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UNITED STATES ATOMIC ENERGY COMMISSION

VOLUME XI

In the Matter Of:

J. ROBERT OPPENHEIMER

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I N D E X

<u>Witness</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
KATHERINE OPPENHEIMER	1990			
CHARLES CHRISTIAN LAURITSEN	2009	2043	2067 2071	2069
JERROLD R. ZACHARIAS	2077	2090	2097	
OLLIVER E. BUCKLEY	2101	2111		
ROBERT FOX BACHER	2119	2151	2181	

1988

APICHBOW

UNITED STATES ATOMIC ENERGY COMMISSION
PERSONNEL SECURITY BOARD

In the Matter of :
J. ROBERT OPPENHEIMER :

Room 2022,
Atomic Energy Commission,
Building T-3,
Washington, D. C.
Monday, April 26, 1954.

The above entitled matter came on for hearing,
pursuant to recess, before the Board, at 9:30 a.m.

PERSONNEL SECURITY BOARD:

MR. GORDON GRAY, Chairman.
DR. WARD T. EVANS, Member.
MR. THOMAS A. MORGAN, Member.

PRESENT:

ROGER ROBB, and
C. A. ROLANDER, JR., Counsel for the Board.

J. ROBERT OPPENHEIMER.
LLOYD K. GARRISON,
SAMUEL J. SILVERMAN, and
ALLAN B. ECKER, Counsel for J. Robert Oppenheimer.
HERBERT S. MARKS, Co-Counsel for J. Robert Oppenheimer.

1989

P R O C E E D I N G S

MR. GRAY: Before we start, Mr. Garrison, Dr. Evans has a statement he would like to make for the record. With your consent, I should like this to appear in the record at this point.

DR. EVANS: Mr. Chairman, for the record, I would like to state that I think Dr. Bush was in error when he stated that the members of the Board made a mistake when they agreed to serve on this Board unless the letter from General Nichols was rewritten. Personally I knew very little about this case when I agreed to serve on it at considerable inconvenience to myself, and I did so because I thought it was my duty to serve.

MR. GRAY: Mrs. Oppenheimer, do you wish to testify under oath?

MRS. OPPENHEIMER: Yes.

MR. GRAY: Would you be good enough to stand and raise your right hand. Your name is Katherine Oppenheimer?

MRS. OPPENHEIMER: Yes.

MR. GRAY: Katherine Oppenheimer, do you swear that the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

MRS. OPPENHEIMER: I do.

Whereupon

KATHERINE OPPENHEIMER

was called as a witness, and having been first duly sworn, was

examined and testified as follows:

MR. GRAY: Will you be seated, please.

Mrs. Oppenheimer, it is my duty to remind you of the existence of the perjury statutes. We will assume that you are familiar with them.

I should also like to say to you what I have said to the other witnesses, and that is that we consider these proceedings a confidential matter between the Atomic Energy Commission and its officials on the one hand, and Dr. Oppenheimer and his witnesses and representatives on the other. The Commission will issue no public releases, and we express the hope that witnesses will take the same view.

THE WITNESS: Right.

MR. GRAY: Mr. Garrison, will you proceed?

DIRECT EXAMINATION.

BY MR. SILVERMAN:

Q Mrs. Oppenheimer, you are the wife of Dr. J. Robert Oppenheimer?

A I am.

Q What were you doing in the autumn of 1933?

A I was attending the University of Wisconsin.

Q You were attending the University of Wisconsin?

A That is right.

Q As an undergraduate student?

A Yes.

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Q What did you do during the Christmas holidays of 1933?

A I went to stay with friends of my parents in Pittsburgh.

Q Will you tell us the circumstances of your meeting Joe Dallet?

A Yes. I have an old friend in Pittsburgh, a girl called Selma Baker. I saw quite a bit of her at that time. It was Selma who said she knew a Communist, and would we like to meet him. Everybody agreed that would be interesting. There was a New Year's Party. Selma brought Joe Dallet.

Q Did you and he fall in love during that holiday period?

A We did.

Q Did you decide you would be married?

A We did.

Q Did you fix a date for that?

A Yes. I decided to go back and finish my semester at Wisconsin and then join Joe in Youngstown and get married there.

Q Is that what you did?

A Yes.

Q The semester ended at the end of January, I suppose, of 1934, and you went to Youngstown?

A Early February. I don't know.

Q Joe Dallet was a member of the Communist Party?

A He was.

Q And you knew that he was?

A Yes.

Q During your life with him, did you join the Party?

A Yes, I did.

Q Will you tell us why you joined the Party?

A Joe very much wanted me to, and I didn't mind. I don't know when I joined the Party. I think it was in 1934, but I am not sure when.

Q Did you do work for the Party?

A Yes.

Q What kind of work?

A I mimeographed leaflets and letters. I typed. I did generally office work, mostly for the steel union that was then in existence.

Q What were most of your activities related to?

A Mostly to the union at first, and later anything that came up, I was sort of general office boy.

Q Did you pay dues to the Party?

A Yes.

Q How much were the dues?

A I believe mine were ten cents a week.

Q Would you describe the conditions under which you lived with Joe Dallet as those of poverty?

A Yes.

Q How much rent did you pay?

A Five dollars a month.

Q As time went on, did you find that you became devoted to the Party or more devoted or less devoted or more attached or less attached?

A I don't think I could ever describe it as a devotion or even attachment. What interest I had in it decreased.

Q Did Joe's interest decrease?

A No, not at all.

Q Was that a cause of disagreement between Joe and yourself?

A I am afraid so.

Q Did you and Joe ultimately separate?

A We did.

Q When was that?

A About June of 1936.

Q Would you say that your disagreement with Joe about your lack of enthusiasm, shall we say, for the Party, had something to do with the separation?

A I think it was mostly the cause of the separation. I felt I didn't want to attend Party meetings or do the kind of work that I was doing in the office. That made him unhappy. We agreed that we couldn't go on that way.

Q Did you remain in love with him?

A Yes.

Q Where did you go when you separated?

A I joined my parents in England.

Q That was about June of 1936?

A I think it was June.

Q Did a time come when you wrote Joe that you were willing to rejoin him.

A Yes. I wrote him probably very early in 1937, saying that I would like to rejoin him.

Q Did he answer you?

A He answered saying that would be good, but he was on his way to Spain to fight for the Republic cause, and would I please instead meet him in Paris.

Q Where did you meet him?

A I met him at Cherbourg aboard the Queen Mary as it docked.

Q That was in 1937?

A Yes. I think it was March. I am not sure.

Q Did you go with him then to Paris?

A We took the boat train and went to Paris.

Q How long did you stay in Paris with him.

A I would think about ten days. It could have been a week, it could have been two weeks, but roughly --

Q Do I understand that he had a furlough or some time off or something because of the reunion?

A That is right.

Q What did you do during that ten days or so in Paris?

A We walked around and looked at Paris, went to restaurants, the sort of thing one does in Paris. We went to the museums and picture galleries. We went to one large political meeting, a mass meeting, where they were advocating arms for Spain.

Q Who was the speaker?

A Thorez.

Q He was a Communist?

A Yes.

Q Do you recall any other political activities if that might be called one during that period or that ten days or so?

A I think one should describe as a political activity that one place I saw where people who were going to Spain were being checked in and told how to do it. I went there once.

Q As a spectator?

A I had nothing to do

Q Then Joe went off to Spain.

A Yes.

Q During that period did you meet Steve Nelson?

A Yes. I met him in Paris. I saw him several times. I think Joe and I had meals with him occasionally.

Q What did you talk about with him?

A I don't know; all kinds of things. I think among

other things the only thing that interests this Board is the fact that we talked of various ways of getting to Spain which was not easy.

Q Then Joe went to Spain at the end of that ten days or so?

A Yes.

Q What did you do?

A I went back to England.

Q Did you try to do anything about joining Joe?

A Yes, I wanted to very much.

Q What was your plan as to how you would join Joe?

A I was told that they would try to see if it were possible, and if it were, I would hear from someone in Paris and then go to Paris, and be told how to get there.

Q Was there talk of your getting a job somewhere in Spain?

A Yes. I don't know what, though.

Q Were you ultimately told that it was possible?

A I got a letter from Joe saying that he found me a job in Albacete.

Q Did you then go to Paris?

A First I stayed in England and waited quite a while until October.

Q What year was this?

A 1937. I then got a wire saying I should come to

Paris, and I went. Do you want me to go on?

Q What happened when you got to Paris?

A When I got to Paris, I was shown a telegram saying that Joe had been killed in action.

Q What did you do then?

A I was also told that Steve Nelson was coming back from Spain in a day or two, and I might want to wait and see what Steve had to say. He had a lot to tell me about Joe.

Q Did Steve come?

A Yes.

Q And met you in Paris?

A Yes.

Q Did you talk with Steve?

A Yes, I spent at least a week there. I saw Steve most of the time.

Q What did you talk about with him.

A Joe, himself, myself.

Q Would you say that Steve was kind to you and sort of took care of you during this period?

A He certainly was, very.

Q Did you discuss with Steve what you would do now?

A I did.

Q Will you tell us what that discussion was?

A For a little while I had some notion of going on to Spain anyway.

Q Why?

A I was emotionally involved in the Spanish cause.

Q Did Joe's death have something to do with your wanting to go on anyhow?

A Yes, as well as if alive he would have.

Q Did you discuss this with Steve?

A I did, but Steve discouraged me. He thought I would be out of place and in the way. I then decided that probably I would go back to the United States and resume my university career.

Q Is that what you did?

A Yes.

Q After you returned to the United States, did you continue to see any of the friends that you had with the Communists?

A When I first got back I saw some friends of Joe's in New York who wanted to know about him and to whom I wanted to talk. I saw some other members of the Communist Party in New York. I went to Florida with three girls. I know one was a Communist. I think another one was, and the third one I don't remember.

Q Did that relationship with Communist friends continue?

A No, it did not.

Q What happened?

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A I visited a friend of mine in Philadelphia. I had planned to go to the University of Chicago, and got back to the United States to go back to their second trimester. I don't know whether they still have that system. I knew no one there. I met a lot of people in Philadelphia, and they said, "You know all of us, why don't you stay here?" I stayed in Philadelphia and entered the University of Pennsylvania, the spring semester of the year 1937-38.

Q What kind of work did you do at the University?

A Chemistry, math, biology.

Q Was biology your major?

A It became my major interest.

Q Did you continue to do professional work as a biologist?

A I did graduate work later and some research.

Q Ultimately you had a research fellowship or assistantship?

A Both.

Q Where.

A University of California.

Q Did you remarry?

A Yes.

Q Would you give us the date of your remarriage and the man whom you married?

A I married Richard Stewart Harrison, an English

physician, in 1938, in December or November.

Q Was he a Communist?

A No.

He was a practicing physician?

A He had been, I think, in England. He had to take all his examinations in this country and do an internship and a residency before he could practice here.

Q Did he go to California?

A Yes.

Q And you went with him?

A No. He went to California much earlier than I to take up this internship.

Q Did you go out there to join him?

A Yes.

Q After graduation in June of 1939? When did you meet Dr. Oppenheimer?

A Somewhere in 1939.

Q When were you divorced from Dr. Harrison?

A In the first of November 1940.

Q You then married Dr. Oppenheimer?

A Yes.

Q Did there come a time after you married Dr. Oppenheimer when you again saw Steven Nelson?

A Yes.

Q Will you tell us the circumstances of that?

A I will as best I can remember. I remember being at a party and meeting a girl called Merriman. I knew of her. She was in Albacrete, and her husband also got killed in action there. The reason I remembered her name is that I had been asked to bring her some sox when I came. When I met her at this party, she said did I know that Steve Nelson was in that part of the country. I said no, and then expressed some interest in his welfare. Some time thereafter Steve Nelson telephoned me, and I invited him and his wife and their small child up to our house.

Q What did you talk about?

A We had a picnic lunch. The Nelsons were very pleased that they finally had a child, because they tried for a long time to have one without success. We talked about the old days, family matters.

Q Did you see him again?

A I think that they came out to our house two times.

Q Was it all just social?

A Yes.

MR. GRAY: What was the date of this period, approximately? If you have said, I have forgotten.

THE WITNESS: I didn't say, Mr. Gray, because I am a bit vague.

BY MR. SILVERMAN:

Q Can you give it as closely as you can?

A Yes. I would guess it was late 1941 or perhaps in 1942. I don't know.

Q Are you fairly clear it was not later than 1942?

A Fairly clear.

Q Have you seen Steve Nelson since 1942?

A Since whenever it was?

Q Yes.

A No.

Q You are no longer a member of the Communist Party?

A No.

Q When would you say that you ceased to be a member?

A When I left Youngstown in June 1936.

Q Have you ever paid any dues to the Party since then?

A No.

Q Will you describe your views on Communism as pro, anti, neutral?

A You mean now?

Q Now.

A Very strongly against.

Q And about how far back would you date that?

A Quite a long time. I had nothing to do with Communism since 1936. I have seen some people, the ones that I have already described.

MR. SILVERMAN: That is all.

MR. ROEB: No questions.

MR. GRAY: Mrs. Oppenheimer, how did you leave the Communist Party?

THE WITNESS: By walking away.

MR. GRAY: Did you have a card?

THE WITNESS: While I was in Youngstown, yes.

MR. GRAY: Did you turn this in or did you tear it up?

THE WITNESS: I have no idea.

MR. GRAY: And the act of joining was making some sort of payment and receiving a card?

THE WITNESS: I remember getting a card and signing my name.

MR. GRAY: Generally speaking, as one who knows something about Communism as it existed at that time in this country and the workings of the Communist Party, and therefore a probable understanding of this thing, what do you think is the kind of thing that is an act of renunciation? That is not a very good question. In your case you just ceased to have any relationships with the Party?

THE WITNESS: I believe that is quite a usual way of leaving the Party.

MR. GRAY: When you were in the Party in Youngstown, or when you were in the Party at any time, did you have a Party name?

THE WITNESS: No. I had my own name, Kitty Dallet.

MR. GRAY: Was that the usual thing for people to

use their own name?

THE WITNESS: I knew of no one with an assumed name. I believe that there must have been such people, but I knew of none.

MR. GRAY: I think the record shows that in some cases there were people who had some other name.

THE WITNESS: I think there were people who lived under an assumed name and had that name in the Party, but then that was the only name I would have known.

MR. GRAY: When you saw Steve Nelson socially in whatever year this was, 1940, '41 or '42, did you discuss the Communist Party with him? Did he know that you were no longer a member of the Communist Party?

THE WITNESS: Yes, that was perfectly clear to him.

MR. GRAY: Did he chide you for this or in any way seek to reenlist your sympathy?

THE WITNESS: No.

MR. GRAY: He accepted the fact that you had rejected Communism?

THE WITNESS: Yes. I would like to make it clear that I always felt very friendly to Steve Nelson after he returned from Spain and spent a week with me in Paris. He helped me a great deal and the much later meeting with him was something that was still simply friendship and nothing else.

MR. GRAY: The people you dealt with in Paris or

that you saw there were members of the Communist Party. I have in mind any discussions you had about going to Spain, both before and after your husband's death?

THE WITNESS: I wouldn't know who was or wasn't then. Many people were going to Spain who were not members of the Communist Party. I think, however, that probably most of the people I saw were Communists.

MR. GRAY: But at that time you were not?

THE WITNESS: No.

MR. GRAY: This was following your leaving the Party in Youngstown?

THE WITNESS: That is right.

MR. GRAY: Do you suppose they were aware of the fact that you had left the Communist Party?

THE WITNESS: I am sure they were. I mean such as knew me.

MR. GRAY: This is a question not directly related to your testimony, but we have had a witness before the Board recently -- I might say I am sorry I didn't ask him this question -- and this witness referred to Soviet Communism in a general discussion here before the Board. In your mind as a former member of the Communist Party in this country, can a distinction be made between the Soviet Communism and Communism?

THE WITNESS: There are two answers to that as far as I am concerned. In the days that I was a member of the

Communist Party, I thought they were definitely two things. The Soviet Union had its Communist Party and our country had its Communist Party. I thought that the Communist Party of the United States was concerned with problems internal. I now no longer believe this. I believe the whole thing is linked together and spread all over the world.

MR. GRAY: Would you think that any knowledgeable person should also have that view today?

THE WITNESS: About Communism today?

MR. GRAY: Yes.

THE WITNESS: Yes, I do.

MR. GRAY: I was puzzled by this reference to Soviet Communism in April 1954. But in any event, you would not make a distinction.

THE WITNESS: Today, no, not for quite a while.

MR. GRAY: But in those days you in your own mind made the distinction?

THE WITNESS: Yes.

MR. GRAY: At that time the American Communist Party was not known to you to be taking its instructions from Russia?

THE WITNESS: No.

MR. GRAY: You testified that today you are opposed to the Communist Party and what it stands for.

THE WITNESS: Yes.

MR. GRAY: I am getting back now to whatever action of renunciation is. Do you think these days that a person can make a satisfactory demonstration of renunciation simply by saying that there has been renunciation?

THE WITNESS: I think that is too vague for me, Mr. Gray.

MR. GRAY: All right. I am afraid it is a little vague for me, too. I wa'n't pursue it.

Do you have any questions?

DR. EVANS: Just one. Mrs. Oppenheimer, I have heard from people that there are two kinds of Communists, what we call an intellectual Communist and just a plain ordinary Commie. Is there such a distinction, do you know?

THE WITNESS: I couldn't answer that one.

DR. EVANS: I couldn't either. Thank you. I have no more questions.

MR. GRAY: Thank you very much, Mrs. Oppenheimer.

(Witness excused.)

q MR. GARRISON: May we take a five minute recess?

MR. GRAY: Yes.

(Brief recess.)

MR. GRAY: Do you wish to testify under oath, Dr. Lauritsen?

DR. LAURITSEN: I would like to.

MR. GRAY: Will you raise your right hand, please,

sir. What is your full name?

DR. LAURITSEN: Charles Christian Lauritsen.

MR. GRAY: Charles Christian Lauritsen, do you swear that the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

DR. LAURITSEN: I do.

Whereupon,

CHARLES CHRISTIAN LAURITSEN

was called as a witness, and having been first duly sworn, was examined and testified as follows:

MR. GRAY: Will you be seated, please, sir.

Dr. Lauritsen, it is my duty to remind you of the existence of the so-called perjury statutes with respect to giving false information, et cetera. Is it necessary for me to review those provisions with you, or may we assume you are familiar with them?

THE WITNESS: I would be very glad to hear the essentials.

MR. GRAY: The provisions of section 1621 of Title 18 of the United States Code, known as the perjury statute, make it a crime punishable by a fine of up to \$2,000 and/or imprisonment of up to five years for any person to state under oath any material matter which he does not believe to be true.

It also is an offense under section 1001 of Title 18

of the United States code, punishable by a fine of not more than \$10,000 or imprisonment for not more than five years, or both, for any person to make any false, fictitious or fraudulent statement or misrepresentation in any manner within the jurisdiction of any agency of the United States.

If, Dr. Lauritsen, in the course of your testimony it should become necessary for you to refer to or disclose restricted data, I would ask you to notify me in advance so that we might take certain necessary and appropriate steps.

Finally, I should say to you that we consider these proceedings a confidential matter between the Atomic Energy Commission and its officials on the one hand, and Dr. Oppenheimer, his representatives and witnesses on the other. The Commission will make no release about this proceeding and this testimony, and we express the hope that witnesses will take the same view.

