

Wilber S. Anderson, courier for Uranium 235 from Y-12 to Chicago

(As published in The Oak Ridger's Historically Speaking column the week of July 21, 2025)

The method for transporting the Uranium 235 from Oak Ridge's Y-12 electromagnetic separation plant to Los Alamos varied. From March 1944 to June 1945, it was by passenger train. An Army officer dressed as a salesman and carried a briefcase that contained gold-lined coffee cup-sized containers of Uranium 235.

I have told this method many times and included it in The Oak Ridge Story – The War Years documentary film. Recently, I included it in a newspaper article in the Knoxville News Sentinel. A few days after that article was published, I received an email from a lady in Loudon. She said her father had been one of the couriers who took those briefcases of Uranium 235 to Chicago. Well, you know I responded to that email and asked if I could come talk to her. She said yes and gave me her address. She also mentioned she had a file folder of her father's papers. Needless to say, I was excited to get to see those papers.

When I got to her house, the first thing she showed me was a copy of detailed instructions for transporting the Uranium 235. The document was marked, SECRET... I said to her, "This document must be declassified." She agreed to allow me to bring a classification officer from Y-12 and let him take the document and get it reviewed by a person qualified to declassify such documents.

I have since learned that additional methods were used, such as passenger cars or trucks on designated routes with very specific instructions about how the trip would be done. Also, airplanes were used as the time came closer to the July 24, 1945, deadline placed on Los Alamos.

There is an official report dated June 16, 1945, that states: "Up to the present time, all shipments of product 25 to Site Y have been made by officer courier. On the day of a shipment, the material is picked up at Y-12 by two officers or an officer and agent of the Intelligence and Security Division at 10:30 A. M. (CT). They are armed and accompanied by an armed driver, also of the Intelligence and Security Division. The trip from Y-12 to Knoxville is made in an inconspicuous black Chevrolet Sedan bearing State of Tennessee registration. Couriers usually wear civilian clothes. They depart for Chicago at 12:50 P.M. (CT) on the "Southland" travelling in a drawing room which is regularly reserved. Arriving in Chicago early the following morning, they are met at Union Station by a Chicago Branch Intelligence Office car driven by an armed officer or agent and taken immediately to the Chicago Branch Office, where the material is delivered to the Shipment Officer. The second leg of the trip is made by men assigned to the Chicago Office. They depart with the shipment from the office at 11:15 A.M. (OCT) and are driven, again by an armed officer or agent, to the Dearborn Street Station. They immediately board the Santa Fe Chief, which leaves at 12:01 P.m. (CT). Bedroom accommodations, regularly assigned, are used. Couriers are instructed to keep room doors locked, not to mix with other passengers, and to leave their room only for meals. The Chief arrives at Lamy, New Mexico, at 2:10 P. M. (MT) where an armed officer or agent is waiting to transport the couriers to Site Y. The shipment is immediately delivered to the Intelligence Officer in the technical Area. On the second leg of the trip, couriers usually travel in uniform. Approximately 54 hours are required for the trip. Including rail fare, salary, and expenses of personnel, the cost of each such trip is approximately \$400."

This description is quite detailed, as are the orders given to Wilber S. Anderson. I have included photocopies of the orders with this Historically Speaking column. I believe you will enjoy reading the detailed instructions provided.

I also found references in the official history of the Manhattan Project History. You may find that book online at this link: <https://sgp.fas.org/library/mdhist-vol14.pdf>

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Manhattan District History Book 1, Volume 14, Section 5.5:

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b. Courier System. - It was necessary to establish a special courier system for the transportation of "Top Secret" documents and small quantities of highly classified materials. Under the system as originally set up, all "Top Secret" documents and materials were to be carried by officer personnel when available and, otherwise, by agents of the Counter-Intelligence Corps. In January 1945, it was decided that officer personnel only should be used for this purpose. Accordingly, approximately 25 officers were procured, to form an officer courier pool, and were assigned to Oak Ridge, New York, Chicago, Santa Fe, and Richmond. In addition, guard couriers as well as officers were used to transport small but vitally important quantities of highly classified material by rail, closed space. They frequently traveled in civilian clothes and carried the material in ordinary luggage, in order to avoid attracting attention. They were instructed to keep the material being carried in their immediate physical possession, in a locked compartment on the train at all times, and to transport the material to and from the train by armed guard escort. By March 1945, courier shipments of radioactive materials had become so numerous that it became necessary to

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f. Air Transport. - During the month of July 1945, when activities at Site "Y" were in the most critical stage, air transport was used on three occasions to expedite the delivery of U-235 from the Y-12 Plant at Oak Ridge. Arrangements were made with the Army Air

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~~SECURITY INFORMATION~~

Forces to have a transport plane ready at the Knoxville Airport at an appointed hour on each occasion. The material was transferred from the Y-12 Plant to the Airport by special military escort and accompanied on the plane trip by two officer couriers from the Shipment Security Section. A military escort was again provided from the Santa Fe Airport to Site "Y". Numerous other classified shipments by ATC plane were made when urgency of delivery was paramount.

