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CLANDESTINE SERVICES HISTORY

THE BERLIN TUNNEL OPERATION

1952 - 1956

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PREFACE

PEJOINTLY (the Berlin Tunnel project) came into being sometime in 1952 (the exact date cannot be established) and ceased as an active operation in the summer of 1956. The writer served as Headquarters case officer on the project from the winter of 1952-1953 until the summer of 1954 and then as the field case officer until February 1955.

CIA Statute [redacted] a senior Office of Communications officer in the project; Mr. William K. Harvey, Chief, Berlin Operating Base, 1952-1958; and CIA Statute [redacted] Chief, FI/Division D, 1952-1958, were intimately associated with the planning and implementation of the project at the policy level and very kindly offered suggestions for the preparation of this manuscript. Their comments have been incorporated and are greatly appreciated. Several other individuals, including CIA Statute [redacted] who were in a position to offer valuable advice were absent from Headquarters during the period the paper was being prepared and thus unavailable to assist.

When this project was first discussed with the then Director of CIA, Mr. Allen Welsh Dulles, he ordered that, in the interests of security, as little as possible concerning the project would be reduced to writing. It is probable that few orders have been so conscientiously obeyed, and yet there

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are a great many cubic feet of files connected with this project. These files mainly concern technical and administrative matters. Only those details which, in the opinion of the writer, are necessary to a broad understanding of the manner in which the project's objectives were accomplished have been included in this paper. Those interested in additional data may wish to consult the files.

In addition to setting forth significant developments, the writer has attempted to provide insight into the reasons for certain courses of action. At times this required a speculative approach. The judgments derived from such speculation were shared by all those actively concerned in the management of the project, and it is the writer's hope that they are accurately expressed in the following paper. Any error in this respect, however, is the sole responsibility of the writer.

CIA Statute

August, 1967

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I. INTRODUCTION

The exact moment when the idea emerged of digging a tunnel to intercept Soviet and East German communications is somewhat obscure. A number of factors must be considered, among them the following:

a. As early as 1948 U.S. Intelligence Officers became interested in the benefits to be derived from tapping Soviet and Satellite landlines on a scale not previously considered necessary. The loss of certain sources during this period created gaps in our intelligence coverage which were particularly unfortunate during this period of Cold War escalation. It became evident that the tapping of certain selected landlines might produce the information needed to fill a number of the gaps in our overall intelligence picture.

b. In the late 1940's and early 1950's the U.S., through the briefings of "returnee" German scientists (those who were taken by the Soviets after World War II to work in Russia) and other sources, became aware of a new Soviet voice secrecy device which the Soviets referred to usually as "VHE CHE." ^{I/} It soon became evident that

^{I/}
In normal usage "VHE CHE" means "high frequency". The Soviets, however, in context, used this term for a special speech scrambling device developed to provide security to their high level communications.

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the Soviets planned. 50X1
50X1

c. In the late 1940's the Office of Communications, in the course of its continuing efforts to provide secure communications for the Agency, became aware of a principle which, when applied to target communications, offered certain possibilities. Plans to exploit this technique were immediately formulated.

These factors then served as additional incentives (above and beyond our normal collection requirements) to focus attention on Soviet landline targets. In mid-1951 exploratory discussions were held in Washington to plan the mounting of an attack on Soviet landlines in East Germany with special emphasis to be placed on the Berlin area. As a result of this conference, 50X1
50X1

50X1 an agent network was set up which was successful in penetrating the East Berlin office of the East German Post and Telecommunications network.

Vital information on the 50X1
50X1

50X1 first became available 50X1

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during the latter part of 1951, and by March 1952 all of the pertinent technical material had been assembled and sufficiently analyzed to permit the pinpointing of the most important Soviet circuits. 50X1

50X1

50X1

Subsequent events proved this information to be completely correct.

Various methods of tapping these circuits were explored and one sampling operation was run in the East Zone, unfortunately with negative results. By January 1953, however, the effectiveness of the penetration network 50X1

50X1

had become such that a 15-minute sample was obtained of the prime target circuit. This was accomplished

by 50X1

50X1

cable pair to the West Berlin Post Office where it was recorded.