Mr. Marks.

DIRECT EXAMINATION

BY MR. MARKS:

Q Dr. Lauritsen, what is your present position, and where?

A I am professor of physics at the California Institute of Technology.

Q How long have you held that post?

A I believe as full professor since 1936. I have

been at the California Institute since 1926, first as a graduate student, later as assistant professor, and subsequently associate professor, and full professor.

Q Are you an experimental or theoretical physicist?

A Experimental.

Q Dr. Lauritsen, will you describe briefly the nature of the more important war work that you did during World War II? Let me suggest that you leave out the preliminaries and just describe as what you regard the most important.

A All right. Starting in July 1940, I came to Washington and joined the National Research Defense Committee which had just been formed in June. The organization consisted of four divisions, and I was appointed by Dr. Bush as vice chairman of Division A on armor and ordnance. More important things that we worked on in that division initially were proximity fuses and rockets.

Q Will you tell the Board about your work on rockets during the war?

A Yes, I will be glad to. In the early summer of 1940-- I am sorry, 1951 -- Dr. Hafstad and I were sent to England.

Q Who is Dr. Hafstad?

A Dr. Hafstad at the present time is head of the Reactor Division of the AEC. Dr. Harry Hafstad. He and I were sent by the NBRC to England to discuss proximity fuses with them. We brought over the first samples of the proximity fuses

we made in this country.

MR. ROBB: I can't hear the witness. Will you speak louder?

THE WITNESS: Shall I repeat? Dr. Hafstad and I were sent by the National Defense Research Committee to England on proximity fuses. I had also been interested in the development of rockets in this country and the program was in my opinion not very satisfactory at that time, although I was responsible for it. I knew nothing about the subject at that time. So while we were in England in the early summer of 1941, I obtained all the information that I could on rockets in England and on the British rocket program. At the same time I also obtained all the information I could about the British atomic energy program.

When I came back I reported to Dr. Vannevar Bush on these two subjects. You wanted particularly to hear about the rocket program?

BY MR. MARKS:

Q Yes.

A As a result of my report to Vannevar Bush, he asked me to organize an expanded effort on producing of rockets for the armed services. This I tried to do first here in the east without very much success, and in the fall of 1941, I went back to Pasadena and started a program at the California Institute for the development of rockets.

A number of my colleagues had been here in Washington up to that time working on proximity fuses. They went back to Pasadena with me and started this rocket program.

The result of this was that ultimately we produced all the rockets that were used in World War II by the Navy and the Marines and the Air Force.

Q When you say "we produced", who do you mean by "we"?

A I mean this rocket project at the California Institute of Technology.

Q Who was the head of that?

A I was the technical director of that program and responsible for the technical program.

Q You mean you produced at the project in Pasadena?

A At the project we developed the first type of rockets that we thought were necessary and that we could get interest in that the military thought they needed, particularly the Navy. I worked personally very closely with the Bureau of Ordnance. We then developed these and tested them, and when they were approved, we produced them until such time as large companies could get into production.

A typical example was the five inch rocket, which you read so much about that was used in Korea. This one we developed and we manufactured in Pasadena something considerably over 100,000, which were used in the European theater, and later on in the Pacific war. Ultimately they

were made by the millions. At the end of the war, the total budget in the Navy for rockets was a million dollars a month, I understand.

Q Did I understand you to say, however, that your project in Pasadena produced all the rockets that were used in World War II.

A All the rocket types, not the individual rockets that were fired. We produced them only until large companies could take over production, which was usually something like a year. We made all the rockets used in the African landings, in the Sicilian landings, and in a number of the landings in the Pacific, like Iwo Jima, and many of the others. Altogether several hundred thousand rockets. Our total project added up to about \$80 million spent at the project.

Q How many people did you have under you in that production work?

A I am not quite certain, but I believe the number was something like 3500 at the maximum. This, of course, did not include contractors and subcontractors. These were the people employed by the California Institute for this purpose.

Can you tell what importance you attached to the rocket program and why?

A Personally I like to think that the most important thing was the landings in the Pacific which ultimately became a matter of walking ashore. There were very few casualties

due to the heavy bombardment of the shore defenses just before landings were made. A number of landings were made in the Pacific with almost no losses. Of course, the same thing was true at Inchon. The coast line was --

Q Inchon when?

A During the Korean war. The coast line was heavily bombarded and there was no opposition when we landed. This is of course not entirely due to rockets, but until they started using the rockets in large numbers, the losses on landing operations were very heavy.

Q I don't quite understand what part the rockets played.

A The advantage of the rocket is that you can unload almost a whole ship's cargo of rockets in a very short time and no shore installations can withstand such bombardment. Rockets can be fired in huge numbers at one time.

Another application was the application of the five inch rocket that I just mentioned to airplanes. This made a very powerful weapon out of the carrier based airplanes as well as the small support aircraft used by the Air Force for supporting ground troops. They are for all practical purposes equivalent to a five inch naval gun.

Q Did the use of rockets represent any change in the nature of fire power?

A It is an enormous increase in fire power at the moment you need it, in a very short time. You can fire

thousands of them in one minute. It would not be possible to provide enough guns to deliver that fire at one time in a short period.

Q Apart from the work that you did on development and production of these new weapons, did you have anything to do with the introduction of their use into military operations?

A Yes.

Q Would you describe that?

A Whenever a weapon was accepted for service use, and we produced the ammunition, we usually sent a man along with the equipment to the various theaters to be sure that it was received with some understanding and used in a reasonable way and that the equipment was kept in operation, and that the crews were trained. It was usually necessary to spend some time training crews.

As an example, I might mention that I was together with one or two of my colleagues to Normandy in 1944 to introduce these rockets to the Air Force. We equipped some squadrons and trained them in their spare time, usually at night after they had been carrying out their daytime missions and operations. They were enthusiastic enough about it to work on learning how to use them during the evenings. They would go back from Normandy, sometimes, over to England to practice on a field that we had borrowed from the British. It was necessary to stay with an operation like this long enough until

the weapon was properly used.

Q How much experience have you had in this kind of field work in the introduction of the use of new weapons that you have been concerned with?

A Usually I did not personally go out with all the equipment. I did personally go out with some of the first submarine weapons that we developed, and I took part in many of the training exercises on the shore bombardment rockets and on the aircraft rocket I was frequently involved. But often other members of our organization were the ones that went out in the field to help with these things.

MR. GRAY: Do you mind if I interrupt for a minute, Mr. Marks?

MR. MARKS: Surely.

MR. GRAY: Are you going to relate this to the present inquiry?

MR. MARKS: Yes.

THE WITNESS: I think I have not said anything that is classified.

MR. MARKS: If the Chairman prefers, I would be glad to get directly to the issue on the present inquiry and then go back?

MR. GRAY: I don't want to restrict you at all, but we are in a little different field than we have been discussing in these hearings.

MR. MARKS: I don't want the testimony to be unintelligible through any point of mine.

MR. GRAY: Let us proceed.

BY MR. MARKS:

Q Let us leave this subject and let me ask you what later work did you do in World War II apart from the rocket work?

A During 1944 it became apparent to us that the war was coming to an end, and that there would probably not be time to dream up any very important new rocket weapons that could be produced in quantity to have much effect on the war. The Navy agreed with us. At that time they decided that they wanted to take over the operation of the facilities that had been developed for our purpose, namely, the large test and development station at Inyokern, California. We had been operating that station during the war. In 1944, the Navy decided that they would take that over gradually and also to take over the future development of rocket weapons.

Q What did you do then?

A At the request of Dr. Bush and Dr. Oppenheimer and General Groves, I went to Los Alamos to help with the final stages of the atomic bomb.

Q What did you do in that capacity?

A Most of what I did was talking, I am afraid. I attended numerous meetings of the various divisions when they

had meetings trying to make decisions. I would usually attend these meetings. I attended meetings of the various steering committees and in general tried to assist Dr. Oppenheimer in any way that I could on making decisions, particularly on hardware.

Q What do you mean by hardware?

A Hardware is all the things that are required to produce a weapon and all the components that are necessary for the weapon itself. They may be electronic gadgets or castings or machine parts or production tools. We had a considerable part of the responsibility for producing the explosive components, that is, the conventional explosive components, and the various tools necessary and installations necessary for producing these.

Q Did you have a title at Los Alamos? Where did you work?

A I had no title I worked directly in Dr. Oppenheimer's office.

Q How long was that?

A Just about one year. I agreed to stay one year, and at the end of one year the war was over.

Q When you say you worked in his office, you mean in the office which he occupied?

A Yes.

Q You and he occupied an office together?

A That is right.

Q How long had you known Dr. Oppenheimer before that?

A I have known Dr. Oppenheimer since he came back from Europe, from Goettingen, which I believe was in 1928 or 1929. I am not certain about the date. In 1928 or 1929, when he came to Pasadena.

Q In the years since that date, how well have you known him?

A I have known him as well as I have known any member of our faculty.

Q Commencing when?

A Very soon. In fact, I probably saw him the date he arrived because it happened accidentally that we had been interested in the same problem, he in the theory of it, and I in the experimental aspects of it. So he looked me up very soon after he came there, I believe.

Q What date was that approximately?

A Either in 1928 or 1929. I could certainly get that date, but I could not be very certain at the moment.

Q Did you become close friends?

A I would say so, yes.

Q Has that friendship continued?

A Yes, sir.

Q Did you observe Dr. Oppenheimer during the Thirties and the Forties, and can you say anything about his political views and activities during that time?

A I cannot say very much about it. I knew very little about it until, I think, about the time of the Spanish war. This was the first time that I knew that he had any political interest. Up to that time I have no recollection that we ever discussed political questions of any interest or serious nature.

Q What impression did you come to have of his political interests?

A It is a little difficult to say because I think they changed a great deal with time. I would say that at one stage he was very deeply interested in the Spanish Loyalist cause, and took the attitude that was taken at that time by many liberals, the hope that they could do something about it, and that they would like to help the Spanish Loyalist cause.

Q You spoke of his changing views. What do you mean by that?

A I think it was probably a gradual increase in interest in social causes, a compassion for the underdog, if you like. The attitude that many liberals took at that time.

Q Did you observe in him an identification with views that were regarded as Communist views or with which the Communists were associated?

A I think at that time very few of us and perhaps very few Americans had very little idea about what Communism was. I think most of us that were concerned about political

things and international things were considerably more concerned about fascism at that time than we were about Communism. Fascism seemed the immediate threat, rather than Communism. Also, I think perhaps my own views were colored by the fact that I was born and raised in Denmark, where Germany was the natural enemy, rather than Russia. I think for that reason we did not pay as much attention to the evils of Communism as we should have done.

Q Were you mixed up in any Communist activity?

A No.

MR. ROBB: Mr. Chairman, I don't think the witness quite answered the question Mr. Marks propounded to him. I wonder if we might have it read back so the witness could have it in mind.

(Question read by the reporter.)

THE WITNESS: I frankly did not know just what characterized the Communist view at that time. When they talked about improving the lot of the working people, I believe Oppenheimer and probably many other people thought this was a good beginning. But that this was not the whole story of the Communist ideology I think was not realized by very many people at that time. Does that answer the question?

MR. ROBB: Yes.

THE WITNESS: It did not occur to me at that time or at any other time that he was a Communist Party member. In

fact, at the date we are talking about, namely, the early part of the Spanish-American war, I didn't know there was such a thing as --

BY MR. MARKS:

Early part of what war?

A The Spanish War. Did I say Spanish American?

Q Were you in the Spanish American war?

A No. These are words that have just been associated so long. I was not aware that there was such a thing as a secret membership of the Communist Party. I don't know if other people were but I was not.

Q I asked you, I think at the time Mr. Robb reminded me that you had not answered an earlier question, whether you were mixed up in Communist activities yourself.

A I was not.

Q Was there a difference between yourself in that respect and what you observed of Oppenheimer at that time?

A I think I was more pessimistic about what liberals could accomplish, even if they were trying to accomplish good things. I was less optimistic about what you could do about these activities. Therefore, I took no part in them.

Q As time went on, did you notice any change in Dr. Oppenheimer's attitude about these matters which you have indicated as being more optimistic than yours?

A How far along are we now? Are we still in the Thirties?

Q Let us take the period, Dr. Lauritsen, from the late Thirties to the early Forties.

A In the late Thirties, the event that I remember best, the discussion that I remember best, is the discussion we had, I believe it was on the day that Russia signed the agreement with Germany. This was an event that shocked me very deeply and we discussed it at considerable lengths.

Q When you say "we", who do you mean?

A I was thinking about conversations Dr. Oppenheimer and I had on that day, I believe, or at least very shortly after. I was very convinced that this was the beginning of a war and during our conversation I am quite certain that Dr. Oppenheimer agreed with this point of view, and was as concerned about it as I was.

Q Concerned in what way?

A Afraid that this would lead to war, realizing what a bad situation, what a dangerous situation for the rest of the world, this combination of Russia and Germany could be.

Q Did anything else happen as time went on of that nature?

A This was 1933, was it not? Shortly after that the war started. The war was a reality. That is Germany went into Poland.

Q What if anything did you observe about Dr. Oppenheimer's attitude as these events of the late Thirties and early

Forties progressed?

A You must realize that our most intimate contacts at this time during the late Thirties were limited to the spring term, because Dr. Oppenheimer spent most of the year in Berkeley, and only the spring term, part of May and June, in Pasadena. So there were considerable intervals when we did not spend a great deal of time together.

The next thing that I recall was in 1940, and it was in the spring of 1940 that we at the California Institute realized that we would have to change our way of life, and that sooner or later we would have to get into war work. As I have already related, in June 1940, NDRC, the National Research Council was organized and in July I joined. So there were long periods after that when I did not get back to California and when I did not see Dr. Oppenheimer.

Q Do you have anything to say -- if you don't, of course just don't say it -- about your observation of his views during the period '40, '41, '42, '43?

A I can only say that at that time in 1940-41, I saw Dr. Oppenheimer only rarely, probably only two or three times. I do remember at one time -- I think it was in 1941 -- he did not tell me what he was working on, I did not tell him what I was working on, but he did ask me if I thought that there would be an opportunity possibly later of his contributing to the work that we were working on. When I say "we", I meant

In 1941, Division A, Professor Tolman, who was a very good friend of both of us, who was the Chairman, and I was the Vice Chairman. Dr. Oppenheimer expressed the desire perhaps to join us, because of our old associations.

Q Could you date that time?

A I could not be sure but I think it was 1941.

Q Was it the early or latter part of 1941?

A It was almost certainly either during the spring term, namely, June and July, early summer, or else Christmas, because those were the two times when we were most likely to be in Pasadena at the same time. As I say, the rest of the year he was as far as I know in Berkeley.

Q So that the next intimate, if you can call it that, contact you had with Dr. Oppenheimer is when you came to Los Alamos into his office?

A That is right.

Q Did you observe anything about his political attitude then?

A At that time politics didn't seem very important. The job was to win the war.

Q What did you do after the war?

A After the war I went back to teach school at California Institute of Technology.

Q And how long did you do that without extensive outside interests?

A This continued without too much interference from the outside until the start of the Korean war.

Q What change occurred in your own work after the commencement of the Korean war?

A Actually some of these activities started before the Korean war. I may have a little difficulty in getting the actual date, but I will at least get the sequence.

The first so-called study project that I was asked to join was called the Hartwell Project. It was a contract between the Navy and the Massachusetts Institute of Technology. The purpose of it was to study possible improvements in submarine warfare -- that is, antisubmarine warfare.

After this study, which was according to the Navy people that I know quite satisfactory and quite useful to them, these studies became a habit.

Q Became a habit with whom?

A With the military, and a number of such studies were originated by the military.

Q How many did you engage in?

A Hartwell, as I say, was the first one. The next one was called Charles. This was also a Massachusetts Institute study. I believe it was in the summer of 1951, which resulted in the setting up of the Lincoln Laboratory, which now is considered the most important establishment in this country for the Air Force program in continental defense.

Perhaps this was before. It was already in the summer of 1950 that we undertook at the California Institute of Technology a study that was called the Vista study. The purpose of that was to see if methods and tactics and weapons could be devised that would make it possible to hold in Western Europe, rather than to abandon if the Russians should decide to invade Western Europe. The assignment we had was ground and air combat.

Q From whom did you get that assignment?

A From all three services. It was originally suggested in somewhat modified form by the Air Force, but before we undertook the program the Army and the Navy joined, and it was done jointly for all three services and under the direction of the three services.

Q What other connections have you had with military work since 1950?

A In fact, ever since the war I have spent a little time in an advisory capacity at the Naval Ordnance Station at Inyokern. In the beginning it was merely because of personal and friendly relations with the technical director up there. Frequently I visited at his request. Somewhere around 1949, he requested from the Chief of the Bureau of Ordnance an advisory board which was set up on a formal basis. It was setting up this thing for the same purpose, but on a formal basis. This board was organized, I believe in 1949. I was the first

Chairman of that board. The board still meets about three times a year and I am a member of that Board, but no longer chairman. We rotate the chairmanship.

This was the only direct connection I had with military affairs, as I say, until 1950.

The next thing I was requested to do was to go to Korea for the Secretary of Defense's office, the Weapons System Evaluation Group. I went there in October and November of 1950. The Korean war started, I believe, in June 1950. Assuming this is correct, then it was in October or November of 1950.

Q What else have you done along these lines?

A I am still on two panels of the Scientific Advisory Board of the U. S. Air Force, one panel on explosives and ordnance, the other panel on nuclear weapons. I am a member of an advisory board to the Research and Development Command of the Air Force in Baltimore. I am a member of a panel on armament.

Q Since 1950, how much of your time has been devoted to this work connected with military affairs?

A Including homework and travel, it is probably about half my time.

Q Since 1950?

A Yes.

Q In these connections, did you have anything to do

with much top secret material?

A Yes.

Q Do you have what is called a C clearance in all of these matters?

A Yes.

Q In this work commencing with the Korean war, what associations have you had with Dr. Oppenheimer and to what extent has his work and yours overlapped or coincided?

A I believe the first contact on these problems was in connection with an ad hoc committee in the Research and Development Board. It was an ad hoc committee of the Committee on Atomic Energy in the Research and Development Board. We had meetings around Christmastime or I guess January 1951 -- probably December 1951 and January 1952 -- the purpose of this was to make recommendations to the Research and Development Board and the Military Liaison Committee on long range planning and production of atomic weapons. I think this was the first contact.

I was, and as far as I know, still am, a consultant to this permanent committee of the Research and Development Board.

Q What other connections did you have with Dr. Oppenheimer in this work? By "this work" I mean the general activities of yourself in the military field since the Korean war.

A I believe the next connection or perhaps this was even before was on the Vista Project, where we asked Dr. Oppenheimer to help us on a particular chapter on which he was better informed than most of the rest of us.

Q In connection with the work at MIT on continental defense, did you have any association with Dr. Oppenheimer?

A Yes. I do not recall whether Dr. Oppenheimer was present or took part in the first study, the one I referred to as the Charles study, but after the Lincoln Laboratory got under way, there was a subsequent study the following summer at which Dr. Oppenheimer and I were both present part of the time. The main purpose of this study was to see if the Lincoln Laboratory could somehow be improved, whether they were doing the right things, and whether we were covering all the important aspects of continental defense.

Q In your observations, do you care to make any comment about the nature of his contributions to these various endeavors that you have described?

A I think they were very important. It is always hard in a large group like that to know who contributes most. It is a joint effort.