As you can tell, the method changed near the end of the war when getting the Uranium 235 to Los Alamos became even more urgent.

The following was provided to me by Tom Kunkle, a historian who has done extensive research on Los Alamos and the Manhattan Project:

"Accompanied by MED Special Security Division officers, the final shipments of HEU 'green salt' were moved from Y-12 to Los Alamos aboard three special flights from Knoxville to Santa Fe (MDH I:14 pg. 5.8); see Appendix I for and accounting of the special procedures used in shipping 'Product 25' from Y-12 to Los Alamos. The final weapon parts were cast and completed in Los Alamos on 24 July (MDH VIII:2 pg. XVII.5). The HEU projectile was delivered to Tinian by the Navy heavy cruiser USS Indianapolis on 26 July, only a few days before her tragic sinking off Peleliu (MDH VIII:2 pg. XIX-8). The HEU target insert arrived at Tinian on 28 and 29 July in three separate parts, as the only cargo of the Air Transport Command C-54 cargo aircraft (Ibid). The Project Y Combat Field Team assembled the fizzle components into the Little Boy L-11 combat drop unit."

Note: Product 25 refers to the shortcut name for Uranium 235. It was known as "25," and plutonium was known as "49." The method used was to take the last number of the atomic number "2" from atomic number 92 for Uranium 235, and the last number, "5" of the isotopic number 235 for Uranium

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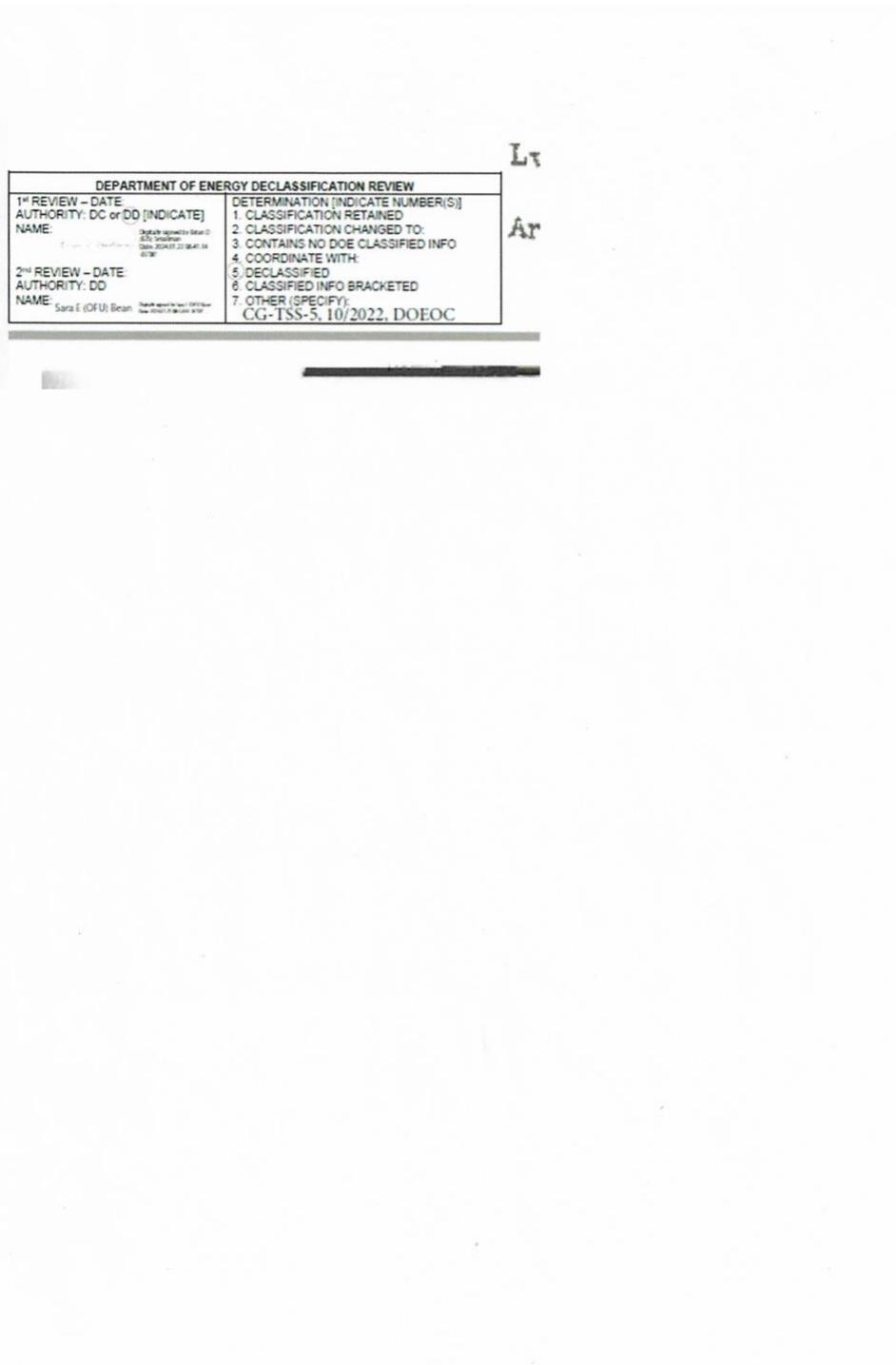
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235, and the shortcut was then "25." The same method was used for plutonium, the "4" from atomic number 94 and the "9" from the isotopic number 239.