This operation continued for some six months 50X1

50X1

for a total of almost two hours. The longest continuous sample obtained was 29 minutes and most samples were of two to three minutes' duration. Special mention should be made of the fact that it was necessary to maintain a 24-hour watch over a six-month period on "our" end of the cable to record these

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samples 50X1
50X1

Meantime collateral collection effort continued on the communications systems involved and the Office of Communications developed techniques for recovering the text from the magnetic tape recordings of the target signal. Somewhat ironically, the first actual material recovered proved to be a recording of a student teletypist practicing on the "home keys". While perhaps disappointing from the standpoint of intelligence content, this material served to prove the technical possibility 50X1

At this point (mid-1953) we knew it could be done - the next step was the problem of installing a permanent tap on the target lines.

Precisely at what point the idea of a tunnel for the purpose of tapping the target cables began to come into focus cannot be pinpointed. In 1951, the British advised CIA that they had for some years been tapping Soviet cables through a system of tunnels in the Vienna area and offered to share the take with the U.S. The suggestion was made by the British at

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the time that similar opportunities might be present in the Berlin area. While it should perhaps be possible to credit one individual with the initial concept, it appears to be a bit difficult to do so. At any rate, the British and CIA continued to pool collateral information, and by May 1963

50X1

the idea of a tunnel to tap the target cables began to take definite shape. 50X1

50X1

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II. PLANNING

Inspection of all sites from which it might be possible to tunnel from the U.K. or the U.S. Zones to the target cables served to narrow the choices to two spots: one in the British and one in the U.S. Zone. The site actually used (see figs. 1, 2, and 3) was selected after careful deliberation which included, but was not limited to, the following factors:

a. The location of the permanent water table (which is normally relatively high in Berlin) was ascertained to be 32 feet below ground surface. It was considered that this fact would obviate the necessity for the use of compressed air, watertight locks, and watertight construction with a corresponding reduction in the attendant engineering problems.

b. The length of the tunnel was considered to be not impractical although it far exceeded anything which had been done by the British in Vienna.

c. Land was available on which to construct an installation from which to begin the tunnel.

d. Complete collateral information on the area was available, including the target cable plans, aerial photographs, and the plans for all utilities serving the area.