Q What was your own purpose in all of the military work that you have been doing since Korea, speaking generally?

A My own purpose is to contribute to avoiding a war if we possibly can. To be somewhat more specific, I think my

general thinking was very much influenced by the detailed objectives of the Vista study, namely, the objectives of discouraging the Russians from trying to occupy Western Europe, and at least make sure that they cannot win Western Europe by military means without serious destruction.

Q Without serious destruction to whom?

A To property and equipment. We believe that the greatest danger would be if they could somehow occupy Western Europe intact as it were.

Q Again speaking generally, how did you give expression to this purpose in the work you did and the policies you advocated?

A We did that by getting a great deal of help from the military, especially from the people that had fought over there in World War II, to determine where we should try to hold a line, to what extent we could make preparations ahead of time with such things as demolitions and land mines and weapons that were placed in position ahead of time and dispositions of ground forces. In particular, since our problem was ground and air combat --

Q You are speaking of Vista now?

A Of Vista. How we could get more effective cooperation, more effective assistance from the Air Force, so that the armies could hold, or at least so that they would go backwards as slowly as possible.

Q What part did consideration of atomic weapons play in this work?

A We felt that if atomic weapons --

MR. ROBB: Excuse me. The witness said "we. Could he identify who he is talking about for clarity?

THE WITNESS: I am talking about the Vista project.

MR. ROBB: I mean the individuals, in the interest of clarity.

BY MR. MARKS:

Q Would you try to do that?

A I will be very glad to try to do that. The way the Vista project was operated was that a group of us would be together usually for a couple of hours every morning, and discuss what we were trying to do -- trying to formulate what our understanding of the problem was. This group consisted of Dr. DuBridge, the Director of the project, Dr. Fowler, and a number of the senior members of the Institute faculty, like Dr. Bacher and myself, and also the heads of the various subdivisions of the project. With us would usually be visiting people or people that we could somehow persuade to spend time with us. As an example, I might mention that Dr. Wedemyer spent several weeks with us, and General Quesada spent a good deal of time with us. We kept notes during these discussions and tried to write up what we thought was a sensible program as a result of these discussions.

Q What about Dr. Oppenheimer?

A I doubt if he was ever present at any of the daily strategy sessions. If he was, it was only one or two occasions.

Q What part did he play in the ultimate formulation of the Vista report?

A He played an important part in expressing our ideas on the specific subject of how to use tactical atomic weapons in connection with supporting ground operations. This was one particular chapter, called Chapter 5. On that chapter he was very helpful.

Q Who were the others who worked on that chapter?

A Most of the preliminary planning and writing was done -- the discussion was usually between Dr. Bacher, Dr. Christie and myself, and I think most of the preliminary writing was done partly by Dr. Bacher and part by Dr. Christie.

Q Did Dr. Oppenheimer help on that?

A Not in the preliminary stages, but later on in arranging the material and presenting it in the final form, he helped. He made a very important contribution.

Q If you can put it briefly, what was the essential point of this Chapter 5 on atomic weapons that you have been talking about?

A The essential point was that we felt that without the use of atomic weapons to support ground operation, to

destroy mass attacks like we have seen in World War II so often on the Russian front, and like we have seen in Korea. To hold it was necessary to have atomic weapons that could be delivered on short notice, and with high accuracy in all kinds of weather. We felt that with the growing stockpile, it was wise and besides, that it was necessary in order to solve our problem. But in any case, we felt that it was wise to use part of our stockpile or to divide part of the stockpile so that it could be used for this purpose if it was necessary. We believe it was necessary in order to resist aggression.

Q Did this mean that you were opposing strategic air use of atomic weapons?

A Not at all. It meant that we felt that the stockpile was rapidly getting sufficiently large so that it would not be wise to devote all ^{our stockpile} of ~~it~~ to strategic weapons.

Q There has already been testimony in these proceedings about a trip to SHAPE which was made by yourself and a number of others in connection with the Vista report in the latter part of 1951. Could you describe the circumstances of that trip, why it was made and what you did?

A This was at the time when the Vista report was nearing completion. It was in what we considered very close to its final form. Some of the people on the project, especially Dr. DuBridge, felt that it would be very important to discuss the proposals, especially the more radical

proposals in tactical change in airport with the staff of the Supreme Headquarters. Some of the Secretaries, I believe especially Secretary Lovett, thought this was sound before the report went in officially. So the arrangements were made and Dr. DuBridge, Dr. Oppenheimer, and Dr. Whitman and I went over to discuss the Vista report with the planning staff at Supreme Headquarters.

Q Why did you take Dr. Oppenheimer along?

A Because we felt that people would be more likely to believe what he said about what we could do about atomic weapons than what any of the rest of us said. Also, he learns very fast, and we thought we might learn something while we were over there

Q Was there any difference between your views and his about the use of atomic weapons?

A Not that I know of.

Q As a result of your visit to Supreme Headquarters toward the end of 1951, did you make any essential changes in your report?

A There were no essential changes. There were changes in wording, in expression, and the way the material was presented perhaps in some places, but there was no change in the essential idea of using atomic weapons for supporting our ground troops and making it possible to hold as far forward as possible.

Q When you speak of using atomic weapons in support of ground troops, are you speaking simply of a different kind of use of atomic weapons, or are you speaking of different kinds of atomic weapons than those which would be used in strategic?

A They would in general be quite different

Q Had they been developed?

A They had not been developed and tactics for delivering them had not been developed at that time.

Q What were you advocating then?

A We were advocating the development and use of weapons that would be suitable for precise delivery at close range from our troops and in all kinds of weather. This included specifically developments of weapons and tactics that could be employed at very low altitudes. Up until that time it was not possible to deliver a weapon at low altitude because you would blow yourself up if you tried to do so. So one of the essential requirements was to get a weapon that you could deliver at low altitude in bad weather with high accuracy. We felt that by increasing the accuracy you could economize on material. You see if accuracy is poor, you must have a very large explosive to destroy a target. If the accuracy is high you can get along with a much smaller weapon.

Q I think there has been a suggestion in these proceedings that in the course of going through various

drafting stages, the Vista report changed substantially from time to time in respect of Chapter 5. Would you comment on that?

A I hope it improved due to discussions with very many people. The purpose was still the same. There was nothing changed that made it less useful for our purpose. There was no significant change in the methods proposed, as far as I know. I can say I was still happy with the final version of the report. I think it would accomplish our purpose.

Q How about some of the intervening drafts?

A There were a number of those. There were not nearly as many as there would have been if I had been writing it. Most people need more than one draft. As a result of discussions some wording was changed, or perhaps some emphasis was changed, but the general purpose and important ideas in that chapter were not changed as far as I know.

Q Just so that we can be clear, Dr. Lauritsen, will you say again what that essential purpose was?

A That essential purpose was to try to develop weapons -- in particular in Chapter 5, of atomic weapons -- for supporting ground operations. For making it possible to operate an army in Western Europe and to resist aggression in Western Europe. One plan in this was to develop weapons specifically for destroying the Russian Air Force on the ground. The second was to destroy mass attacks which as we have

learned by sad experience we have no way of resisting. If we could force these concentrations and then strike them with appropriate atomic weapons, we believed a breakthrough would be very difficult. In fact, it might not be attempted.

Q In any of these drafts did the essential attitude that you have described with respect to strategic use of atomic weapons as contrasted with the new tactical uses change?

A I think not. Certainly not to the extent that this was lost sight of because this is what made the Vista proposals as a whole possible.

Q When you speak of this, I am not sure I know what you mean.

A I mean the tactical use -- the attack on Russia -- by tactical use, I mean primarily hitting enemy concentrations in your immediate front, mass concentrations.

Q Did you at all times think that was consistent with the maintenance of a strong strategic air force?

A Yes. I think this is even more true now since our stockpile has increased enormously. But even at that time I think it was sound to start on this development.

Q Again by this development, you mean tactical use.

A Weapons that could be delivered with high accuracy in any kind of weather from any altitude, including very low altitude.

Q Will you turn your mind now, Dr. Lauritsen, to the

studies that you referred to having to do with continental defense at MIT. What was the relation in your mind between the efforts that were being made in those studies, what was the relation in your mind between those studies and those efforts and the policies that you advocated with respect to tactical and strategic use of atomic weapons or any kind of weapons?

A I am not sure I understand your question. I am not sure there is any relation except as far as our overall military effort is concerned. May I say why I was interested in Lincoln? Is that what you are trying to get at?

Q That is correct.

A We knew by that time, by the time of the first study on Lincoln, namely, the Charles study, that the Russians had or very soon would have a very considerable capability of striking us with the same kind of weapons that we were planning to use in our strategic attack on Russia. We knew they had an Air Force that was capable of coming over here and delivering those weapons. We felt it was important first of all to get as early warning as we could of a possible attack, Second, that it was important to be able to shoot down as many of these bombers before they reached our strategic air fields and our principal cities. This was the purpose of the Charles study.

MR. ROEB: Could we have a date on this, Mr. Marks,

approximately?

THE WITNESS: The Charles study? I can certainly find that. It was either 1950 or 1951. It was the first study on air defense. There had been previous study by a panel of the scientific advisory board in the Air Force, and there was a project going on improving some of the radar stations in this country. This was going on at the time of the Charles study was started. The Charles study concluded that this was a very sound effort, but utterly inadequate because they are already here when these radar stations pick them up. They were primarily for the purpose of organizing our interceptors. We felt that the warning should be pushed out as far as possible in order to make better use of our interceptors and to concentrate them where the attack was going to come, and also in order to make possible some sort of civilian defense, which is hopeless without some warning. So our purpose was to get at least an hour or two warning while under the old system you had no warning.

BY MR. MARKS:

Dr. Lauritsen, let me see if I can get at the question that I put to you rather badly a moment ago. Do you believe that we need a strong strategic air?

A I do.

Q Do you believe that we need strong developments and strong capabilities in respect of tactical use of atomic

weapons?

A I do.

Q Do you believe that we need a strong continental defense?

A Yes.

Q Taking into account what you know of the relation between scientific development and military affairs, and taking into account what you know of our capabilities and potential, do you regard these three views that you have expressed as consistent or inconsistent?

A I think they are consistent.

Q To what extent can you say of your own knowledge that the views you have just described are similar to or different from the views that you know Dr. Oppenheimer to hold?

A I believe he agrees with me. He has worked hard on all of these three things. I think his purpose has been the same as mine. He may have sometimes thought of it differently in different details. The aims have been the same, I am convinced, and we have agreed in general.

Q Dr. Lauritsen, what opinion do you have about Dr. Oppenheimer's loyalty and character? By loyalty I mean loyalty to the United States.

A I have never had any reason to doubt it.

Q Do you think you could be mistaken about this?

A I suppose one can always be mistaken, but I have

less doubt than any other case I know of.

Q Less doubt than in any other case?

A Than in any other person that I know as well.

Q Do you know many people better?

A Not many. I suppose I know my own son better, but I don't trust him any more.

Q To what extent would you trust Dr. Oppenheimer's discretion in the handling of classified information, restricted data?

A You are referring now to recent years when he understood these problems, I hope. In that case I think I would trust his discretion completely. I think in the early Thirties very few of us knew anything about discretion and were not very conscious of security. Whether he had been indiscreet at that time, I don't know. It is possible. It is possible I have been indiscreet. But I am sure after he understood what security meant, and what was involved, that he has been as discreet as he knew how.

Q What do you mean by as discreet as he knew how?

A As discreet as it is possible to be and try to get some work done.

Q Do you have any idea about whether your views about the needs for and the possibilities of being discreet are any different than his?

A I think they are no different now, certainly.

Q Let us take the period commencing in 1944, when you went to Los Alamos. Is that the span of years you are talking about?

A During that period this would apply. At that time he knew the importance of the information we had.

MR. MARKS: That is all, Mr. Robb.

MR. GRAY: I think it would be well to break for a few minutes at this point.

(Brief recess.)

MR. GRAY: Mr. Robb, will you proceed.

CROSS EXAMINATION

BY MR. ROBB:

Q Doctor, do I understand that you have known Dr. Oppenheimer both professionally and socially?

A That is correct.

Q Have you visited him from time to time at his ranch in New Mexico?

A I have visited him I think twice.

Q When was that, sir.?

A About the middle Thirties - '35 or '36, I believe.

Q Do you also know Dr. Oppenheimer's brother Frank?

A I do.

Q When did you meet him, sir?

A I believe I met him for the first time at the ranch in 1935 or 1936. I may have seen him once before, but I am

am not quite sur.

Q Was he on the faculty at Cal Tech?

A He was a graduate student.

Q Under you?

A Yes.

Q Did you get to know him pretty well, too?

A I got to know him quite well in the laboratory.

Q And you saw him on the ranch, also, I take it?

A Yes.

Q Did you know him at Los Alamos?

A Yes, I did.

Q Have you seen him since then very frequently?

A Not frequently. I have seen him. Most recently last year at a meeting of the Physical Society in Albuquerque, New Mexico.

Q Up until the end of it, did you have any reason to believe that Frank was a Communist or had been a Communist?

A No, I had no reason to believe that until he made that statement himself.

Q What would you say about Frank's loyalty?

A I have no reason to doubt his loyalty.

Q And his character?

A His character is very good.

Q You would make about the same answer about him that you do about Dr. Oppenheimer?

A Yes, I would think so. His judgment was perhaps not as good as Dr. Oppenheimer's.

Q Yes, sir. I notice that you made some little distinction between Dr. Oppenheimer's present appreciation of security and his appreciation in the past of security.

A I think that applies to all of us.

Q Yes, sir. You suggested that there might have been some change in Dr. Oppenheimer's attitude on those matters.

A On how important you think it is, how seriously you take it.

Q Would you care to tell us, Doctor, when you think that change took place?

A I think we all learned about it during the war.

Q You think Dr. Oppenheimer learned about it during that period?

A That would be my judgment. I think this was true of most of us that had had little to do with military things until that time.

Q I see. Did you know many of Dr. Oppenheimer's friends?

A I knew of his friends in Pasadena and some of his friends in Berkeley.

Q That is up until the war years, is that right?

A That is right.

Q Did you know a man named Frank K. Malina at Pasadena?

A Yes, I did.

Q Who was he, Doctor?

A He was first, I believe, a graduate student and later a research fellow in the aeronautics department on a special project that had to do with rocket developments.

Q Was he working under you?

A No, he was not. When I first went to Pasadena I knew of his work. I did not know of him personally. I hoped to get him to undertake the rocket work at Pasadena. However, we did not agree on what should be done, so I dropped the subject and went to Pasadena myself to do the work. We had no connection with their development, which incidentally resulted in the so-called assisted takeoff system which is not a weapon but a method for getting aircraft with overload or from too short strips.

Q What they called JATO?

A That is right.

Q Did you suspect at any time that Frank Malina had any Communist connections?

A I had no way of knowing. I did not know him personally.

Q You did not suspect that?

A I had no way of knowing. I did not know him socially. I never have associated with him. I have only talked with him a few times when I tried to get him interested

in this project.

Q At least you knew him well enough to suggest that he come help you on the project?

A That is right, I knew of his work.

Q Did you suspect that he had any Communist connections?

A I had no idea, no.

Q Did you know a man at Pasadena named Martin Summerfield?

A I had a student at one time in a class, not in my laboratory, by that name. I believe he later worked at the jet propulsion laboratory but I have had no connection with him since he was a student.

Q That jet propulsion laboratory was a part of Cal Tech?

A It is a contract with the Army Ordnance Corps that is administered by Cal Tech, but it has no other connection with Cal Tech. It has the same relation as Los Alamos has with the University of California.

Q You never had any suspicion, of course, that Martin Summerfield had any Communist connections?

A I had no way of knowing.

Q Did you know Dr. Thomas Addis at Berkeley?

A No.

Q Did you know a David Adelson at Berkeley?

A No.

Q Did you know a couple named Henry Barnett and Shirley Barnett?

A At Los Alamos?

Q Yes.

A Yes.

Q Who were they?

A He was a doctor, I believe.

Q Who was she?

A I think she was a secretary.

Q To whom?

A To Dr. Oppenheimer, I believe, or assistant secretary.

Q Did you ever have any reason to suspect that they had any Communist connections?

A No.

Q Did you ever suspect that?

A No. I would have no way of knowing.

Q Did you know a man named David Bohm at Berkeley?

A No, sir.

Q Did you ever meet a woman named Louise Bransten?

A Not that I know of.

Q Did you ever know a man called Haakon Chevalier?

A No, sir.

Q You never met him?

A No, sir.

Q Did you know a man named Robert Raymond Davis at Los

Alamos?

A I can't recall. I can't be sure. Davis -- the name sounds familiar. Was he a physicist at Los Alamos?

Q I believe so. In all events, you didn't know him well if you knew him.

A I certainly did not know him well. I have no recollection of knowing him.

Q Did you ever know a man up at San Francisco named Isaac Folkoff?

A No, sir.

Q Did you know a man at Berkeley named Max Friedman?

A No, sir.

Q Did you know David and Francis Hawkins at Los Alamos?

A I knew David Hawkins, not Francis Hawkins.

Q Who was David Hawkins?

A David Hawkins was, I guess you would call him a historian. When I knew him he was writing the history of the project.

Q Did you know him before he began to write the history of the project, Doctor?

A I knew him probably from the time I joined Los Alamos, that is, from September 1944.

Q You didn't join until September 1944?

A That is right.

Q Do you recall what Hawkins was doing then?

A No, I don't. I think he was already then thinking about this history, but I am not quite sure what he was doing.

Q Did you ever suspect that he ever had any Communist connections?

A No, sir, I did not know him personally.

Q Did you know a man at Berkeley named Alexander S. Kaun?

A No, sir.

Q Did you know a man at San Francisco named Rudy Lambert?

A No, sir.

Q Did you know a man at San Francisco named Lloyd Lehmann?

A No, sir. If any of these people are physicists it is quite possible I have met them at one time or another, but I have no recollection of knowing them.

Q When I say San Francisco, I mean the area of San Francisco to include Berkeley.

A Yes.

Q Did you know a man named Giovanni Rossi Lomanitz up there?

A No, sir.

Q Did you know a man in San Francisco named Kenneth May?

A No, sir.

Q Did you know a man named Philip Morrison at Los Alamos?

A Yes.

Q Who was he?

A He was a theoretical physicist.

Q Did you come in contact with him frequently?

A I saw him quite frequently. In fact, I knew him before I went to Los Alamos. He was a student of Dr. Oppenheimer who occasionally while he was a graduate student came during the spring term to Pasadena with Professor Oppenheimer.

Q Did you ever suspect he had any Communist connections?

A No, sir.

Q Did you know a man at Los Alamos named Eldred Nelson?

A I knew Nelson, but I do not recall him at Los Alamos. I recall him the year after. He was in Pasadena the year -- in late 1945 and 1946.

Q Did you know anything about his background and associations?

A Not any.

Q Did you know a man at Los Alamos named Bernard Peters, and his wife, Hannah Peters?

A Is he the physicist who later was at Rochester?

Q Yes, sir.

A I did not know him at Rochester, but I met him since the war. I mean I didn't know him at Los Alamos.

Q Did you know him at Berkeley?

A No, sir.

Q Have you ever suspected that he has ever had any Communist connections?

A I heard that after the war.

Q After the war?

A Yes; I did not know him before.

Q How did you happen to hear that?