One last story about the Uranium 235 shipments from Y-12. The very first shipment was processed by Bill Wilcox. Bill told me this story. He was a chemist, and his duty on this day was to dry out the Uranium 235 shipment. It was a very small amount, and he placed it in a glass funnel-shaped container, which was exactly the right size to suspend it in a small metal can, with the lip of the funnel-shaped glass container exactly resting on the opening of the can. He set a timer for the oven to heat and dry out the material. He then went home for the night. When he returned to work the next morning, his supervisor met him at the gate and said, "You better go hide somewhere, the big boss is looking for you and he is going to fire you!" Bill asked what was wrong... His supervisor said, "You know that material you left in the oven last night. Well, the heat expanded the metal, and the glass fell into the can. Then the oven shut down after the timer ran out and the metal retracted, shattering the glass into a million pieces, mixing it with the uranium!" Bill said that was the closest he ever came to getting fired.

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Cover Page showing declassification of Orders for Wilber S. Anderson's courier duty transporting Uranium 235 "25" from Y-12 to Chicago

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NO 20 OF 50 a

ARMY SERVICE PERSONS
UNITED STATES ENGINEER OFFICE
MANHATTAN DISTRICT
OAK RIDGE, TENNESSEE

RIIMI-6 17 August 1945

Subject: Shipment of Y-12 Product to Site Y.
To: All Concerned.

1. On 18 September 1945, there will be a shipment of TOP SECRET material from Y-12 to Site Y. The couriers assigned will travel by-rail, in closed space, with a change of trains in Chicago.

2. Personnel:

COURIER IN CHARGE:	<u>Lt. J. Seingarten</u>
ASSISTANT COURIER:	<u>Lt. W.S. Anderson - Oak Ridge to Chicago</u> <u>Lt. Hugo Koranda - Chicago to Santa Fe</u>
SHIPMENT OFFICER, OAK RIDGE:	<u>Capt. J. .. Haley</u>
SHIPMENT OFFICER, CHICAGO:	<u>Lt. D. A. Metzger</u>
SHIPMENT OFFICER, SITE Y:	<u>Lt. B. Roszman</u>

3. Equipment and Clothing:

- a. Weapon: 38 cal. Revolver worn concealed on person.
- b. Film Badge: Worn concealed on person.
- c. Dress: Uniform (insignia other than Engineer) - ~~XXXXXXXXXXXX~~

4. Schedule:

Lv. Knoxville at <u>1245</u> on <u>9/18/45</u> via <u>L&N & Penn. Railroads</u>
Arr. Chicago at <u>0730</u> on <u>9/19/45</u> station <u>Union</u>
Lv. Chicago at <u>1201</u> on <u>9/19</u> via <u>Santa Fe "Chief" - Dearborn Sta.</u>
Arr. Lamy at <u>1615</u> on <u>9/20</u> via <u>" " "</u>
Lv. Lamy at <u>2145</u> on <u>9/20</u> via <u>Santa Fe "California Limited"</u>
Arr. Chicago at <u>0730</u> on <u>9/22</u> station <u>Dearborn Sta.</u>
Lv. Chicago at <u>1245</u> on <u>9/22</u> via <u>N.Y.C. I.C. Station</u>
Arr. Knoxville at <u>0630</u> on <u>9/23</u> via <u>Southern "Southland"</u>

CLASSIFICATION OF SOURCE INFORMATION	
1. AUTHORITY TO DECLASSIFY	2. DATE OF DECLASSIFICATION
3. AUTHORITY TO RECLASSIFY	4. DATE OF RECLASSIFICATION
5. AUTHORITY TO EXTEND	6. DATE OF EXTENSION
7. AUTHORITY TO REVOKE	8. DATE OF REVOCATION
9. AUTHORITY TO SUSPEND	10. DATE OF SUSPENSION
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Subject: Shipment of Y-12 Product to Site Y.