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Figure 1 - Map of Berlin

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Figure 1 - Map of Berlin

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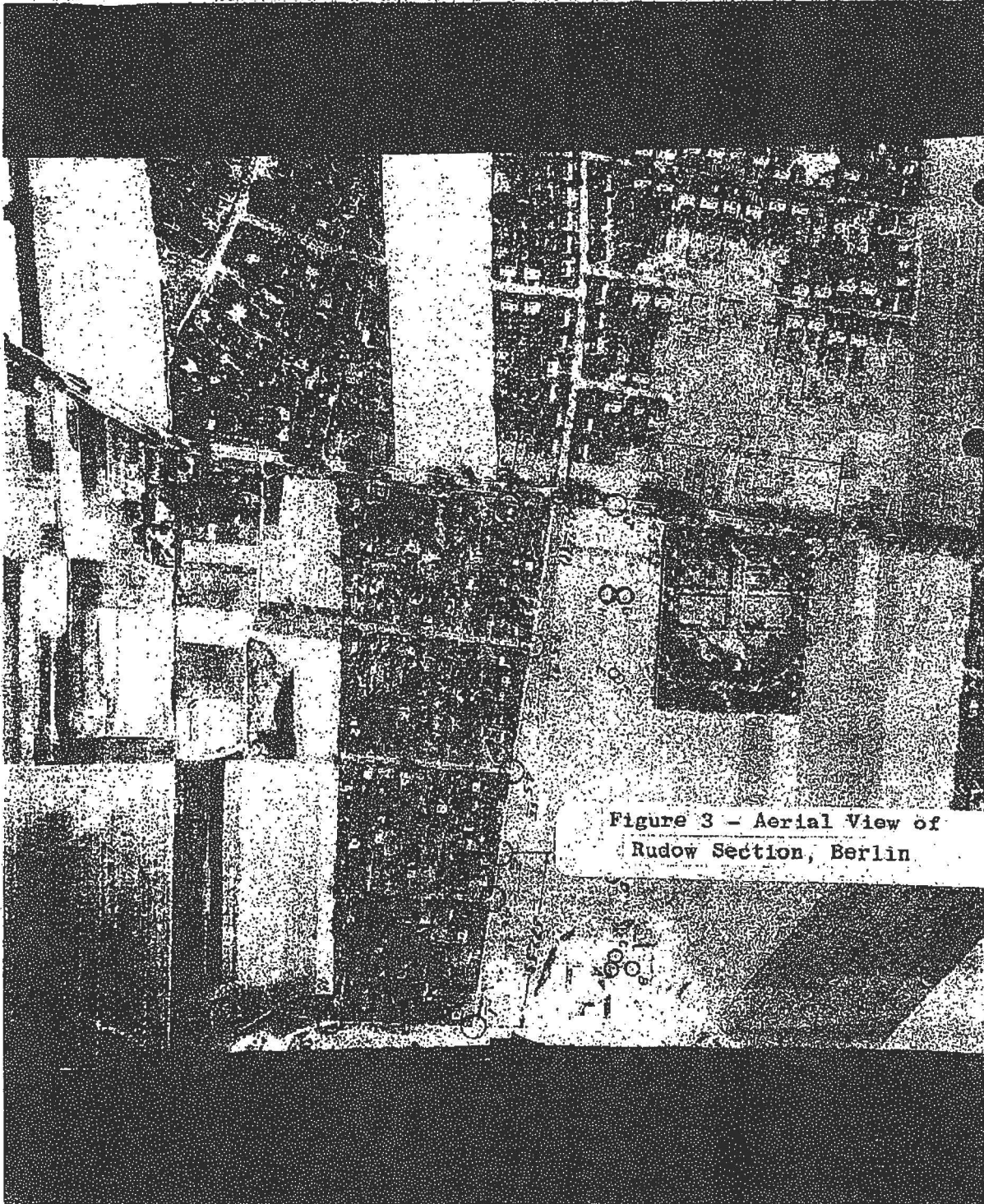


Figure 3 - Aerial View of
Rudow Section, Berlin

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At this point the following major questions remained unanswered:

a. Was it indeed possible to dig a tunnel of this magnitude (approximately 1500 feet) clandestinely, considering the fact that the border at this point was heavily and constantly patrolled by the East Germans, and hit the targets?

b. If the answer to the above was favorable, what was to be done with the spoil (reckoned at approximately 3,000 tons of sand)?

c. What type of cover installation could be built in such a remote area (this portion of Berlin was at that time a "squattersville" of shacks and hovels constructed from rubble by refugees from the East German Zone)?

In retrospect the first question, "Could the tunnel be dug?", was never really a debatable one---those concerned more or less decided that given sufficient money and personnel the job could be done. (This judgment fortunately proved sound.) The second question, "Where do we put the dirt?", haunted the minds of project personnel for many weeks and a great many ingenious ideas were brought forth and discarded for one reason or another until the suggestion was made facetiously that we "dig a hole and put the dirt in it." This in effect was the solution. At this time no convincing cover story had

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suggested itself and the current consensus favored making the cover compound an element of the Quartermaster Corps with a rather vague mission of housing items that should be dispersed for one reason or another in a remote area of Berlin. Space requirements for the recording and associated equipment were such that a building of warehouse proportions was needed; so it was decided to build a two-story warehouse. Local engineers were told that it had been decided to experiment with a new type of warehouse, one which would be half above the ground and half below with a ramp suitable for running fork lift trucks from the basement to the first floor. Berlin had been selected as the site for this warehouse because (a) construction would be cheap due to low labor rates and (b) the work would benefit the Berlin economy. So the basement was dug under the eyes of the local border guards and we had "our hole to put the dirt in." ^{2/} (See fig. 4.)