A The way I heard about it was that two years ago the Physical Society had a meeting in Mexico City, and I was president -- no, I was elected -- I was vice president of the Physical Society. Dr. Rabi was the president of the Physical Society. He was at that time in Italy at a UNESCO meeting, so I was requested to represent the Physical Society in Mexico City. There was an invited paper on the program to be given by a physicist who had worked with Peters. It was joint work that was to be presented. This invited speaker died in the meantime or was killed in an accident, I believe, and some of Peters' colleagues requested that the Physical Society should appoint him the invited speaker to give this paper. They referred to me as the highest official in the country at the time.

Q The senior officer present.

A That is right. However, I referred it back to the Secretary of the Society, who habitually handled all of those things. So I avoided the decision. But this was the first time as far as I remember that I had met Dr. Peters.

Q How did the Communist business come into it?

A It came in because someone told me to be careful about this, because he might not be able to get permission to go into Mexico. So that is the reason I did not want to invite him.

Q Did he appear?

A He did, but he appeared without official invitation from the Society.

Q That was two years ago?

A I think so, two or three.

Q Did you ever know a man up in the San Francisco area, named Paul Pinsky?

A No, sir.

Q Did you ever hear of him?

A I think I have heard the name, but it doesn't mean anything to me, and I certainly do not know him personally.

Q Did you ever know a man in the San Francisco area named William Schneiderman?

A No, sir.

Q Did you ever hear of him?

A I have heard the name.

Q It doesn't mean anything to you?

A No, sir.

Q Did you know Robert and Charlotte Serber at Los
Abmos?

A Yes, sir.

Q Do you know anything about their political background?

A No. There again I had known them long before the war. Dr. Serber was again one of the students that came down during the spring term with Dr. Oppenheimer. So I got to know them long before the war, and saw quite a bit of them at Los Alamos.

Q Did you ever suspect that Mrs. Serber had any Communist connections?

A No, I did not suspect that she had Communist connections, I would say that I thought she was again what I would call an optimistic liberal.

Q That is as far as your suspicion, if you can call it such, went?

A That is right.

Q Did you ever know a man named Joseph Weinberg?

A In Pasadena or in Berkeley?

Q In Berkeley or Pasadena.

A No. I know only of what I read in the papers. He is Scientist X, is that not correct? I do not know him. As far as I know, I have never met him.

Q You don't know anything about him?

A No.

Q Do you know anything about the organizations to which Dr. Oppenheimer may have belonged in the late Thirties and early Forties?

A No, I do not. I assume you do not refer to the Physical Society or the National Academy?

Q No, sir. I mean the other organizations.

A No.

Q Doctor, you said that Dr. Oppenheimer played an important part in expressing the ideas of your group in Chapter 5 of the Vista report. ; Would you tell us just what that part was that Dr. Oppenheimer played?

A I think you know that Dr. Oppenheimer is very articulate

Q Yes, sir.

A He is very good at expressing ideas clearly and understandably.

Q Yes.

A This is primarily what I had reference to.

Q You mean he drafted that part of the report?

A There were several drafts before he came out the first time, and then there were many discussions afterwards. The wording was modified more or less continuously until the final version was accepted.

Q Dr. Oppenheimer's part was in preparing that final draft?

A The final draft and possibly some intermediate drafts where the wording was somewhat different, perhaps the emphasis somewhat different, but as far as I know, the main theme was

the same.

Q Was that final draft presented at a meeting out in Pasadena?

A Yes. In fact, even earlier drafts were presented to the whole group that was working in the field.

Q There certainly came a time when the finished product was presented to the meeting, is that right?

A That is right.

Q Do you recall who it was who presented it, Doctor?

A I believe Dr. DuBridge presented it.

Q Referring to that draft as it was prepared by Dr. DuBridge, do you remember if that said anything about thermonuclear weapons?

A They may have been mentioned, but they were not part of our proposal for close support, for army support.

Q Would you explain that a bit to me, Doctor? Why weren't they?

A In the first place, at that time the feasibility of hydrogen weapons had not yet been established, and we did not feel that this could be part of our proposal. Development work was still going on and the investigation of the technical feasibility of a hydrogen bomb was still going on.

Q This was in May 1952?

A No, this was in November 1950, I believe, was it not?

Q We were both wrong. It was November 1951.

A November 1951, that is correct. That is the time that we discussed the version that we took to Europe with us. That was November 18, 1951, I believe.

Q When was the feasibility of hydrogen weapons established?

A I have no knowledge that it has been established yet.

Q You mean you still don't know that they will work?

A I do not know, no. I know about subsequent developments on certain thermonuclear devices.

Q Wasn't there a test of a hydrogen weapon? Haven't there been tests of hydrogen weapons?

A I think that is questionable, but perhaps not a good subject for discussion here.

MR. GRAY: You mean from the point of view of security?

THE WITNESS: That is right.

MR. GRAY: Do you want to pursue this?

MR. ROBB: Perhaps I might finish up other matters first.

BY MR. ROBB:

Q Doctor, do you remember in the spring of 1952, specifically in May, when there was discussion about so-called Ivy Shot?

A I remember the Ivy Shot, yes.

Q The Ivy Shot was supposed to be a test of some thermonuclear device.

A That is right.

Q Did you take any position on whether or not that should be postponed or cancelled?

A I thought it was an important time to see if some agreement could be reached for avoiding future tests, or if there was some way of reaching agreements on control of weapons of that character. I thought a study should be made, and consideration should be given to the possibility of making use of this important event to accomplish this purpose.

Q Was it your position that the Ivy test --

MR. MARKS: Mr. Robb, what was the date of the Ivy test?

MR. ROBB: It was in the fall of 1952, wasn't it, Doctor?

THE WITNESS: That is my belief and recollection.

MR. ROBB: We are talking now about the spring of 1952.

BY MR. ROBB:

Q Was it your position in the spring of 1952 that the Ivy test should not take place?

A It was my position that some effort should be devoted that summer to studying the question of whether we could take advantage of this possibility of trying to reach some sort of agreement on the limitation of the use of thermonuclear weapons.

Q Agreement with whom?

A With the Russians.

Q Did you oppose the Ivy test in the absence of such an effort to make an agreement?

A I did not oppose it in any official capacity. I thought it was very unfortunate.

Q Were you opposed to the development of the so-called H bomb?

A Yes.

Q Had you finished?

A I have finished. I think I have said all I can say unless we go into classified material.

Q Were you opposed to the development of the H bomb as of the spring of 1952?

A You refer to a hydrogen bomb, is that correct?

Q Yes, sir.

A I thought it would be very unfortunate to devote an effort to that that would be so large that it would interfere with the weapons that we have discussed earlier, namely, the weapons that the Vista study indicated were needed for ground support and for resisting aggression in Western Europe.

Q Doctor, I don't want to be unfair with you, but am I to conclude from your answer that you were opposed to the development of the H bomb?

A I was not opposed to a study of the technical

feasibility of an H bomb. That was the question that was being considered at that time, I believe.

Q In May 1952?

A I think so. I believe this was the President's directive, that a study of the technical feasibility should be made. This I was in favor of.

Q Doctor, when was the President's directive?

A I believe there were two directives, one on the 30th of January, and the second, an official newspaper announcement, on the 31st of January, 1950.

Q That was two years before May 1952.

A That is right.

MR. ROBB: I think that is all I care to ask, Mr. Chairman.

MR. GRAY: Dr. Lauritsen, do you feel as of today a member of the Communist Party, that is, a man who is currently a member of the Communist Party, is automatically a security risk?

THE WITNESS: I think so.

MR. GRAY: You don't have any question in your mind about that, do you?

THE WITNESS: No, not if I can believe what I have been told about the Communist Party, and I do believe it.

MR. GRAY: In testifying earlier, I think you said you considered Dr. Frank Oppenheimer loyal in every respect,

and with no reservations about his character or trustworthiness?

THE WITNESS: That is right.

MR. GRAY: Are you aware that Dr. Frank Oppenheimer has stated at an earlier period in his life he was a member of the Communist Party?

THE WITNESS: Yes, sir, I am aware of that now.

MR. GRAY: But still you say you have no reservations about his loyalty or character?

THE WITNESS: No, I have not.

MR. GRAY: Would you explain to the Board why you conclude that you would trust him with any secret, which I believe is the effect or import of what you say, today, although you believe that a member of the Communist Party is automatically a security risk? Would you explain that?

THE WITNESS: I believe he has resigned from the Communist Party, and he is no longer under the discipline of the Communist Party. I believe he was cleared for work on war projects during the war and including nuclear weapons work.

MR. GRAY: This was not after it was known he was a member of the Communist Party?

THE WITNESS: This I have no way of knowing. I do not know what turned up in his investigation.

MR. GRAY: Would you feel that if it had been known at the time that he was a member of the Communist Party he should have been cleared for war work?

THE WITNESS: If he had not resigned previously, I would certainly not recommend his clearance. If he had resigned previously because he no longer wanted to be a member of the Communist Party because he had found out that the Communist Party was not what it appeared to be, then I would still be inclined to say that he would be reliable.

MR. GRAY: Today on classified projects for which you have some responsibility, including a security responsibility, if a man comes to the project seeking employment, who is known to you to have been a former member of the Communist Party, would you employ him simply on his statement that he no longer was a member of the Communist Party?

THE WITNESS: No, not without appropriate clearance through official channels.

MR. GRAY: What would your recommendation be?

THE WITNESS: If he had resigned from the Communist Party when he found out what the purpose of the Communist Party really was, and had been a member only as long as he had been under misconceptions about these things, then I would not hold that against him.

MR. GRAY: You would accept as evidence of that his own statement?

THE WITNESS: Not necessarily. I think some people you can trust, and others you can't trust. I think it depends on what other activities he has been involved in and what he

has been doing. In Frank's case, I think he demonstrated that he wanted to work for this country. Other people perhaps have not demonstrated that. I think there is a great deal of difference between being a Communist in 1936 and being a Communist in 1954. I don't think very many of us knew, I certainly did not know what the Communist Party was up to and how it operated.

MR. GRAY: Let me ask this question: Would it be a rather accurate summary of at least parts of your testimony to say that you never really understood very much about the Communist Party or its workings?

THE WITNESS: That I did not?

MR. GRAY: That is right.

THE WITNESS: At that time.

MR. GRAY: Because each of these people that Mr. Robb asked you about, who I think were later identified as having been in the Party or close to it, you testified that this was something you had no knowledge or suspicion about.

THE WITNESS: That is right.

MR. GRAY: Have you ever known anybody that you thought was a Communist?

THE WITNESS: Not personally, no.

MR. GRAY: So membership in the Communist Party is something you really have not concerned yourself with in any way?

THE WITNESS: That is right.

MR. GRAY: Did you know Mr. Fuchs?

THE WITNESS: I knew him at Los Alamos.

MR. GRAY: You didn't suspect he was a Communist?

THE WITNESS: No. I did not know him well. My contacts with him were limited to our having lunch together in the same dining room occasionally. Apart from that, I did not know him.

MR. GRAY: But you had no more suspicion of him than you did of the others whose names have been mentioned here?

THE WITNESS: No.

MR. GRAY: If asked at the time would you have said that he was loyal to the war effort?

THE WITNESS: I would not have said it. I did not know him well enough to have an opinion. I had nothing to do with his work.

MR. GRAY: If he worked very hard at Los Alamos and contributed effectively, that is in a sense a demonstration of his loyalty?

THE WITNESS: I would say it would be one in his favor, but perhaps not conclusive.

MR. GRAY: In the light of developing facts.

THE WITNESS: That is right. I could not have testified against him if I had been asked to because I did not have the information.

MR. GRAY: You would not consider yourself an expert on Communism in any sense of the word?

THE WITNESS: No.

MR. GRAY: Have you any questions, Dr. Evans?

DR. EVANS: Yes. Doctor, you said you were born and raised in Denmark.

THE WITNESS: That is correct.

DR. EVANS: Would you tell us just where you were educated?

THE WITNESS: I studied in a technical school called Odense. I graduated from there in 1911. Then I studied at the Royal Academy of Arts in Copenhagen subsequently.

DR. EVANS: You got a degree from there?

THE WITNESS: I got a degree from this technical school, what probably here would be called structural engineering. I think that would be the nearest approach to it. I was at that time planning to be an architect.

DR. EVANS: You are not a Communist?

THE WITNESS: I am not a Communist, no.

DR. EVANS: Have you ever been what is called a fellow traveler?

THE WITNESS: No, sir.

DR. EVANS: Have you belonged to any of these subversive organizations that appear on the Attorney General's list?

THE WITNESS: No, sir.

DR. EVANS: Doctor, do you believe that a man can

be perfectly loyal to his country and still be a security risk?

THE WITNESS: I suppose so, yes.

DR. EVANS: You have faith in Dr. Oppenheimer's discretion, you say?

THE WITNESS: I do.

DR. EVANS: Have you ever been approached for security information?

THE WITNESS: Yes.

DR. EVANS: Men have approached you?

THE WITNESS: FBI, yes.

MR. GRAY: I want to make sure the witness understands this question.

DR. EVANS: I don't mean the FBI.

THE WITNESS: I am sorry.

DR. EVANS: I mean somebody that might be a Soviet agent.

THE WITNESS: No.

DR. EVANS: You have never been approached?

THE WITNESS: Not to my knowledge, no.

DR. EVANS: You are not always able, Doctor, to tell these Communists when you meet them, are you?

THE WITNESS: That is right.

DR. EVANS: It apparently is not easy to recognize them.

THE WITNESS: That is right.

DR. EVANS: It is particularly apparent for a

professor not to know whether people are Communists, is that true?

THE WITNESS: I think it is true of anybody. I don't think professors are any better or any worse than any other people.

DR. EVANS: I don't know, Doctor, since I have been on this Board. That is all.

MR. GRAY: Mr. Marks.

REDIRECT EXAMINATION

BY MR. MARKS:

Q Dr. Lauritsen, looking back over the span of the last 25 years, do you know Robert Oppenheimer or Frank Oppenheimer better?

A Robert much better.

Q Would you explain that?

A We had more professional things in common and were if not of the same age, at least more nearly the same age. It was only reasonable both being members of the faculty that I should know him better. Also, I have known him a longer time and a greater fraction of the time.

Q You said you don't consider yourself an expert on Communism.

A No, I don't.

Q Do you consider yourself an expert on Dr. Oppenheimer's trustworthiness?

A No, I don't know what an expert on that is, or how you get to be expert on that. I only know what my own feelings and belief are, and it is very deep.

Q There was a long list of names read to you. Some of them you said you didn't know.

A As far as I know, as far as I remember.

Q Some of them you described, such acquaintance as you had with them. Are there any people on that list that was read to you by Mr. Robb with respect to whom your knowledge was as great as that of Dr. Oppenheimer?

A No, I think not.

Q Considering the fact, Dr. Lauritsen, that you extensively engaged in military work of a top secret nature, would you consider it a departure from discretion if you were to visit with Dr. Morrison today?

A No.

Q Would you consider it a departure from discretion if you visited with the Serbers?

A No.

Q Would you visit with them?

A I would like to very much.

Q Would you say the same of Dr. Morrison?

A I know him very little. I know the Serbers fairly well. I have no knowledge that they are Communists.

MR. GRAY: I don't know whether you had completed

your questioning.

MR. MARKS: I think so.

RE-CROSS EXAMINATION

BY MR. ROBB:

Q How about Peters? Would you visit him?

A I don't know him personally, but I feel that it would be very wrong for the Physical Society to throw him out of the Society. It is not a political society.

Q No, but from what you have heard about Peters, would you feel that you were being discreet to associate with him?

A I really don't know enough about him to be sure about that.

Q You couldn't be sure either way?

A I don't have enough information.

Q One question that I overlooked, Mr. Chairman. Do you recall, Doctor, anything in the Vista Report, either in the draft as it was read in final form at Pasadena or later, about an announcement by the United States that no strategic atomic attack would be made against Russia unless such an attack were first started by Russia, either against the Zone of Interior or against our European Allies, or something of that sort?

A I do not remember the exact wording, but I know that my feeling was that the important thing was to strike immediately against their tactical airfields and the immediate

military targets that could attack our field forces. This had to be done within a matter of hours after hostilities, while the long range strategic operations could at best be days, and that the immediacy of the attack was not nearly as important as in the case of the ground forces.

Q Was there anything about any announcement to that effect being made by the United States? Was there any recommendation?

A Was a recommendation in the Vista Report?

Q I am asking you to search your recollection for it.

A I think it is possible that we pointed out that we felt that the tactical support should be available if such a statement was made, that we would not use the strategic capability except in retaliation.

Q Was that your view?

A Yes.

Q Was it Dr. Oppenheimer's?

A I believe so.

Q Did your views and Dr. Oppenheimer's pretty generally coincide during this period?

A I think so.

Q Was that true in May of 1952, also?

A In May of 1952?

Q When you were talking about the Ivy test.

A I think so, yes.

Q Did you discuss that with him?

A Yes.

MR. ROBB: I think that is all.

MR. GRAY: I have just one other question, Dr. Lauritsen. Would it be fair for me to assume that your view with respect to a Communist, former Communist, and so forth, is that you really prefer not to have to make these determinations, and you would rely on the security people for it?

THE WITNESS: Yes.

MR. GRAY: In fairness, isn't that your statement, that you would just prefer not to have to go into it?

THE WITNESS: That is right.

MR. GRAY: I don't want to put my statement in your mouth.

THE WITNESS: No, I agree this is the point of view. We have machinery for handling these cases, and I think it would be quite wrong for me to make the decisions.

REDIRECT EXAMINATION

BY MR. MARKS:

Q Dr. Lauritsen, accepting the view that you have just described, that we have machinery for deciding the kind of issues that the Chairman has mentioned about the Communists, I would like to have you distinguish between the operation of that machinery in the large, the operation of that machinery

in general, and the opinion that you hold with respect to Dr. Oppenheimer, and I would like to ask you whether you have any hesitation in making the judgment on this matter with respect to Dr. Oppenheimer -- personal judgment -- that is, a personal judgment with respect to his character, loyalty, discretion.

A Would you say what the question is?

Q My question is, bearing in mind your view that it is appropriate for the machinery of government to determine questions of who is and who is not a Communist, who is and who is not a security risk, I would like now to ask you whether in view of that opinion you have any hesitation in expressing what your own convictions are about Dr. Oppenheimer?

A I think I have already done so. I take it we are in the middle of the operation of this machinery, and I have made statements that I would have no hesitation to recommend complete clearance.

Q I was not asking you that.

A I thought that is what you asked.

Q I think you answered the question.

MR. GRAY: I think his earlier testimony pretty adequately answered that. I don't want to keep him from saying it again, but I think it is perfectly clear.

MR. MARKS: No, I just wanted to be sure that there was a distinction. Just one more question.

BY MR. MARKS:

The testimony that has already been given by others here suggests to me that it is not inappropriate for me to ask the question that I am about to ask. If, however, the answer to it in any way involves classified information, you will have to say so.

The question is: Is there any difference in your thinking between what is described as an H bomb and what is described as thermonuclear weapons and devices?

A I think it is clear from the way I answered these questions that there is, but the explanation of it, I think, is classified with a very high degree of classification. It involves technical details that could only be considered of a high degree of classification.

Q Let me ask another question that I think will not involve or that may not involve any classified information:

Is it fair to conclude from what you have just said that you might have held one kind of a view with respect to thermonuclear devices and thermonuclear weapons and a quite different view with respect to a hydrogen bomb?

A May I state it a little differently? It is a little hard to answer directly.

Q Answer it as best you can, if you can without getting into classified material.

