## Memorandum • United States Government

MR. HARBÓ

DATE: Dec. 8, 1952

D. X. PARSONS FROM:

MICROPHONE AND TECHNICAL SUBJECT:

INSTALLATIONS FOUND IN U. S.

ESPIONAGE - R EMBASSIES ABROAD:

## **PURPOSE**

The purpose of this memorandum is to recommend that we return to the U. S. Army Signal Corps Laboratories at Fort Monmouth, New Jersey, the ultra high frequency radio transmitter used during the research involving the Russian resonant cavity microphone. This should be returned by SAR. W. Swartz who will then have an opportunity to discuss. with the Signal Corps experts any work they may have independently done in this field.

## DETAILS

In the initial steps of the technical project to explore the Russian resonant cavity microphone, it will be recalled that we had no transmitters in the range of frequencies in which the microphone was found to operate. The first operation of the microphone was achieved with a signal generator borrowed from the . U. S. Bureau of Standards which had a power of only a fraction of one watt. Since representatives of the Signal Corps were present at the initial technical discussion, they were aware of the work which the Bureau was doing. I inquired of the Signal Corps representatives as to whether they might have transmitting equipment which we could borrow having greater power than the Bureau of Standards' generator. Signal Corps people were most cooperative and one of their experts phoned from the Fort Monmouth, New Jersey, Laboratories to inquire of the specific equipment needed and thereafter, at their own expense, brought a transmitter of approximately four watts power to the Laboratory. This has been most helpful in completing our Laboratory work on the instrument.

We are now ready to return this piece of equipment to the Signal Corps Laboratories at Fort Monmouth, New Jersey. they have previously advised me that they were independently making, some studies of the operation of resonant cavity microphones themselves, it is entirely possible that they have some information which would be of interest to us particularly in connection with the possible future acquisition of activating equipment.

We presently have two resonant (cavity microphones which

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are similar to the Russian instrument. We also have two receiving units which our personnel built at the Naval Research Laboratory, but we have no transmitters of any kind which can be used to activate the microphones either in searching for these listening devices or any desired operation of them. Independently of the return of the equipment which the Signal Corps generously brought to us, I think it would be to our benefit to have SA Swartz visit Forth Monmouth to see what work they have done. He will on the occasion of this visit return the transmitter and thank the Signal Corps for its use.

## RECOMMENDATION

That SAR. W. Swartz of the Laboratory drive to the Signal Corps Laboratories at Fort Monmouth, New Jersey, and return the transmitting equipment which they loaned to us at our request, and also spend a day or two discussing any developments in this field which would contribute to our interest.

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