED MARCH 22, 1974 TO THE OFFICE OF THE DIRECTOR, FEDERAL BUREAU OF INVESTIGATION, UNITED STATES DEPARTMENT OF JUSTICE, WASHINGTON, D. C. 20535 BY CERTIFIED MAIL
NO. 821735 Snow 2 Snow 12 Sn



UNITED STATES DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

WASHINGTON, D.C. 20535

April 2, 1974

Mr. Emory L. Brown, Jr.
Route 4, Box 82
Squankum Road
Farmingdale, New Jersey 07727

Dear Mr. Brown:

Reference is made to your letter of March 22, 1974 requesting information concerning the analyses of core and jacket metal representing bullet fragments.

There are analytical techniques which include the spectrograph that can be employed to determine the trace elements in metal fragments from the core and jackets of bullets.

Judgements relating to the qualitative and quantitative analyses of such metal fragments depend on a large number of factors too numerous to set forth in a letter. Your attention is drawn to a publication entitled "Forensic Neutron Activation Analysis of Bullet-Lead Specimens: (GA-10141)." This publication is available from the National Technical Information Service, U. S. Department of Commerce, Springfield, Virginia 22151, at a cost of \$3 per copy. It is felt that the subject matter of this publication is directly related to your inquiry.

I trust this information will be of value to you.

Sincerely yours,

Clarence M. Kelley

Director

EMORY L BROWN, JR.
ROUTE 4, BOX 82
SQUANKUM ROAD
FARMINGDALE, NEW JERSEY 07727

April 8, 1974

National Technical Information Service United States Department of Commerce Springfield, Virginia 22151

Gentlemen:

I would fike to purchase a copy of the publication which is entitled "Forensic Neutron Activation Analysis of Sullat Lead Specimens: (GA 10141)". The Federal Bureau of Investigation has advised me that the cost of the publication is stored dollars (\$\$3.00) and I have enclosed a check in that amount. If any additional payment is required, please notify me and a check will be forwarded immediately.

Also, I would like to know if there is a catalog of other related publications available, which I might receive. I am particularly interested in ballistics and weapon identification. Thank you.

Sincerely yours,

Sumy 2 Book

Attachments

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Box 32 Squankum Road Howell, New Jersey 07731 September 17, 1974

Mr. Clarence M. Kelly, Director Federal Bureau of Investigation United States Department of Justice Washington, D. C. 20535

Dear Mr. Kelley:

In March of this year I wrote to you concerning the analyses of bullet fragments and I have now obtained and read a copy of the publication to which you kindly referred me. After studying the technical data contained in that material, I have inferred that it would not be possible to determine if two specimens, each with similar core and jacket composition, and with not identifiable markings for matching, were of the same caliber, lot or manufacturer. This is assuming the several fragments are rather small and mutilated. Would you say that I have a proper understanding of material?

Your kind reply will be very much appreciated.

Sincerely,

Emory & Brown, Jr.

Attachment

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UNITED STATES DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

WASHINGTON, D.C. 20535

September 24, 1974

Mr. Emory L. Brown, Jr. Box 82, Squankum Road Howell, New Jersey 07731

Dear Mr. Brown:

Reference is made to your letter dated September 17, 1974, relating to the comparison analysis of bullet fragments. It is pointed out that when bullet metals are analyzed in our Laboratory for the various elements they contain, they are not analyzed for the purpose of determining caliber, or manufacturer or inventory lot number. The lead fragments, for example, are compared to determine if they could have originated from a common lead source or homogenous lead supply at the time of manufacture.

The publication cited in my letter of April 2, 1974, was to give you some appreciation of the many factors involved in an analysis of bullet metal.

Obviously the size and the degree of contamination of particulate matter available for comparisons relate to the quality and quantity of significant data obtainable from direct comparison examinations. The conclusion an examiner draws from a lead comparison depends on the specific data so obtained.

Sincerely yours,

Clarence M. Kelley Director

Box 82 Squankum Road Howell, New Jersey 07731 February 20, 1975

Miss. Jane F. Smith, Director Civil Archives Division National Archives and Records Service, General Services Administration Washington, D. C. 20408

Dear Miss. Smith:

Subject: RECORDS OF THE WARREN COMMISSION: CD 81-b

The above mentioned document, an F.3.1., lab report, states that spectrographic examination was made on various specimens including certain bullet fragments as well as a whole bullet. However, the actual test data is absent from the report.

Generally, in Emission Spectrochemical Analysis the results are recorded photographically by means of Photographic Immage Formation of the spectra. What I would like, is a copy of each of those film plates relating to the testing of items Q 1, Q 2, Q 3, Q 4, Q 5, Q 8, Q 9, Q 14 and Q 15. Please advise me of the number of prints and the copying fee.

Very truly yours

Emory L Brown, Jr.

UNITED STATES OF AMERIC: GENERAL SERVICES ADMINISTRATION

National Archives and Records Service
Washington, DC 20408



February 28, 1975

Mr. Emory L. Brown, Jr. Box 82 Squankum Road Howell, NJ 07731

Dear Mr. Encry:

This is in reply to your letter of February 20, 1975, concerning the records of the President's Commission on the Assassination of President Kennedy.

We are not aware of any film plates relating to the spectrographic examination of the bullet and bullet fragments relating to the assassination among the records of the Commission. We have referred a copy of your letter to the FBI for a separate reply.

Sincerely,

(MISS) JANE F. SMITH

Director

Civil Archives Division



FEDERAL BUREAU OF INVESTIGATION

WASHINGTON, D.C. 20335

March 17, 1973

Tim. shory D. Dress, Jr. Bott 12 Equation Hosel Howell, Hew Jersey 07731

Lear Ir. Brown:

This is in raply to your latter dated Pabruary 10, 1970, addressed to the National Archives and Accords Service. A copy of your letter was referred to by office by Miss Jane F. Smith, Director, Civil Acchives Division, National Archives and Records Service, and was received March 5, 1975.

In connection with your request for a copy of each film plate relating to the spectrographic examination of items enumerated in your letter, our Laboratory Division is attempting to locate and identify the requested records. Latimates of your costs involved in the possible reproduction of the requested spectrographic plates are not presently available. An extension of time is necessary to complete the processing of your request. Please be assured that your request is being processed as promptly as possible.

Sincerely yours,

Clarance M. Ralley Director

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