A The best I can say is that from what I know about

the discussions that have appeared in the newspapers, the discussion has been on the basis of whether you are for or against a crash program on hydrogen bombs. This expression was not used as far as I know in any directive by the President. The President's directive did not mention crash program. It did not mention hydrogen bomb. I believe it mentioned the order of investigation of the technical feasibility of thermonuclear weapons.

This, I think, is very different from a crash program on a hydrogen bomb. Such a crash program I believe would interfere seriously with other things that we needed very badly if we were to carry out the mission that was assigned to Vista. If our total effort in this field went into a crash program on hydrogen bombs, starting in 1950, I believe it would seriously interfere with things that we needed urgently.

Does that answer the question? I was never opposed to carrying out what I understood to be the President's directive but it has been discussed in very different terms, it seems to me.

MR. MARKS: I think that is all.

MR. ROBB: That is all.

MR. GRAY: Thank you very much, Dr. Lauritsen.

THE WITNESS: Thank you.

(Witness excused.)

MR. GRAY: Who is your next witness?

MR. GARRISON: I told Mr. Buckley that I arranged for him to testify at 2 o'clock.

MR. GRAY: Do you have anybody here now?

MR. GARRISON: We have Dr. Zacharias here.

MR. GRAY: Is he likely to be a long witness?

MR. MARKS: I hope not.

MR. GRAY: Could we get started with Dr. Zacharias?

MR. GARRISON: The problem you will recall about Mr. Buckley --

MR. GRAY: Yes, I would say in this case because of Mr. Buckley's health and circumstances of his being here, if we don't finish with Dr. Zacharias, we will interrupt his testimony. But I would like to get ahead with it if we can unless you object to that.

MR. ROBB: No, indeed.

MR. GRAY: Dr. Zacharias, do you wish to testify under oath? You are not required to do so. However, I think I should point out to you that every witness who has appeared to this point has chosen to do so.

DR. ZACHARIAS: Yes, I do.

MR. GRAY: Would you be good enough to stand and raise your right hand. What is your full name?

DR. ZACHARIAS: Jerrold R. Zacharias.

MR. GRAY: Jerrold R. Zacharias, do you swear that

the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

DR. ZACHARIAS: I do.

Whereupon,

JERROLD R. ZACHARIAS

was called as a witness, and having been first duly sworn, was examined and testified as follows:

MR. GRAY: Will you be seated, please, sir?

It is my duty to remind you of the existence of the perjury statutes, and the fact that there are penalties with respect to violation of those statutes. Do I need to review those with you, Doctor?

THE WITNESS: No, sir.

MR. GRAY: I should like to request that if in the course of your testimony it becomes necessary for you to refer to or disclose restricted data, you notify me in advance so that we may take certain appropriate steps in the interest of security.

Finally, I should say to you, as I say on behalf of the Board to all witnesses, that we consider this proceeding a confidential matter between the Atomic Energy Commission and its officials on the one hand, and Dr. Oppenheimer, his representatives and witnesses on the other. The Commission is making no releases with respect to these proceedings, and we express the hope that the witnesses will take the same view.

MR. MARKS: May we pause just a minute. I am not sure you expressed the hope to Dr. Lauritsen.

MR. GRAY: Yes, I did.

MR. MARKS: I am quite sure he understands that.

MR. GRAY: No, I am not sure that I did.

MR. MARKS: I think he understands in any case but I just wanted to be sure.

MR. GRAY: Will you proceed.

DIRECT EXAMINATION

BY MR. MARKS:

Q What is your present position?

A I am professor of physics at the Massachusetts Institute of Technology, and director of the laboratory of nuclear science there.

Q What connections have you had with military work commencing with World War II. State this very briefly, if you will.

A I worked during World War II primarily in the radiation laboratory at MIT. For a short period during that time at the Bell Telephone Radar Laboratory at Whippany, New Jersey. I spent about four months at the end of the war, just overlapping VJ day, at Los Alamos. Then I spent a fair amount of time on a number of study projects for the military and for things associated with the military.

Q What are those projects?

A The first one was a study of nuclear powered flight sponsored by the Atomic Energy Commission, a project headed by Walter Whitman, and known as Project Lexington. I think it was probably the first of the things that we call summer studies.

The second one was Project Hartwell, which I directed, a study of overseas transport, specifically directed toward the antisubmarine problem.

Then Project Charles, which was a study at MIT, headed by F. W. Loomis. I was the associate director of that study.

That was a study on air defense, although/general study of the air defense, specifically for force of time had to think mostly about defense of continental North America.

Then out of that study there grew a laboratory at MIT called the Lincoln Laboratory, now a large air defense laboratory in Lincoln, Massachusetts. It is in Lincoln, Lexington and Bedford, Massachusetts.

I was for a time associate director of the Lincoln Laboratory in its first year or so.

Q When was that?

A That laboratory started in about June, July or so of 1951. I was involved for a short time -- not very long -- in Project Vista, which I am sure has entered into these discussions before. Then as a member of Project Lincoln, I was in charge of a study on defense of the North American

continent, a project that had no name. We were trying not to let it be a project, but it got to be known as the summer study of Project Lincoln. That was in the summer of 1952. I think that is about it.

Q In connection with this last project that you have described, did you personally make any special contribution to it that you can describe without getting in to classified material?

A I was director of the project, and therefore involved in almost all phases of it. I think without getting into rather involved technical discussion which might turn out to be classified, that is, a frank discussion of which might go off into classified channels, I think it would be best not to be too specific about personal contributions.

I would be glad to if necessary.

Q How long have you known Dr. Oppenheimer?

A As I remember it, I met him when he was a student abroad. It was in the summer of 1926 or 1925. It was the summer of 1926 at a meeting in the University of Leyden in Holland, and talked to him a bit.

Q What is your association with him since that time?

A Since that time I would say it has been very scanty up until my working at Los Alamos. However, I did meet him again in 1940 -- the summer of 1940 -- Norman Ramsey and I met him at Seattle, and together we drove south to San

Francisco and Dr. Oppenheimer joined us.

Q Putting to one side such casual associations, what is the period during which you have had close associations with him?

A The close association, I would say, substantially started at Los Alamos in July of 1945.

Q Since that time have you had frequent occasion to work with him?

A Yes, and mostly on things that involve the military. To some extent on general policies, regarding the support of science.

Q Regarding the support of science where?

A Support of science in this country generally. Let us call it financial support of science and the trends that physics takes.

Q Just to be sure I understand you, you are speaking now, I take it, about two different aspects of your postwar association with Dr. Oppenheimer?

A Yes.

Q One is military.

A One is you might say military in matters of national policy and that sort of thing, and the other has to do with support of -- let us be specific -- of nuclear physics. It being fairly expensive, there has been a fair amount of discussion about how much an expensive thing can be properly

supported, and the directions on which it ought to go. On those subjects we have had considerable discussion.

Q Did you have much contact with Dr. Oppenheimer in connection with Vista?

A Not really. I saw him there. I was at that project only about two or three weeks. He was there at the time that we were working on substantially different things, and although I saw him there, I wasn't very close to the particular thing he was working on.

Q How about Project Lincoln?

A On Project Lincoln, I think the most important thing to mention would be the study during the summer of 1952. Could I go into a little detail on that?

Q Yes, bearing in mind the Chairman's caution about classified information.

A I think the story of that summer study is probably worth putting into the record, and I will try to do it as quickly as I can, because it has been to a certain extent a moderately controversial thing. Continental has been to a certain extent controversial. Present national policy on continental defense is especially gratifying to those of us who did work on that study because national policy has turned enough in the direction of making continental defense so that I think it is an important thing to get on the table.

Q Let me interrupt you there to ask you if you can say,

was there any policy with respect to continental defense before the summer study of which you are speaking?

A Surely. The Air Force had then and has considerable interest in continental defense, and was going along certain technical lines, and with the buildup of a certain amount of counter force for the protection of the continent. In fact, the Lincoln Laboratory itself, which was by then a year and a half to two years old, is a laboratory that is under contract to the Air Force. It is a joint Army, Navy, Air Force laboratory, but the Air Force holds the contract and is the major contributor.

Q I interrupted you when you were about to tell the story of what happened as a result of the summer study.

A The lincoln laboratory set up to work on technological and technical aspects of continental defense. In fact, air defense of any sort. Just prior to the summer of 1952, Dr. Lauritsen and I had a long discussion about the trend in continental defense, whether the buildup was great enough, whether the United States was indeed capable of making a defense. The question was whether we were capable of making a defense that was worth the effort, worth the making and worth the cost in dollars and men.

Dr. Lauritsen and I decided that it might be a very good thing if we looked into these technical, military, and economic questions again during that summer. We decided

that we should talk this over with certain others whom we knew very well. First of all, Dr. Hill, who was then the director and is now the director of Lincoln Laboratory. We decided we would talk it over with Dr. Oppenheimer and Dr. Rabi.

Q Why did you talk to Dr. Oppenheimer?

A In my experience it is always profitable to talk to Dr. Oppenheimer. His head is so clear on questions of this sort that when you flounder for months to try to formulate your ideas, you get to him and he can listen and help state clearly what you and he and others have decided is the germ of what you are thinking. This is true in all of my contacts with Dr. Oppenheimer on this kind of question.

We decided, then, that it would be a good idea to start such a study, that Dr. Oppenheimer, Dr. Rabi, and Dr. Lauritsen agree to work on this study in part. The reason is that it is very difficult to recruit men of stature, men of ability into any kind of study. They are doing what they think is adequate and they have some sense of urgency but they also have the feeling, why don't we let somebody else do the work.

Dr. Hill, who is the director of the Lincoln Lab, and I felt that if Dr. Oppenheimer, Dr. Rabi and Dr. Lauritsen agreed to work on this in part, that it would be easier for us to recruit a number of very brilliant people and some of the more experienced people to do the job. Indeed,

that turned out to be true. So that directly within the Lincoln Laboratory and sponsored by the Air Force, as I say, we set up a study.

We came out with three recommendations, one of which I would like to say something about, and the other two I will just mention and not go into more deeply because of security classification.

On the first, which was clearest in our minds, and which has been enough in the newspapers so that I can say it, we formulated the technical side of a warning system against aircraft that might be launched from Russia toward the United States. We formulated the technical details and laid plans for a warning system that would be substantially across the top of the world from Hawaii around through the north, back down across to England, and another part down to the Azores.

There were many people in all branches of the military and civilian life who felt that this was an impractical thing to do, that such a warning system would be too expensive, too monotonous; it would take too many people and too many dollars. It is my feeling that the major role of science in technology is to cut the dollars and men out of the military projects. We cut this by devising new methods which have indeed over the past year and a half been proven technically. We have devised new methods whereby it is economically sound and quite feasible to have such an early warning

system. We formulated tentative plans for carrying the air battle out beyond the continental confines of the United States. We formulated plans to try to carry any possible air battle out away from the cities.

Q You mean to keep it from getting to the cities?

A To keep it from getting to the cities, but also to keep the battle from going over cities. Air Defense Command is in the United States. We felt that it was very important to learn how to fight an air battle out away from the country in order to pull its sting, in order to reduce it, and possibly to turn it back altogether.

The last part of that study was devoted to possible intercontinental ballistic missiles, and on these last two things, the remote air battle and missiles, I would like to discuss these things only under military secrecy. The atomic energy secrecy I think would not be importantly involved, although to a certain extent there, too.

Q Let us not go into those matters, Dr. Zacharias. You spoke of resistance to these ideas in some quarters in the military and civilian circles. Has this resistance persisted?

A I am not sure that I said there was resistance. However, I am sure in the newspapers it is clear that continental defense is a subject that has a lot of emotion in it. Let me say in direct answer to your question that the

national policy apropos of continental defense is quite in keeping with the recommendations that were made by that study, Before the study, they were not. I don't want to bring in the confusion of post hoc ergo propter hoc, but it is true just before the time of the study and before the discussions that followed it, there was not a strong policy, and there now is a strong policy.

In other words, I don't want the summer to be credited with change of national policy no matter what I happen to think when I am by myself.

Q Did you conceive the recommendations of this summer study that you have referred to as being inconsistent or to be in conflict with any national policy with respect to what is described as strategic air policy.

A The only conflict is of a funny sort. Let me begin it this way. Certainly part of any defensive system in this country is what we call our offensive plan. One doesn't think of protecting the continent by conventional defensive means. That is, destruction of enemy bases just as important and every bit as important as local defense. It was the feeling of a number of us who worked on this summer study that the amount of money and the amount of effort that the government would have to put into overall defense was larger or is larger than was being put in then. Many people interpreted our strong recommendations for defense as an unfortunate

method of cutting into appropriations for Strategic Air Command. This was not the case in our recommendations and we believed then and I still believe that the money is going to have to come from other sources, and not from cuts from the military except in the matter of pruning certain military things that are not terribly fruitful.

Objections to try to build up continental defense from the point of view of people who are trying to build up offensive power alone, simply that if you work with a limited number of dollars and a limited amount of effort, naturally if you build one thing up, you would have to build the other down. Whereas, I am firmly of the opinion that we are going to build the whole thing up, and our economy will have to stand it, and I am assured that it will. Does that answer your question.

Q You mean that you had both strategic air and also continental defense?

A Yes, sir, and other military things, too, as events of the present show.

Q In this work that you have been describing, --

MR. GRAY: Are you still on the continental defense, or are you about to leave?

MR. MARKS: I was about to get to a final couple of questions.

MR. GRAY: Please proceed if you are that close to

finishing. My question was related to whether we should stop now for lunch.

MR. MARKS: I think I could finish in just a few minutes.

MR. GRAY: Let us go ahead.

BY MR. MARKS:

Q The work which you described in which Dr. Oppenheimer participated on continental defense and other military and scientific affairs, who did you conceive to be the enemy that we needed to be worried about?

A There is no question in anybody's mind, and there was no question in the mind of anyone who participated or was closely associated with any of these discussions, Soviet Union, and the word "enemy", or "Russia" and the word "enemy" are sort of interchanged freely. It is that deeply imbedded in everybody's thinking, including that of Dr. Oppenheimer.

Q What was your general purpose in devoting yourself to this work?

A That is a simple question. This is the only country we have, and these are tough times, and we want to help it.

Q As a result of your association with Dr. Oppenheimer have you formed an opinion or conviction as to his character and his loyalty to the United States?

A I am completely convinced of his loyalty to the United States. Can I add a little way of saying it?

g When you are gathered in a group of men who are discussing the details on how to combat the Russians, how to contain the Russians, how to keep them from overrunning the rest of the world, and so on, the loyalties come out very, very clearly. There just is not any question in my mind that Dr. Oppenheimer's loyalty is for this country and in no way or shape by anything other than hostility toward the USSR.

Q What about his character?

A His character? Ethical, moral is first rate.

Q Do you have any views as to his capacity to exercise discretion in dealing with classified and restricted data and military secrets?

A In my opinion, he is always discreet and careful and has regarded the handling of secret documents and secret ideas and so on with discretion and understanding. You might think it is not the easiest thing in the world to carry around a head full of secrets and go about in public, too, and talk about burning questions of the day. It is difficult. I believe that Dr. Oppenheimer has showed in every instance to my knowledge that he can do this kind of thing.

MR. MARKS: That is all.

MR. ROBB: I can finish in two minutes, I think.

MR. GRAY: If we can, let us go ahead.

CROSS EXAMINATION

BY MR. ROBB:

Q Doctor, are you in the group that is called ZORC?

A Yes, except let me say that this name was never heard of by the members of that group, by any one of those four until it appeared in the national magazine.

Q I was going to ask you if you could tell us what you know about the origin of that nomenclature.

A I have no knowledge of the origin of that nomenclature. I do know one friend of mine went around to a meeting of the Physical Society and hunted for people who had heard of it. Found one and I would rather not mention the name because it has nothing to do with this thing. He may have heard it or it may have been the invention of the man who wrote the article.

Q I think for our purpose, the name is not popular. Was there a group consisting of yourself, Dr. Oppenheimer, Dr. Rabi and Dr. Lauritsen?

A No, no more than there would be a group of any four people who respect each other despite the fact that they hold slightly different ways of looking at things -- a community of interests and a slight disparity of approach. These four people, I think, are very different.

Q Were you four people the nucleus of that LINCOLN summer study?

A No, sir. The four were not. I would say the nucleus, as I tried to clarify before, were Dr. Hill and myself.

That is, the Director of the Lincoln Laboratory. The first discussions were with Dr. Lauritsen. Dr. Oppenheimer and Dr. Rabi agreed that it would be a good thing to go ahead with it and they were willing to lend their prestige to help pull in some people into it, but this is far from being the nucleus of the thing.

Q That is what I am trying to find out because it has been rather fuzzy in my mind. Were you four people -- Dr. Oppenheimer, Dr. Lauritsen, Dr. Rabi, and you -- peculiarly active in that summer study? Were you the leaders of it?

A Let me say this. I ran it. I was the director of it. So, I was in it. There are no two ways about that. Dr. Rabi, Dr. Oppenheimer and Dr. Lauritsen spent a small fraction of their time. However, let me say this. We had for the first week of that study a briefing for four days, as I remember it, that was packed with as much meat as you can get into any four days of technical briefing. I wanted a summary of that technical briefing, and there were about 65 people there, all very fully informed, and the only man I could turn to to give a summary, who could pull the thing together, was Dr. Oppenheimer. He did a masterful job. It was perfectly clear to everybody in that group how Oppenheimer felt about all of the issues, so that if you questioned any one of those you could find a statement of what he believed.

Q Was there any discussion, Dr. Zacharias, about the

comparative morality of a so-called fortress concept, on the one hand, and a strategic air force to wage aggressive war on the other?

A Not in that summer study. I am afraid that wars are evil. I do not think there is anyone in the room who would take exception to that. It is not a very meaningful statement. But the question of morality, one way or the other, you do not have time for when you are trying to think how you fight.

Q Was there any conclusion reached as to the relative importance of a strategic air force on the one hand and an impregnable air defense on the other hand and, if so, what was it?

A I know of no one who really knows the inside of the military who believes that it is possible to have either an impregnable and all overwhelming and completely decisive strategic air command, and I know of no one in the know who thinks you can have a completely impregnable defense. What the country needs is a little of both and one has to supplement the other. That was clearly stated in the conclusion of this report.

MR. ROBB: That is all I care to ask.

MR. GRAY: I have a couple of questions. I am going to reverse my procedure and call on Dr. Evans.

DR. EVANS: I have no questions.

MR. MORGAN: I have no questions.

MR. GRAY: Dr. Zacharias, have your own associations been in question? Have you, for example, been identified with any groups which the Attorney General has listed in these various publications?

THE WITNESS: No, sir. Let me make one statement about this, which I have written on all security questionnaires so you will know.

In the late thirties, sometime, there grew up something called the American League Against War and Facism. I may have been a member. I would now, thinking back on it, believe that I should have been. It is an organization which became communist-dominated. What I have had to say in any security questionnaire is this: that if their rolls say I was, I was. If their rolls say I wasn't, I wasn't. It was not something that I had much time for or much traffic with. This is the only thing of any sort remotely associated with this kind of thing. Mind you, it was not a communist-dominated organization when I was looking into it and thinking that it might be a good thing to back.

MR. GRAY: I think that is a very fair statement.

May I just ask this one further question. At one time, did you begin to be conscious that association with the Communist Party had elements of danger? Is that a clear question?

THE WITNESS: Yes, but like the question that is not completely clear, the answer will take a couple of minutes. Yes or no will not quite do.