While the "warehouse cover" was adjudged sufficient to solve the temporary problems of construction, it was not deemed solid enough to carry the project for an extended period. At this particular time the intelligence community was becoming increasingly interested in the potential of 50X1

^{2/} As an interesting sidelight, we heard later that the Quartermaster Corps became seriously interested in this type construction because the ratio of cost to storage space available was amazingly low. We do not know if any follow-up ever occurred.

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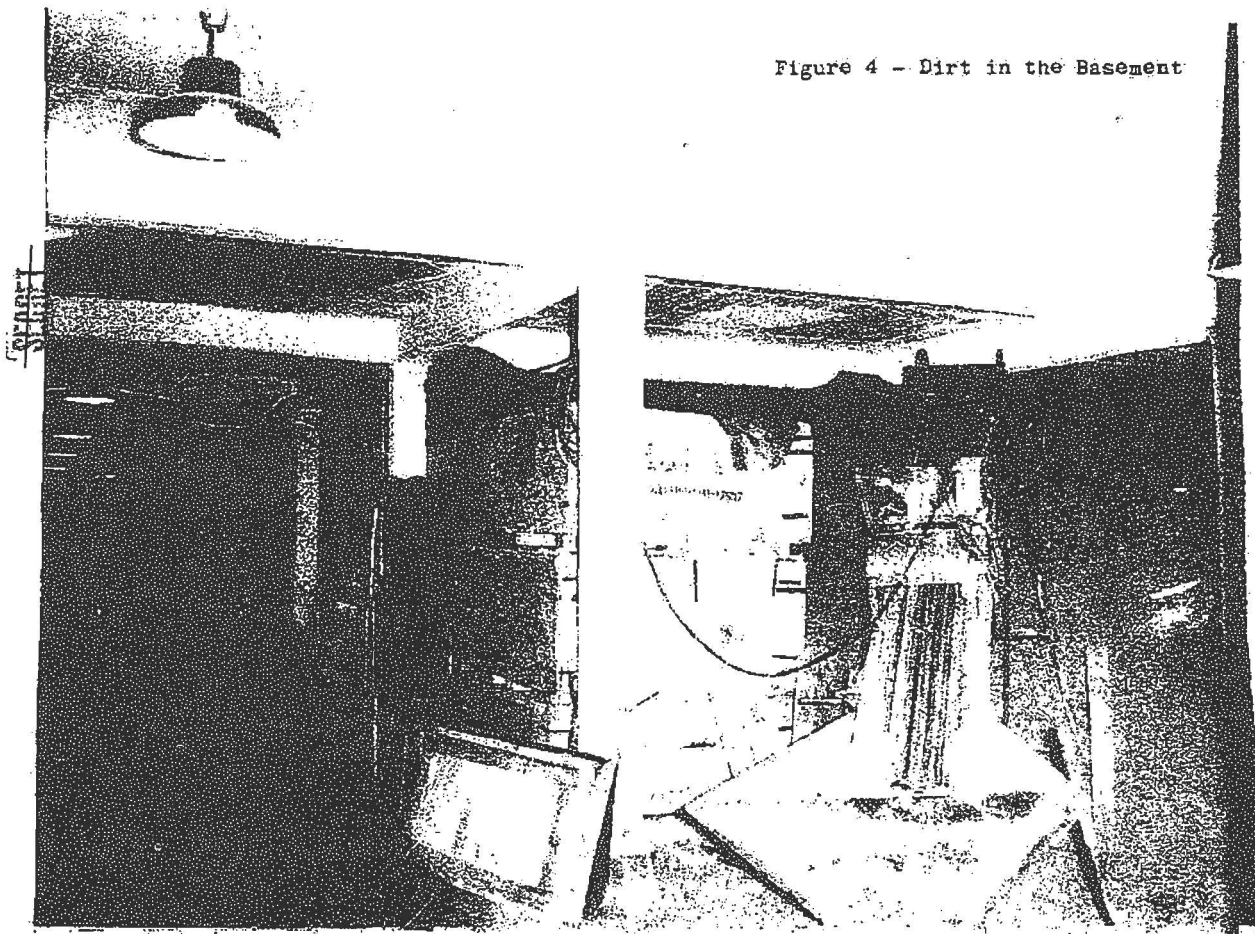


Figure 4 - Dirt in the Basement

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50X1

50X1

For example:

a. Excuse was provided for maintaining extraordinary physical security and tight compartmentation.