- p. Obtain railroad tickets to Lamy and arrange for return tickets to Knoxville through the Chicago Shipment Officer.
- q. Proceed to train at Chicago with armed driver from Chicago Shipment Office.
- r. Observe train instructions related above for trip from Chicago to Lamy, New Mexico.
- s. Upon arrival at Lamy, New Mexico, wait at station for Site Shipment Officer or his representative who will drive you to Site Y.
- t. Turn over material to Shipment Officer at Site Y and obtain proper receipts.
- u. Courier in charge will telephone or teletype Shipment Office at Oak Ridge, advising of safe arrival at Site Y.
- v. Inquire as to empty containers to be returned and make arrangements to take custody.
- w. Arrange for railroad tickets for return to Chicago through Site Y Shipment Officer.
- x. Make arrangements for transportation to train through Site Shipment Officer; avoid unnecessary waiting at station by telephoning for train information prior to leaving Site Y.
- y. If empty containers are returned, they are to be treated as ~~TOP SECRET~~.
- z. Upon arrival in Chicago, proceed to the Chicago Office; deposit empty containers in vault; pick up railroad tickets from Chicago Shipment Officer; advise Oak Ridge Shipment Officer of safe arrival by telephone or teletype.
- aa. Upon arrival at Knoxville, you will be met by car from Mc Pool; proceed to Administration Building and deposit empty containers and equipment with Duty Officer in his room.

6. Shipment Officers will observe following procedure:

a. Oak Ridge

- (1) Arrange for armed driver to accompany couriers to Knoxville.
- (2) Advise Chicago Shipment Officer of time of departure couriers.
- (3) Advise Site Y Shipment Officer of receipt of material

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5. Couriers will observe the following instructions:
 - a. Read District Letter, dated 10 May 1945, entitled "Instructions to Couriers".
 - b. Arrange personal finances to provide self with adequate funds for the entire trip.
 - c. Obtain Travel Orders, Travel Requests and railroad tickets from the Administrative Section.
 - d. Provide self with required clothing and equipment set forth in paragraph 3 above.
 - e. Keep record of number of hours of exposure to material and report this upon return to Oak Ridge.
 - f. Report to Shipment Officer at 0930 on 9/18/45 for any additional instructions.
 - g. Arrange admittance passes to Y-12; proceed to Security Office, Y-12, pick up material and execute proper receipts.
 - h. Telephone Oak Ridge Shipment Officer, advising amount of material being carried.
 - i. Avoid unnecessary waiting at Knoxville railroad station by telephoning for information on train schedule and arranging time accordingly.
 - j. Proceed to Knoxville with armed driver. Not more than one officer to leave the vehicle for any purpose such as meals, etc.
 - k. Board train as soon as it arrives in station; proceed to space assigned; lock the compartment door; allow no one to enter except train personnel.
 - l. At least one officer will keep the material within his immediate physical possession at all times during the entire trip. Only one officer at a time will leave for meals on the train.
 - m. Upon arrival at Chicago, wait on station platform for Chicago Shipment Officer or his representative, who will drive you to the Chicago office.
 - n. Place material in vault at the Chicago office until ready to leave for train.
 - o. Courier in charge call or teletype information of safe arrival in Chicago to Oak Ridge Shipment Officer.

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(4) Arrange for Motor Pool car to meet couriers in Knox

b. Chicago

(1) Arrange to meet couriers at railroad station and drive them to office.

(2) Arrange train reservations for couriers from Chicago to Lamy; and from Chicago to Knoxville.

(3) Advise Oak Ridge and Site Y of time of departure of couriers for Site Y, by teletype.

(4) Furnish armed driver and transportation for courier railroad station on trip to Lamy.

(5) Furnish armed driver and transportation for courier railroad station on return trip to Knoxville if empty containers are being carried.

c. Site Y

(1) Arrange to have armed driver meet couriers at railroad station in Lamy and drive them to Site Y.

(2) Receive material from couriers and execute receipts

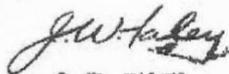
(3) Arrange train reservations for return trip to Chicago

(4) Furnish transportation to railroad station on return trips, with armed driver if empty containers are carried.

d. General

Transportation between sites and railroad stations will be by radio cars whenever radio cars are available. Contact should be maintained with site radio station.

For the District Intelligence Officer:



J. W. HALEY,
Captain, Corps of Engineers