MR. GRAY: I understand.

THE WITNESS: I went to college in New York, at Columbia, having come from the South. I learned about that, that there was such a thing as Communism, as a college student naturally. I lived in New York as a graduate student at Columbia and as a member of the teaching staff of one of the municipal colleges, Hunter College. There was Communist argument all around. I could never really understand any of the Communist arguments and always fought bitterly, intellectually with all of the people who tried to hand out the Communist line, so I would say that at no time since even my first discovery of Communism did I ever think there was anything very sensible about it.

I remember even what I thought as a freshman in college. At no time did I ever think there was anything sensible about it, so there was never any sudden becoming aware. However, the build-up of the Communist talk was something that a number of us in New York would always fight off and I can remember some bitter battles with the pinks of the 1930's.

MR. GRAY: As of the time the fighting started in Europe, would it have been clear to you that Communism might

have involved some security problems? I am not sure that is a fair question. What I am trying to get at is whether you as a scientist were conscious at all of Communism either in relationships or its threats or dangers, or whether it was something that really did not cross your path at all.

THE WITNESS: I do not think one could have claimed that he was awake and live in New York City in the thirties and not know that there was Communism. I think a lot of people did not regard it as the threat that it turned out to be. Russia was small, it was experimental, it was backward, and so on. I do not think any people who were backing it then knew that it would capture half of the globe by 1954. Does that answer your question?

MR. GRAY: Yes. I think perhaps I will put one other to you.

Is there any question in your mind that employing a Communist today on matters involving security would be a mistake, one who is now a member of the Communist Party?

THE WITNESS: Let me get this straight.

MR. GRAY: Let me put the question this way: In your mind, would Party membership be an automatic bar to a man who was being considered for work of a classified nature?

THE WITNESS: Certainly.

MR. GRAY: Would this have been true in your mind in the war years of World War II?

THE WITNESS: A then member of the Communist Party, I would have thought the same, because I had such a low opinion of their attitudes. In the case of some whom you might call American Communists, there was a fanaticism that left little doubt about whether you would want to have them on a secret project. There are many who saw the light and when they did -- the Russo-German Pact certainly cut a lot of those-- and the less fanatical ones were probably hireable.

MR. GRAY: It follows, I suppose, from what you have already said that you feel that today a man who might have been a member of the Communist Party can be in 1954 a perfectly safe person security-wise. That is possible?

THE WITNESS: Yes, I think so. I think also that in giving a security clearance one should look at the depth of his involvement and what sort of involvement there was.

MR. GRAY: Dr. Evans.

DR. EVANS: There were quite a number of Communists around Hunter College at that time.

THE WITNESS: I do not know how many. I knew that Bella Dodd, who was the head of the Teachers Union there was likely to be a Communist. Remember, it is hard to know who is a Communist if you are not in it, but I was never surprised when Bella Dodd confessed that she was a Communist.

DR. EVANS: You can meet a lot of people and talk to them and know them in a certain way and not know they are

communists.

THE WITNESS: It depends on how you define it. Some people want to be very specific and try to say a dues-paying member. You might not know whether a man was a due-paying member unless you happened to have some mechanism for knowing it. A man is not likely to show you a red car and say, "Look, I am a member of the Communist Party." But you can certainly tell the flavor of a man's opinions by what he says. There are many people that I would call Russo-phylic American Communists -- lovers of Russia. You could tell this by talking to them, I am sure.

DR. EVANS: You have never been approached by anyone trying to get classified information from you, have you?

THE WITNESS: No, sir.

DR. EVANS: I have no further questions.

REDIRECT EXAMINATION

BY MR. MARKS:

Q Just three questions.

Dr. Zacharias, in response to a question of the Chairman, as to whether you would consider someone who once had been a communist or perhaps he said close to communists, but who no longer was, considering his present hirability for secret work, you said you would have to take account of the extent of his involvement in the communist movement. Would you also take into account his record since then?

A Certainly. Whenever you sign a petition saying, "I give this man clearance to work on such-and-such secret project," this is a positive statement, and I think should be backed up with good, full knowledge and appreciation, pro and con.

Q In response to a question by Mr. Robb about continental defense and strategic offensive, I think you said that what you were advocating and what your group in the summer study was advocating was a little of both.

A Maybe I should have said a lot of both.

Q Just one other question. Do you have any connection with the Science Advisory Committee of the Office of Defense Mobilization?

A Yes, sir. I am either a consultant or a member, depending on whether the names have been changed in the last month or two. There are so many people who are members of the Science Advisory Committee and so many people called consultants and it was decided to switch the titles of the groups.

Q Do you attend those meetings regularly?

A Yes, sir.

Q Could you make any comment on the value of Dr. Oppenheimer's contributions in that organization.

A There are very few people who have Dr. Oppenheimer's ability to synthesize the additions of others along with the

ideas of himself. He has that wonderful ability. Meetings that have gone on without Dr. Oppenheimer, in my opinion, have suffered somewhat from this lack. Mind you, there are people on that Committee who have a real gift for summary, but they are not the equal of Robert Oppenheimer. In particular, DuBridg and Killian, two college presidents. Maybe that is part of the equipment of a college president, but neither one of them will focus the ideas quite as well as Robert Oppenheimer.

DR. EVANS: I did not get what you said about the equipment of college presidents.

THE WITNESS: The ability to bring ideas into a clear focus. I am afraid it sounded --

DR. EVANS: You say that is the ability or is not the ability?

THE WITNESS: It is the ability.

DR. GRAY: He said it may be.

MR. MARKS: That is all.

MR. ROBB: I have nothing further.

MR. GRAY: Thank you very much, Dr. Zacharias.

(Witness excused.)

MR. GRAY: We will recess until 2:15 p.m.

(Thereupon, at 1:10 p.m., a recess was taken to reconvene at 2:15 p.m. this day.)

MR. GRAY: Mr. Buckley, do you care to testify under oath? You are not required to do so.

MR. BUCKLEY: I am quite willing to do so.

MR. GRAY: All the earlier witnesses have done so. If you do wish to, would you raise your right hand and stand please? May I have your full name?

MR. BUCKLEY: Olliver E. Buckley. If you wish the middle name, it is Ellsworth -- Olliver Ellsworth Buckley.

MR. GRAY: Olliver Ellsworth Buckley, do you swear that the testimony you are to give the Board shall be the truth, the whole truth, and nothing but the truth, so help you God?

MR. BUCKLEY: I do.

MR. GRAY: Will you be seated, please, sir.

I am required to remind you of the existence of the so-called perjury statutes. May I assume you are familiar with those? I am prepared to review with you the penalties for falsification or fabrication under oath?

MR. BUCKLEY: I realize they are severe. I could not state them.

MR. GRAY: I think that is adequate.

MR. BUCKLEY: I should like to ask, sir, if the course of your testimony should indicate to you that is necessary to advert to or disclose restricted data you let

2 me know in advance so that we may take certain necessary and appropriate steps.

Finally I should say to you what I have been saying on behalf of the Board to each of the witnesses, and that is, that we consider these proceedings a confidential matter between the Atomic Energy Commission and its officials on one hand and Dr. Oppeneheimer, his representatives and witnesses on the other, and that the Commission is making no releases with respect to these proceedings and we express the hope that the witnesses will take the same view of the situation.

Would you proceed, Mr. Garrison.

Whereupon,

OLLIVER E. BUCKLEY

was called as a witness, and having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. GARRISON:

Q Mr. Buckley, would you state your present position?

A I am retired. I was formerly chairman of the Board of Bell Telephone Laboratories.

(Mr. Morgan left the hearing room.)

A Before that, I was President of Bell Telephone Laboratories -- President for a period of ten years and Chairman for a period of one. I am still a member of the Board of Directors of Bell Telephone Laboratories.

3 Q Your training has been that of what?

A I hold a doctor's degree in Physics, and after obtaining that at Cornell University, went to the Bell System -- really with the Western Electric Company Engineering Department which later was merged into Bell Telephone Laboratories -- and spent my whole professional career in that organization in one way or another, except for a period of one year in the signal corps in the first world war.

Q During the Second World War, did you hold a defense position?

A I was a member of the Guided Missile Section or Division -- I forget just how they labeled it -- of the National Defense Research Committee and Chairman of the particular of that that had to do with applications of television to guided missiles. I was also for a time a member of the Communications Division of NDRC.

(Mr. Morgan re-entered the hearing room.)

BY MR. GARRISON:

Q Then after your service in World War Two, would you state the governmental committees on which you served in connection with our defense work?

A There was another committee -- an ad hoc committee -- that I served on for a short time during the war that perhaps deserves mention. That was the National Academy of Science Review Committee on Atomic Energy, which was, I think, for

4 a short period in 1941. After the war, I served on the Industrial Advisory Committee of the Atomic Energy Commission from October, 1947 to August 2, 1948, when I was appointed to the General Advisory Committee and dropped off the Industrial Advisory Committee.

Q And you served on the General Advisory Committee for six year?

A It will be six years the first of August. I am nearing the end of my statutory term.

In April of 1951 I was appointed Chairman of the Science Advisory Committee of the Office of Defense Mobilization, which office I held until May 15, 1952, when I resigned because of illness, though remained at the request of the President in my position as a member of that committee. I am still a member of that committee.

Q When did you first meet Dr. Oppenheimer, in what year and what connection?

A I am not certain. I recall Dr. Oppenheimer as a younger man in presenting papers to the American Physical Society which I attended. The first definite memory I have of meeting him was while I was on the Industrial Advisory Committee of the Atomic Energy Commission.

Q In 1947?

A That would be 1947, when the GAC met with the Industrial Advisory Committee on one occasion.

5 Q Were you closely associated with him -- I know you were on the GAC -- in the work of the Science Advisory Committee of the Office of Defense Mobilization?

A I was, quite, because I sought his advice at the time I was considering acceptance of that appointment. The Committee, as it was originally proposed by some people working in the Government, was not one I thought I could accept, but with some modifications I came to the conclusion that I ought to accept it if it could be cut to fit my ideas a bit better. I consulted Dr. Oppenheimer in this connection and he was very helpful in working out some of my problems in this connection.

Q You remember, of course, the October 1949 meeting of the General Advisory Committee that had to do with the H-Bomb program.

A I have refreshed my memory on that occasion by looking up some notes in the AEC and recall some things about it.

Q Did you join in the so-called majority report at the October meeting?

A I did.

Q Did you later at the next meeting in December or before then submit an additional statement of your own?

A Yes. That was the meeting early in December -- December 3. I wrote up a separate attachment that did not

6 in my opinion reverse the position I had taken, but elaborated on it from my point of view. There was no attempt in that statement to express the views of other members of the committee, but rather my own interpretation of what the committee statement signified.

Q Would you care to summarize as briefly as you can for the Board what your position in the matter was?

A I shall have to refer to my notes to do that. I haven't a transcript of that thing.

MR. ROBB: Excuse me, Doctor, is that your letter of December 3, 1949?

THE WITNESS: That is right.

MR. ROBB: Would you like to see that?

THE WITNESS: I have seen it. I saw it the other day over at the AEC. I don't know whether there is anything in there that is regarded as classified material at the present time.

MR. ROLANDER: I will have to consult the classification officer.

MR. GARRISON: I didn't intend to ask Mr. Buckley to go into much detail but just state the essence of his position without reading from the text.

MR. ROBB: He could certainly have it before him if he wishes to have it while he is testifying. It is marked Top Secret.

7

THE WITNESS: This is the difficulty with its label. I felt at liberty to make a few cryptic notes about it.

MR. ROBB: Yes, indeed.

MR. GARRISON: Do you wish to have the text before you?

THE WITNESS: No, I don't have to have the text before me.

MR. GARRISON: I didn't ask for anything very elaborate.

THE WITNESS: Is there a security officer present?

MR. ROLANDER: I am the security officer. I have asked for the Classification Officer. But I think if you talk in general terms you won't have any difficulty here.

THE WITNESS: Will you check me if I do go beyond bounds?

MR. ROLANDER: I will try to be of service.

THE WITNESS: I see no danger in discussing it, but I don't wish to violate any security regulation.

MR. GARRISON: Perhaps while we are waiting for him I could ask you one or two preliminary questions.

BY MR. GARRISON:

Q How did you come to write a statement of your own?

A As I recall it -- my memory is not entirely clear on this point -- I thought that our statement of October had

8 been misinterpreted and I thought that what I meant at any rate in signing the statement needed more explanation than the mere statement itself gave.

 Shall I proceed.

 MR. ROLANDER: The Classification man is here now, Dr. Buckley, so if you would like to proceed you can check with him any question that might arise.

 THE WITNESS: This memorandum was based on the question of an immediate all out effort on what was called the Super, which was a hypothetical kind of a weapon at that time, as I recall. I was at the time still opposed, as I had been something a month earlier to a Crash Program to produce something that we didn't understand and the consequences of which we did not understand. I based my opinion on certain assumptions which I enumerated: (1) our ignorance of how to build the Super or whether it could in fact be built at all; (2) the great cost in money which it represented and the diversion of effort from the A-Bomb program which it must mean; (3) the small, if any, addition to military effectiveness as I then viewed this hypothetical weapon; (4) if we can do it, the Russians can also do it, but they cannot do it so quickly.

 I assumed those things were so. I noted that others might not agree with those assumptions. It was the way it looked to me. I endeavored to appraise what I would

9 call the good versus the harm of this development. It was, I thought, a possible retaliatory weapon, one of doubtful value. It represented the diversion of effort from the area of practical military weapons to the end only of extensive genocide and ruthless destruction. It might have an adverse effect on the acceleration of Russian development. It might lead to a false sense of security and it represented some loss of moral and political value in limiting defense activity to instruments of military effectiveness. Those, as I recall, with the aid of my notes, were questions in my mind based on the assumptions which I had made.

Weighing the pros and cons as best I could, I favored very careful systems analysis of the Super program, and an active program of research -- doing everything that we could see needed to be done to establish whether this thing could be done and how -- so that we could know what we were making policy about. This was one of the things that troubled me: That we were advising on policy about a thing that we didn't understand and see our way through on. I thought that we ought to see our way through and not be hysterical about an all out development and production of a weapon of which we knew so little and without compromising our position and restricting production to weapons of predominantly military value. My notes are not too clear on this point. I am rather cryptic and I would refer you to

10 the document itself.

I favored strongly building a large stock of A-Bombs at the same time that we pursued this Super idea further in the laboratory and by test shots of various sorts that would lay a sound engineering foundation for doing the job.

That is what I scratched in an obscure way out of my notes and the document may not be entirely consistent with those words, but the general idea that I had was that I thought we ought to proceed with research and development parts of these things rather than an all out production immediately of something we didn't understand either physically or with regard to its probably consequences.

BY MR. GARRISON:

Q After President Truman directed in January, 1950, that work in connection -- I am not trying to state exactly what his directive was, but I think you know what I mean -- that work on the thermo-nuclear weapon should move forward actively, what would you say as to the cooperation or lack of cooperation of the members of the GAC, particularly Dr. Oppenheimer, with the national policy?

A I think all members of the GAC accepted the President's decision as a definite determination of policy to which we were bound and all of us, along with Dr. Oppenheimer, conducted ourselves accordingly from thence on. There was no

11 argument about it. That was the policy. However, we did persist in our opinion that the A-Bomb stockpile should be enlarged and that development should proceed in that field as well, which I think was consistent with the President's order.

Q Do you feel that your associations with Dr. Oppenheimer in the years that you served with him on GAC and your service with him on the Science Advisory Committee were sufficiently close to enable you to form a judgment as to his character and loyalty to the United States?

A The question never arose in my mind as to whether he was loyal to the United States. I believed and believe that he was and is loyal to the United States. I just don't recall any event that even raised that issue in my mind.

Q Would you have any comment as to the quality of his service in those years to the country?

A This is in the post-war years you are speaking of?

Q Yes.

A I think it was extraordinary service to the country. The job of being chairman of the GAC is a very heavy and time consuming job. He was our unanimous chairman during the period that my service overlapped his and he was so outstandingly good in that position that if you give value to the services of the GAC you must also give great value to the service of its chairman who was an excellent chairman.

12

Q What would you say as to his discretion or lack of discretion, particularly with reference to his knowledge of classified material of a very secret character?

A I assumed and believed him to be discreet with reference to such material.

Q You read the Commission's letter of December 23, 1953, to Dr. Oppenheimer which initiated these proceedings.

A I read it in the newspaper.

Q Do you have the same confidence in him today that you had when you served with him in the post-war years?

A Yes.

MR. GARRISON: I think that is all, Mr. Chairman.

MR. GRAY: Mr. Robb.

CROSS EXAMINATION

BY MR. ROBB:

Q Doctor, are you a nuclear physicist?

A I am not, sir.

Q So in respect of the question of the feasibility of a Super bomb, I suppose you had to rely on the opinions of others, didn't you?

A That is right.

Q Whose opinion did you rely on, Doctor?

A I gave great weight to Dr. Oppenheimer's opinion. I subsequently to the letter of which I just spoke visited Los Alamos and heard a discussion of it by Dr. Teller and got

13 a briefing on it, you might say. I could not analyze that or criticize it as a physicist, of course.

Let me say that so far as I could understand it, it was consistent with the opinion that I had formed after hearing from Dr. Oppenheimer and others, that it was one of these things that had a speculative chance. It was a hypothetical kind of thing and not the kind of a thing that was developed later.

Q Doctor, you said that you felt that your subscription to the majority report of the GAC of the October, 1949 meeting had been misinterpreted, I believe you said.

A I think that is stated in the document that I wrote and, I think, misunderstood.

Q Would you explain that to us a little bit, Doctor?

A Yes. As I look back on it, that statement doesn't fully reflect our discussion at that meeting because I believe that it was the general opinion that research in the direction of thermonuclear weapons should be heavily pushed. I can't prove that but I think that was the position. I believe that I thought it was the position at the time I wrote this memorandum. But further than that, I can't recall. That was not brought out in the October statement, you see.

Q I see.

A As a matter of fact, there was work going on already and work planned ahead at the time of this thing being set up.

14 It was down the thermonuclear alley. The question at issue was a crash program to build a hypothetical Super, as I recall it. My memory may not be accurate but that is the best I can recall.

I think that memorandum which I endeavored to sum up is consistent with that point of view because in the memorandum I did not take exception to the prior statement. I was in my mind elaborating on it. I did not attempt, as I said, to reflect the opinion of all the others. But I believe on that point it was consistent with the position that the GAC took at that time and had taken previously.

Q Doctor, do you recall in your later memorandum making some reference to a public commitment not to develop the thermonuclear weapon?

MR. GARRISON: Would you make that a little more clear?

THE WITNESS: I don't recall offhand.

BY MR. ROBB:

Q Let me show it to you.

A That is a statement, I think, of my opinion at that time.

Q Having looked at this do you now remember that you did make some reference as to whether there should or should not be a public commitment not to develop the weapon?

MR. GARRISON: Could you read the sentence?

15

MR. ROBB: May I read this, Mr. Classification Officer?

MR. MARSHALL: May I see it, please?

MR. ROBB: Yes (handing).

BY MR. ROBB:

Q I want you to explain this and what caused to put that in. The two sentences I have in mind are these: "Whatever course of action is adopted in the development of Super bombs I do not wish at this time to recommend for or against a public commitment not to develop the weapon, nor have I any specific recommendation as to declassification. Some public announcement of policy may be necessary or desirable but I do not feel able to advise wisely."