50X1

in the Top Secret category at this period in its evolution.)

b. 50X1

50X1

c. Legitimate targets 50X1 existed in the area.

d. The existence 50X1 at the site provided the opposition with an explanation for the site's existence. In spite of the fact that any form of 50X1 presents a priority target, it was argued that presenting the opposition with a reason for the site's existence would make it a less prominent target than leaving it a "mysterious something." The

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site did in fact 50X1 [REDACTED] In addition, the sight of the Soviets and East Germans standing on top of the tunnel with binoculars focused 50X1 [REDACTED] 50X1 [REDACTED] on the roof of the installation provided considerable amusement to personnel at the site. (See fig. 5.)

Joint U.S.-U.K. planning for the project continued throughout 1953 and in December of that year the Director of Central Intelligence approved the terms of reference which covered formal negotiations with the British for the implementation of the project. A series of conferences in late 1953 and early 1954 led to the following decisions:

a. The U.S. would:

(1) procure a site, erect the necessary structures, and drive a tunnel to a point beneath the target cables;

(2) be responsible for the recording of all signals produced 50X1 [REDACTED] 50X1 [REDACTED] and

(3) process in Washington all of the telegraphic material received from the project.

b. The British would:

(1) drive a vertical shaft from the tunnel's end to the targets;

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Figure 5 - Vopos Studying the Installation



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Figure 5 - Vopos Studying the Installation

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(2) effect the cable taps and deliver a usable signal to the head of the tunnel for recording; and

(3) provide for a jointly manned U.S.-U.K. center in London to process the voice recordings from the site.

It was jointly agreed that each side would keep the other advised in detail on all aspects of the project. It should perhaps be said here that the bilateral aspects of this operation (with one notable exception which will be discussed later (see BLAKE, page 23)) caused few, if any, problems. The skills developed by the British during the Vienna operations stood us in good stead and the distribution of effort and expense proved in the end to be reasonably equitable.

Activity thus proceeded on three fronts - in Berlin steps were taken to lease the necessary land and right-of-way easements for the site and a contract was let with a German contractor. The compound, which was roughly the size of an average city block, was fenced with chain-type high security fencing and contained the main operations building (the one story with basement type warehouse previously described), combined kitchen-dining facilities and barracks, and another building which housed three diesel driven generators to provide power for all facilities. (See fig. 6.) Sanitary

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Figure 6 - East German View of the Compound



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Figure 6 - East German View of the Compound



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provisions consisted of a cesspool. (The logical placement of the cesspool was such that it was situated only a few feet from the tunnel site. It later developed when the tunnel was dug that this was quite unfortunate because working conditions in the sector adjacent to the cesspool were, to say the least, highly unpleasant.) Planning called for the completion of this work on 27 August 1954.

For assistance in actually digging the tunnel it was decided to request help from the Army Corps of Engineers, and to this end the Chief of Staff and the G-2, U.S. Army, were briefed on the project. The initial contact with the Army was made personally by Mr. Allen Dulles to General Matthew B. Ridgway. Fortunately General Arthur Trudeau, a trained engineer, had just been appointed A.C. of S., G-2. From the first moment he learned of the operation, General Trudeau was an enthusiastic supporter of the concept. The Army selected Lt. Colonel Leslie M. Gross (the only available member of the Engineering Corps with any experience in tunneling) to head the project. This proved to be an excellent choice for Lt. Colonel Gross turned in an outstanding job. By mid-summer of 1954 he had firmed up the engineering plans, selected a crew of engineering personnel, and actually constructed a mock-up tunnel some 150 yards long working under operational conditions at a high security base in New Mexico.

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