Would you mind explaining what you had in mind?

A It seems to me it hardly needs explaining. I think that is a clear statement.

Q I just wondered if there had been some discussion in the GAC as to whether there should be a public commitment or not.

A I don't recall any. There may have been, but I don't recall it.

Q Had there been any discussion as to declassification?

A I don't recall that there was any at all.

MR. ROBB: That is all I care to ask, Mr. Chairman.

16

MR. GRAY: Mr. Buckley, you have made a distinction, I think, in your testimony between research and development or partial development on the one hand, and an all-out production effort on the other. This is a distinction I believe you made and I believe you have stated that you were opposed to what has been called the crash or all-out effort on the Super. At least this was your position and was the majority position of the GAC in the October, 1949 meeting.

I think you also testified that you felt, however, that we should have an active program of research. I believe those were your words.

Did you later feel that the interpretation of the written report of the October, 1949 meeting lead people to believe that you had been opposed as a committee to active research? Is that one of the reasons you felt that you wanted to make a clarifying statement later?

THE WITNESS: I now believe, or, as I recall, that was my position on the thing. I wasn't aware that there was any great difference in the committee on this thing. I wanted to state it more explicitly. Perhaps in that committee I had been rather often making the point that we ought to do what I called systems analysis to see as far as we could where we are going before we embark on a heavy development program.

MR. GRAY: I am a layman. Would systems development

17 be the same thing as active research?

THE WITNESS: No. Systems development would be a paper study, generally speaking -- those supported by experiments -- to determine systematically ends and possible means of achieving those ends in the nature of a technical survey and enlarging the technical grounds for planning a program with these ends in view.

I thought we ought to see our way through just as far as we could and build up as good a technical background for a program as we possible could and that this would be the economical and speedy way to do the job, whatever job appeared to be good to do.

MR. GRAY: Would you forgive me just a moment while I glance at your letter.

Your feeling is that your participation as a member of that October meeting did not in any way commit you against the development of this weapon although you did oppose all out production?

THE WITNESS: You could say an all-out development and production program. I thought that a more careful study of the problem based on further experimenting than had been done and based on our military objectives might lead to some major modification of the program, but it was not to my mind a determination advice on our part not to pursue the study of thermonuclear weapons. Is that clear?

18

MR. GRAY: Yes, I think you have answered the question.

THE WITNESS: That is the way I now recall my position which I think is fairly set forth in that letter which I wrote.

MR. GRAY: Mr. Garrison, do you have any further questions?

MR. GARRISON: No.

MR. ROBB: I have no further questions, Mr. Chairman.

MR. GRAY: Thank you very much, Doctor; we appreciate you being here.

(Witness excused)

MR. GRAY: Who is the next witness, Mr. Garrison?

MR. GARRISON: Dr. Bacher, Mr. Chairman.

MR. GRAY: Dr. Bacher, do you wish to testify under oath?

DR. BACHER: I would be very glad to, if you so wish.

MR. GRAY: You are not required to, but all other witnesses have done so.

DR. BACHER: I should be glad to do so.

MR. GRAY: Would you stand and raise your right hand, please, and also give me your full name.

DR. BACHER: Robert Fox Bacher.

19

MR. GRAY: Robert Fox Bacher, do you swear that the testimony you are to give the Board shall be the truth, the whole truth and nothing but the truth, so help you God?

DR. BACHER: I do.

MR. GRAY: Would you be seated, please, sir.

I am required to call your attention to the existence of the so-called perjury statutes. May I assume you are familiar with them and their penalties and it is unnecessary to review them?

DR. BACHER: I think I am.

MR. GRAY: I should like to ask, Dr. Bacher, if in the course of your testimony you find it necessary to refer to or disclose restricted data that you notify me in advance so that we might take certain appropriate and necessary steps.

I should also make the same observation to you that I have tried to remember to make to all the witnesses, that we consider these proceedings a confidential matter between the Atomic Energy Commission and its officials on the one hand and Dr. Oppenheimer and his representatives and witnesses on the other. The Commission is making no releases to the press and on behalf of the Board I express the hope that the witnesses will take the same course of action.

Mr. Garrison, will you proceed.

MR. GARRISON: Yes, Mr. Chairman.

DIRECT EXAMINATION

BY MR. GARRISON:

Q Dr. Bacher, would you state your present position?

A I am Chairman of the Division of Physics, Mathematics and Astronomy and Professor of Physics at Cal Tech.

Q Where did you receive your academic training?

A I went as an undergraduate to the University of Michigan, took a bachelor's degree, and later a doctor's degree in physics in 1930.

Q How long have you known Dr. Oppenheimer, approximately?

A Approximately since 1929 or 1930 when he visited the University of Michigan during the summer to give some lectures there in the summer symposium in theoretical physics.

Q When did you first get to know him very well?

A That was somewhat later. I knew him through the thirties. If I recall correctly, he lectured in Ann Arbor once or twice more in the early thirties and I think I was present at that time. During the fall of 1930 I was National Research Fellow at the California Institute of Technology and he was lecturing there during the fall term. I saw him quite frequently during that period. Later than that I saw him only occasionally at meetings or at other times. I remember at one time seeing him in the winter of 1934 in

21 New York when I was an instructor at Columbia and he was visiting his father there. Between then and the war period I think I saw him only occasionally at scientific meetings. My close association with him began just prior to the establishment of the Los Alamos Laboratory.

Q Suppose you just state what your government service has been beginning with your work at Los Alamos.

A I came to Los Alamos from the Radiation Laboratory at M.I.T. where I had been for two years and a half and on the occasion of the starting of the laboratory at Los Alamos. There was a conference when that laboratory was started. I attended the conference. It was decided during the conference that I would join the laboratory and I did, in charge of the Division of Experimental Physics.

In the summer of 1944 the laboratory was re-organized and I became the head of the Bomb Physics Division, which was a position I held until the end of the war. This involved in both capacities very close contact with Dr. Oppenheimer and this contact was, I would say, daily and very close.

Q What was your next government service?

A My next government service, if I recall correctly, was on a committee having to do with declassification which was set up by the Manhattan District at the end of the war. I think I served on one other committee for the Manhattan District and I don't recall exactly what the title of that

22 committee was. Then during the summer of 1946 I served as a scientific advisor to the United States Delegation to the United Nations Atomic Energy Commission.

Q In that connection you had an opportunity to see Dr. Oppenheimer some more?

A Yes.

Q What next after that?

A After that in October of that year, or it was the first of November I became a member of the Atomic Energy Commission and was a member of the Atomic Energy Commission until I left in mid-May, 1949.

Q Have you had government service since then?

A Since then I have been an advisor to the Atomic Energy Commission and still an advisor to the Atomic Energy Commission.

I have been first a member of a panel on long range objectives, I think it was called -- this may not be quite the right title for it -- of the Committee on Atomic Energy of the Research and Development Board from spring, 1951 until its dissolution in 1953. I was chairman of the Committee on Atomic Energy of the Research and Development Board.

Q Was Dr. Oppenheimer a member of that committee?

A Dr. Oppenheimer was a member of that committee. I am presently a member of the technical panel on atomic energy of the Office of Assistant Secretary of Defense for Research

23 and Development. There may be some others which I have forgotten for the moment.

Q Going back to the Los Alamos period, how much did you see of Dr. Oppenheimer in those years from April 1943 to the close?

A A very great deal. Much of the work for which I was responsible was very close to the heart of our problem of making an atomic weapon. The demand was for much information from other parts of the laboratory and in particular needed a great deal of guidance from the theoretical people.

As a consequence of this, in particular, I saw a great deal of Dr. Oppenheimer. It would be hard for me to estimate how much I saw him but it seems to me looking back on it that there was scarcely a day going past that I did not spend an hour or more with him.

Q When he went away did you from time to time act as Acting Director of the Project?

A I think not in any official capacity, but I believe sometimes when he left the laboratory he did leave me in charge.

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Q Did you yourself go on any official missions with him?

A On a number of occasions I went on official missions with Dr. Oppenheimer, trips to the east and in some cases to the west coast, where we needed to get information for the project.

Q Do you have any recollection of his political views in those years as he may have expressed them to you in talks that you may have had?

A We were pretty busy trying to make an atomic bomb and we didn't talk about many other things. I was aware of the fact that Dr. Oppenheimer seemed to be a Democrat and views that one would associate with his being a Democrat. I was an upstate New York Republican, and we used to joke about this from time to time. But we didn't have much political discussion.

Q Coming to the period of your service on the Atomic Energy Commission, I would like to ask you to recall what you can of the actions that were taken with respect to Dr. Oppenheimer's clearance in 1947.

A I might say in this respect that I did refresh my memory on this point by consulting some of the minutes of the Commission, because when I started to think about it, I found I didn't have all of it so clear in my mind.

The consideration of the appointment of the General Advisory Committee to the Commission was taken up at one of

the early meetings of the Commission. In fact, if my memory serves me now on this refreshing of this morning, it was at the second meeting at which this was discussed.

This had to do with who were to be the members of the General Advisory Committee.

Q This is about what time?

A This was about the 20th of November, I think.

Q Of what year?

A Of 1946. Then a little later --

Q Before the appointment of the GAC?

A Yes. Then a little later there was some discussion of the question of making some announcement about this, of the appointments which had then been made by the President. I have forgotten exactly when that was, but I presume in the interim period recommendations had been made to the President, and he had approved these and actually appointed the members of the Committee.

Q Let me just make sure I understand. The Atomic Energy Commission recommended some names to the President for appointment to the GAC?

A That is right. It was a presidential appointment.

Q Were the people appointed by the President the same as those who had been recommended?

A If I remember correctly, that is so.

Q In any event was Dr. Oppenheimer among those

recommended?

A It was, yes.

Q This was a recommendation of the Commission as a whole?

A This was a recommendation of the Commission as a whole.

Q Now, coming to the clearance and the actions that had to do with his clearance, would you say what you can remember of that?

A If I recall correctly, clearance at the start of the Commission activities was for the most part just carrying over clearance that had been given under the Manhattan District. Also, if I recall correctly, all members of the General Advisory Committee had during the war some access to activities in the Manhattan District, and some of them had been employees for an extensive period and continued to hold Manhattan District clearance up to that time. If I remember correctly, this clearance was then just continued, because it took some time to get clearance procedures, and so on, under the Atomic Energy Act into full operation. So this was the first basis of clearance. For new employees, there had to be from the time the Atomic Energy Commission took over investigation under the Act.

Q What do you next remember about Dr. Oppenheimer's clearance?

A I recall that during the spring of 1947 this question was discussed. I am not precisely sure in response to what, but I think in response to a query to the Commission. I remember that we looked at various times through that period, first a summary of information from the FBI, and later a quite voluminous file. Exactly when that is done, I am afraid I don't remember.

Q Do you have a recollection of having examined then both the summary and some kind of a file?

A Yes.

Q Do you have any recollection at all as to the approximate dimensions of these documents?

A I am afraid I don't, except that the file, I remember, was a fairly thick document. I don't know, something like this (indicating).

MR. GARRISON: Mr. Chairman, in connection with the examination of Mr. Lillenthal, there was put into the record at page 1409 of the transcript a memorandum from Mr. Jones, the security officer, to Mr. Bellesly, which contained a reference of which I would just read one sentence. This is a note by Mr. Volpe in longhand on the file, and it says -- this is dated July 18 -- "My impression is that the Commission saw no need for formal action following the meeting they had with Mr. Hoover, referred to in Lillenthal's letter of April 3, to the FBI Director."

We asked for the documents pertaining to this matter when we were in the course of examining Mr. Lilienthal.

MR. ROBB: What was that?

MR. GARRISON: This is a letter of Mr. Lilienthal of April 3 to Mr. Hoover, referred to in Mr. Volpe's longhand note on the Jones memorandum to Bellesly of July 18.

MR. ROBB: I am sorry. I fell off on the first turn of that, Mr. Garrison. What was the question?

MR. GARRISON: What I was going to ask the Chairman was to have the letter of April 3 in the record so that we might see what it was that Mr. Lilienthal wrote to Mr. Hoover because I think it might help to clarify the matter under discussion.

MR. ROBB: I have it before me. Shall I read it? This is a copy. I assume it is the one of April 3, 1947: "TOJ/D", in the upper right hand corner.

"Honorable J. Edgar Hoover,
"Federal Bureau of Investigation
"U. S. Department of Justice,
"Washington, D. C.
"Dear Mr. Hoover:

"As agreed at our recent meeting I am forwarding for your information copies of letters in the possession of the Atomic Energy Commission concerning Dr. J. Robert Oppenheimer, as well as papers relating to the award of the

Medal of Merit to Dr. Oppenheimer.

"Sincerely yours, David E. Lilienthal, Chairman."

"Enclosures: cc Mr. Lilienthal

"File 2."

Then some longhand notes: "Enclosures, papers on Medal of Merit, letter from Conant, Patterson, Groves, Bush." That is in longhand.

"Distribution: 1 and 2, to Mr. Hoover. 3 and 4 to Mr. Lilienthal. 5 reading file. 6 records section file."

MR. GRAY: That is the longhand note?

MR. ROBB: The one Mr. Garrison read, "My impression is that the Commission saw no need for formal action following the meeting they had with Mr. Hoover, referred to in Lilienthal's letter of April 3, to the FBI Director."

That apparently was sending the Medal of Merit award we had here, and the letters from Patterson, Groves, Conant and the others.

MR. GARRISON: This seems to refer to a meeting with Mr. Hoover.

MR. ROBB: That was a meeting on which there was a memorandum written by Mr. Jones, which was read into evidence, on March 27, 1947. That is in the record some place.

MR. GARRISON: Mr. Chairman, I have some more requests for information that I think the Commission can give us about the history of these events that I would like to

submit to the Board, but I don't want to take the time now while Dr. Bacher is on the stand. I thought possibly the particular letter might throw a little more light.

MR. ROBB: Maybe I can throw some light on it, if I might.

MR. GRAY: If you are going to pursue questioning of Dr. Bacher about those events, or if you are, Mr. Robb, I think it might be helpful to Dr. Bacher to have his recollection refreshed because people seem not to remember this period very clearly.

THE WITNESS: Thank you, Mr. Chairman.

MR. GARRISON: What is there, Mr. Robb?

MR. ROBB: I don't know whether I am at liberty under the rules to tell you, but apparently a number of people were interviewed concerning Dr. Oppenheimer. I think Dr. Bacher was interviewed. I think that material was in the file before the Board.

MR. GRAY: One thing it seems to me that Mr. Garrison is perhaps groping for is the possibility that there may have been a meeting of the full Commission with Mr. Hoover. Mr. Lilienthal testified, did he not, about a conversation?

MR. ROBB: That is right.

MR. GRAY: That is, with Mr. Hoover at a time when he was accompanied by the Deputy Counsel of the Commission. It would be my guess on the basis of anything I have heard,

Mr. Garrison, that there was not a full meeting of the Commission with Mr. Hoover, but this I am not sure about.

MR. ROBB: If there was, I find no reflection of it in this file.

MR. ROLANDER: The only record in the file of such a meeting was the one discussed and introduced in the record when Mr. Lilienthal testified.

MR. GRAY: And this involved a visit to Mr. Hoover's office of Mr. Lilienthal and Mr. Volpe.

MR. ROLANDER: That is right.

MR. GRAY: I would guess the Commissioners would remember if they went in a body to Mr. Hoover.

MR. ROLANDER: The memorandum in discussing the meeting, it refers to meeting between representatives of the Atomic Energy Commission and the Federal Bureau of Investigation. Whether that includes all members of the Commission, I just don't know.

MR. GARRISON: Could we have read into the record the portion of the minutes of August 6, 1947, relating to the matter of Dr. Oppenheimer's clearance?

MR. ROBB: I thought this thing that had Mr. Volpe's note on it was all there was on it.

MR. GARRISON: Mr. Volpe's note was before that.

MR. ROBB: Here is a paper here, August 11, 1947, from T. O. Jones to William Uanna, "Subject: J. Robert

Oppenheimer."

MR. GARRISON: This refers to the meeting and I think that was read into the record.

MR. ROBB: "Authorization for granting final Q type clearance, August 6."

MR. GARRISON: What I would like to have is the actual August 6th meeting.

MR. ROLANDER: I think we had in the record a stipulation as to what the minutes reflected. Isn't that satisfactory?

MR. GARRISON: It did not seem to me to be a quotation from the minutes, but rather a stipulation by the Commission that clearance be recorded, or something of that matter. At least it did not on its face appear to be a quotation from the minutes.

MR. ROBB: I don't know. Frankly I did not concern myself with it in view of the stipulation. I have never looked at the minutes.

MR. ROLANDER: I don't think we can state the actual Commission minutes. The Commission minutes as such, I don't believe it proper for us to quote them. Therefore, at that time the Commission did, early in the proceedings, agree to a stipulation as to what took place. That is what we had hoped to make a part of this record, and has already been made a part of the record.

MR. GARRISON: Mr. Chairman, I am not asking for any portion of the Minutes which might have to do with extraneous matters, but only that portion which relates to Dr. Oppenheimer's clearance, and it seems to me that is a piece of information very relevant to this proceeding, and certainly can evolve no matter of improper information to be read into a record like this.

MR. GRAY: I am not informed about the minutes or about the procedures of the Commission not making its minutes available. I think in this case I will have to rely on the representative of the Commission, Mr. Rolander, who says that you do not think the pertinent portions of the minutes can be read into the record?

MR. ROLANDER: That is my understanding, yes.

MR. ROBB: I might say, Mr. Chairman, that I don't think either I or Mr. Rolander would have authority in the light of what I take it to be policy to make any commitment. I think it probably should be submitted to the Commission for its ruling.

MR. GRAY: If you wish, Mr. Garrison, now to make a request of that sort, I certainly will transmit it. I don't think anybody here has authority to grant it.

MR. GARRISON: I would like to make a formal request of that sort, Mr. Chairman. As I read the rules of these proceedings, I must say I see nothing in them that would stand

in the way of that. On the contrary, it seems to me that the emphasis on obtaining all relevant information which is set forth explicitly in the rules should make this information available both to the Board and to us.

MR. ROBB: I am not debating that with Mr. Garrison, Mr. Chairman. We would be happy to transmit the request to the Commission, but I don't think I have the opportunity to say whether or not they will do it.

MR. GARRISON: Then we have made the request, Mr. Chairman.

MR. GRAY: Yes.

MR. GARRISON: I would like to proceed with Dr. Bacher on this matter, and ask him to remember.

BY MR. GARRISON:

Q You told us now you have the recollection of having gone over a summary. Do you recollect anywhere near at all how many pages that may have been?

A No; if I had to make an estimate I would guess around 30 or 40 pages or something of that sort.

Q In addition to that, a thicker file?

A At a later date, if my memory serves me correctly, I believe we went over a very much thicker file, and I believe it was reviewed by the other Commissioners, too.

Q Do you remember discussing this with other Commissioners?

A Yes.

Q What do you remember?

A I don't remember very much about the discussion with the other Commissioners, except that I remember either before or during the Commission meeting referring to various parts of it which seemed to be relevant to happenings in the past that we thought we ought to know about. I can't remember very much at the moment just what was said about that. But we did review that and discuss it in the Commission meeting.

Q Do you recollect any decision on the matter or any conclusion?

A My memory is that when a query was addressed to the Commission, it seemed appropriate to us to consult with some of the people with whom Dr. Oppenheimer had worked during the war other than ourselves. I can't remember exactly who was consulted, but I am relatively sure that Dr. Bush and Dr. Conant were consulted. I don't remember who else was consulted. After consultation with these people and a review of the file, the question was discussed by the Commission and I think the conclusion was arrived at that the Commission saw no reason in view of the information which had been brought up to take any different action on the clearance of Dr. Oppenheimer than that which had already been taken.

Q Do you know Mr. Serber?

A I do.

MR. ROBB: Did you say Mr. or Mrs.?

MR. GARRISON: I will ask about both.

BY MR. GARRISON:

Q Do you know Mr. and Mrs. Serber?

A Yes.

Q Where did you first know them?

A I can't remember when I first met them. I presume that I knew them before the war, but if so, only very slightly. The first I knew them really at all well was at Los Alamos. Dr. Serber was a member of that laboratory and was there when I arrived.

Q Did you know anything of their political background at the time?

A I would say no.

Q Did the question of Dr. Serber's clearance come up when you were a member of the Atomic Energy Commission?

A It did.

Q What was done about it?

A If I recall correctly, Mr. Serber's clearance came up as part of the re-investigation of all contractors' employees. There was a certain amount of derogatory information in the file that appeared. I have forgotten exactly what happened in the local office out there, but it was concluded that there ought to be a hearing board set up on this.

Q The local office where?

A The local office on the Pacific Coast. A hearing board was set up on the Pacific Coast, I believe out of the San Francisco office, and I can't remember the members of that hearing board, but if I remember correctly, Admiral Nimitz was the Chairman of it. The hearing board made a report which I believe was transmitted to the Commission, and the Commission acted favorably on clearance after the hearing.

Q Did the Panel recommend clearance?

A If my memory serves me correctly, they did.

MR. GARRISON: Mr. Chairman, our information is, I feel quite certain, that the Atomic Energy Commission records will bear this out. I would simply like to state for the record subject to verification, which I am sure can be made by Mr. Mitchell or Mr. Rolander, that the panel in addition to Admiral Nimitz as Chairman, consisted of Mr. John Francis Neyland, regent of the University of California, and a lawyer, well known. I think he was counsel to the Hearst interests in San Francisco. And Major General Joyce, of the Marines. If I could just state that in the record and ask if that could be checked.

MR. ROBB: I believe that is correct, Mr. Garrison.

BY MR. GARRISON:

Q What was the date of that?

MR. ROBB: I don't have it.

BY MR. GARRISON:

Q Do you recall about when this was after the start of the Commission? Would you date it from there?

A I would think this was 1947 or perhaps the beginning of 1948. I am not clear on the date.

Q Do you have occasion to see Dr. Serber now from time to time?

A Yes. He is professor of physics at Columbia University, and I see him from time to time when I go to New York.

Q Do you see Mrs. Serber from time to time?

A Occasionally.

Q When you say when you go to New York, in connection with what would this normally be?

A In connection with Physical Society meetings or other scientific meetings in New York. Professor Serber is now spending, I believe, one day a week out at Brookhaven Laboratory, in particular in the interpretation of some of the work they are doing with their high energy accelerator out there, their cosmotron. This is related to work that I am closely interested in, so I see him from time to time because he has the most interesting information on what is going on there.

Q Do you know whether a Q clearance is called for by that sort of work?

A I don't know. I presume he must have some sort of

clearance to be a regular consultant to the Brookhaven Laboratory, but what sort of clearance he has, I don't know. I never have any questions concerned with classified information to discuss with him.

Q What was the character of the clearance which the AEC granted in 1947 or 1948, whenever it was?

A I believe this was a Q clearance that he was granted at that time.

Q Have you ever heard of any action changing that?

A No.

MR. ROBB: This is Dr. Serber, and not Mrs. Serber.

MR. GARRISON: Yes. I don't believe she is a physicist or works on government projects.

MR. ROBB: No.

BY MR. GARRISON:

Q Isn't that correct?

A No, she is not a physicist.

Q As a member of the Atomic Energy Commission, did you have occasion to observe closely the work of the GAC?

A Yes, I think that during the period I was in Washington I probably followed the work of the General Advisory Committee more closely than any other member of the Commission. This was natural because I was the only one with a scientific and technical background, and the work of the General Advisory Committee was mostly scientific and technical. I frequently

attend attended much of their meeting and read their reports very carefully. They were very valuable to us in getting the atomic energy enterprise back on its feet and getting some of the work established that we thought waight to get established.

Q Would you make a comment on Mr. Oppenheimer's work as chairman of that committee?

A It was outstanding. He was appointed a member of the General Advisory Committee. The members of the General Advisory Committee themselves elected him chairman of that committee. Until he left, the committee, I believe, he continued to be chairm. He had had the closest connection with the weapons development work of any of the members of the General Advisory Committee.

In that period in early 1947 when the General Advisory Committee was set up, our greatest problem was to try to get the Los Alamos Laboratory in the development of weapons into a sound shape. The General Advisory Committee, I might add, was vigorous on this point, and very helpful in getting the laboratory into shape both by reason of the recommendations which they made, and also the direct help that they gave us in connection with personnel for the laboratory.

Q What about Dr. Oppenheimer's individual contribution in this effort?

A I would say in this effort Dr. Oppenheimer's

individual contribution was the greatest of any member of the General Advisory Committee. He took his work on the General Advisory Committee very seriously. He usually came to Washington before the meetings to get material ready for the agenda and usually stayed afterward to write a report of the meeting.

During the course of the meeting prolonging discussion at great length so everybody would express his views, nevertheless after the views had been expressed, he had a very great clarity in focusing these views of what would be a report of the committee.

Q What was your normal routine when the General Advisory Committee Committee would meet in Washington? When I say your routine, I mean the routine of the Atomic Energy Commission. Did you meet with the GAC or how did that work?

A If I recall correctly, usually the members of the Commission came in at the start after the meeting at least for a little while and then usually before the end of a meeting there was a session of the General Advisory Committee with the Commission. Sometimes this might occur on a Sunday afternoon, but usually there was a session at the end of the General Advisory Committee so that there could be discussion of what appeared to be their recommendations. At such time it was usual that Dr. Oppenheimer would give a

verbal summary in the presence of all the members of the General Advisory Committee, and of the Commission of their findings, and then these would be discussed.

Q What was the character of the initial meeting between the members of the Atomic Energy Commission and the GAC? At the start of the meeting, in other words?

A I think this initial meeting was apt to be somewhat less regular. Usually most of the members of the Commission went down; if I remember correctly, the Chairman, Mr. Lilienthal, would generally convey to the Committee questions which had come up either within the Commission or from members of the staff to be proposed to the committee.

Q There was verbal discussion?

A There was verbal discussion.

Q You left the Atomic Energy Commission in May of 1949?

A Mid-May 1949.

Q So you were not present at the October meeting.

A No.

Q Did you remain as a consultant after you left the Commission?

A Yes. I have been an advisor to the Commission since I left in 1949 and still am.

Q At the time of the Russian explosion, did you have to do with assessing the information about that?

A Yes.

Q Who else had to do with that?

A If I recall correctly, Dr. Bush was chairman of a group called together in mid-September 1949 to assess the information which was relevant to the determination of whether the Russians exploded an atomic bomb. The other members of the group, if I recall correctly, were Admiral Parsons, Dr. Oppenheimer and myself, and I believe Dr. Arthur Compton was supposed to be there, as a member of the group, but could not come. If I recall correctly there were just four members of the Panel that were set up to assess this information.

I can't give you the exact date on this, but it must have been about the 15th of September.

Q After President Truman's declaration in January 1950 about the thermonuclear program, did you make a speech on the subject of the program?

A I made a speech called, "The Hydrogen Bomb", in the end of March 1950. This is open and available for the record and I am sure that looking this over will be much better than any memory I have of what is in that speech.

Q I just want to ask you two general questions about it. Were you in that speech critical of President Truman's declaration?

A No.

Q What was the principal point you made in that speech?

A I would say there were two points, but here I would like any remarks that I make to be subject to referral to the speech itself for anyone to judge what the speech says. I would say there were two principal points. One, I had misgivings about over-reliance in a weapon which seemed to me to not add much beyond large fission weapons to our national arsenal, and second, I was very much concerned that there was not more information available to the public on which sensible opinions could be formed.

Q You said, I think, that you served on the Committee on Atomic Energy of the Research and Development Board?

A Yes.

Q And that you became Chairman of it and served as Chairman from 1951 to 1953?

A Yes.

Q Did that committee convene a panel in late 1950 or early 1951 to consider our weapons program?

A If I recall that is about the time that a panel was convened for that purpose.

Q And you were a member of it?

A I was a member of a panel that was convened about that time for studying our weapons program.

Q And Dr. Oppenheimer was a member of it?

A Yes.

Q And members of the military?

A Yes.

Q Yes. If I recall correctly, Mr. Oppenheimer was chairman of that panel and other members were General Nichols and Admiral Parsons, and I think General Wilson from the Air Force, Dr. Alvarez, Dr. Lauritsen and myself. Some of these may not be correct, but I think they are.

Q Do you have any particular commitment on Dr. Oppenheimer's service on both the committee and on the panel.

A If I recall correctly, the panel met for two or three days to discuss what might be the important areas for progress. We then divided up the various areas to study somewhat further to find out a bit more about it and came back at a subsequent day to write a report, and incorporate the views of the various days' smaller groups at that time. With his unusually great clarity Dr. Oppenheimer succeeded in turning out a report that stated very accurately what the panel thought in draft form. This was then discussed essentially word by word by the panel, and a report finally appeared which presumably is available somewhere.

Q From your vantage point, if I may call it that, of the Chairman of the Committee on Atomic Energy in the years 1951 to 1953, have you any judgment which you could express to the Board regarding any alleged or possible delays in the production of thermonuclear weapons.

A I am. My impression is that this went ahead pretty

fast. At least as far as the research and development work went, all of the effort that could be put on this was put on it. After a job is done, it is always easier to look back and say if we had not done this, we would have saved some time. I believe that almost everything that was done either in fission weapons or in thermonuclear weapons was very relevant to the job of making a thermonuclear weapon.

Q You are still a consultant to the Department of Defense?

A Yes.

Q You had to do with the Vista program?

A Yes.

Q Were you Chairman of the Vista Project?

A No. Dr. DuBridge was Chairman of the Vista Project.

Q What was your share of it?

A I was responsible for one section of the project which had to do with atomic weapons.

Q You were in charge of that section?

A Yes.

Q There has been a good deal of testimony about this project and I don't want to duplicate the record about Dr. Oppenheimer's participation in it, and so forth. I would just like to ask one or two questions about it. Was there a question of allocations as between the Strategic Air Command and Tactical Air Group with respect to the materials that would go into

tactical weapons?

A Yes, but I believe it would take a little further discussion to make clear just what was meant by that. I am not exactly sure on this point whether one does not get into classified information. I think it could be answered without getting into classified information but if there is someone here whom I could consult on that point --

Q I am not going to ask you any questions of that character. I would like to have your judgment as fairly as you can express it without going into classified materials as to whether the recommendations of this chapter on atomic energy would have affected the hydrogen bomb program then under way, whatever its nature may have been.

A I know of no way in which it would have affected that.

Q Was there any purpose to affect that program in any way?

A I am not even sure I understand the question.

Q I am not sure I do either. What I am trying to bring out is was this question of allocation related in any way to the thermonuclear work that was going forward?

A Not that I know of.

Q It was a question of the allocation of then existing fission materials?

A Could I say a word about what the purpose of this section of the report was, because otherwise I think it is not

even clear what you would like me to answer.

I don't want you to answer anything except what you know.

A I went. The purpose of the Vista Project was to investigate methods of tactical warfare, particularly as they pertained to the problem of Western Europe. We felt that one of the important ways in which our strength in Western Europe could be bolstered at that time, and in fact one of the things that could really be brought to bear on the problem of keeping the Russians out of Western Europe was the tactical employment of atomic weapons. We felt at that time that we had a sufficient stockpile of atomic weapons that utilization in this field was both possible and appropriate and that it would be a great advantage to our military strength to do this. So recommendations were made in this direction, that the tactical use of atomic weapons be developed and increased, and that a potential in this direction be built up.

On the question of allocation of weapons to tactical use, I think that this is apt to be somewhat misleading because there existed, or was about to exist -- I am not quite sure of the time scale -- means by which the essential components of the bomb could be made available for one type or another quite readily. I don't believe that is classified.

MR. ROLANDER: I think that is all right.

BY MR. GARRISON:

Q Would you say a word about Dr. Oppenheimer's contribution to the results of this report?

A The Vista Project was started in April 1951, if I recall correctly. Is that correct?

Q I think that is right.

A Is that a correct date?

MR. ROES: I think so.

THE WITNESS: I believe it is correct. It continued through the summer.

MR. ROBB: That is right.

THE WITNESS: It was started in April 1951. It continued through the summer, and a group of which I was the Chairman, or at least I was responsible for the group, was formed for the employment of atomic weapons. The other people who worked with this group were Dr. Lauritsen and Dr. Christie. Dr. Thorndyke from the Brookhaven Laboratory was there during most months of the summer. Dr. Hayworth from the Brookhaven Laboratory was there for a period of a week or so, and a few other people helped us from time to time during that period. During the summer we got a good many of our ideas in line and during the fall started to formulate these so that we could write a report.

I think that by fall much of the background information was beginning to be clear, and many of our ideas were beginning to be a little clearer. It was very difficult to

formulate these ideas because all of the points we wished to recommend were interrelated and we found ourselves in difficulty.

I think it was about this time, I don't remember the date, October or November, that we were fortunate to get Dr. Oppenheimer to come and spend a week or ten days with us. He was very helpful to us in formulating these ideas. I think that we had a first draft of the report actually written down at that time, but it was not in very good form. After two more days of discussion with him, he had some ideas of how these things could be better formulated, and helped very much in bringing them to a focus.

Subsequently this draft then went through several revisions. I don't even remember how many. It was finally revised in late december of that year and the final report, I think, appeared or was proposed shortly after Christmas.

Q Dr. Bacher, you are familiar with the Commission's letter of December 23, 1953, to Dr. Oppenheimer initiating these proceedings?

A I have read it.

Q Apart from the allegation or the reports about the H bomb, did the rest of it come to you as a surprise?

To put it another way, how much, if any, of the matters in this letter apart from the H bomb would you say you had been over previously at the time of the 1947 clearance?

A It is, of course, hard to give a categorical answer

to a question like that, but I didn't find any parts of it that seemed surprising to me in view of the things I had read before.

Q How well do you feel that you know Dr. Oppenheimer?

A I feel I know him very well. I have worked very closely with him during the war, have seen him frequently since the war, and feel I know him really very well. I just don't think it would be possible to work with a man as closely as I worked with Dr. Oppenheimer during the war without knowing him very well.

Q What is your opinion as to his loyalty to the United States?

A I have no question at all of his loyalty.

Q On what do you base that? Is that purely a subjective judgment?

A I think opinions of that sort are always subjective judgments. In this case I put great credence in my own judgment, naturally, because I know him very well. But this is essentially an assessment on my part based on knowing him for a great many years. I have the greatest confidence in his loyalty.

What would you say as to his sense of discretion in the use that he would make of the knowledge that has come to him and will continue to come to him assuming that he continues in government work?

A I found Dr. Oppenheimer to be very discreet. I can remember during the war once when we had to go out on a trip together and it was essential that he carry a memorandum, that even in note form was classified, and he was so careful and he pinned it in his hip pocket. I thought here is a man who really is very careful about these things. But to say more generally as to his discretion, I have always found Dr. Oppenheimer to be very discreet in his handling of classified information.

Q Is there anything else you care to say to this Board about his character as a man and as a citizen?

A I have the highest confidence in Dr. Oppenheimer. I consider him to be a person of high character. I consider him to be a man of discretion, a good security risk and a person of full loyalty to the country.

MR. GARRISON: That is all, Mr. Chairman.

CROSS EXAMINATION

BY MR. ROBB:

Q Dr. Bacher, you were asked by Mr. Garrison what you knew about Dr. Oppenheimer's political views at the time you were in Los Alamos, and you answered, I believe, that you knew him to be a Democrat.

Did you know anything about his interest in other political philosophies?

A As I think I answered Mr. Garrison, too, we didn't

have very much time to discuss politics at Los Alamos.

Q Whether you discussed it or not, did you know?

A Not much. I had been aware of the fact that he had leftish sympathies before the war, but I didn't really know very much about it, and I didn't discuss it with him.

Q Did you ever state to anyone that you knew that between 1934 and 1942, Dr. Oppenheimer became interested in various political philosophies and was interested as many others were at the time in the experiment being conducted by the Soviet Government in Russia?

A I don't know, but it sounds as if I might have.

Q Did you know that?

A That is a difficult question to answer, because I am not exactly sure what it would take to know that. I was aware that this was commonly discussed.

MR. ROBB: Mr. Chairman, there is in the file before the Board a memorandum to the files, dated March 14, 1947, the subject is stated to be a study of a report on J. Robert Oppenheimer, or an analysis of a report on J. Robert Oppenheimer. Much of this analysis has to do with FBI reports which I am not allowed to discuss or disclose here.

MR. GARRISON: This is an analysis by whom?

MR. ROBB: It is not signed, Mr. Garrison, strangely enough. But it is in the AEC files under that date.

MR. GARRISON: Is that a document used in connection

with the clearance discussions?

MR. ROBB: I assume it was. I don't know. It is March 14, 1947.

MR. GARRISON: An unsigned document?

MR. ROBB: That is correct.

MR. GRAY: It is on AEC stationery?

MR. GARRISON: Are you going to read portions of that to Dr. Bacher?

MR. ROBB: Yes, sir. Mr. Chairman, as I say, I am not permitted to read those portions which reflect FBI reports. I would like, however, to read a certain portion which does not necessarily involve such reports, and wherein some minor instances there are some references --

MR. GARRISON: I am sorry. I did not hear that.

MR. ROBB: I would like to read certain portions which do not involve reference to FBI reports. In some instances where there is reference to FBI reports, I would like to delete or paraphrase, so as not to get into FBI reports. I wish the Board would follow me so I am not distorting.

MR. GARRISON: Mr. Chairman, is there anything to show that this may not be simply a kind of memorandum exchanged between security officers?

MR. ROBB: I don't know what it is. It is a memorandum to file.

MR. GRAY: There is not anything to show the authorship

of this report.

MR. GARRISON: I am a little troubled about reading into the record matter from a document whose purpose, nature origin, authenticity, we have no knowledge at all.

MR. ROBB: Could you want the Board to consider it without your hearing it?

MR. GARRISON: I would like to hear everything that the Board considers. I know that to be beyond the possibilities, greatly as I regret it.

MR. ROBB: May I proceed, Mr. Chairman. I am reading from page 4 of this memorandum, starting at the bottom -- "It is known" --

MR. GARRISON: Mr. Chairman, could we have this read first off the record to see what we can make of it, and then see if it belongs in a part of the record which conceivably one day may become public? I am not saying that there is any plan to make it public, but this is a record of some historic character, and I think --

MR. GRAY: I would like to ask Mr. Robb whether this is going to be the basis of a question to Dr. Bacher?

MR. ROBB: I think it relates to Dr. Bacher's testimony, and I want to put some questions to him about this.

MR. GARRISON: Does it relate to him personally?

MR. ROBB: Not at all.

MR. GARRISON: Why can't you put your question without

reading it from an unknown document?

MR. ROBB: Because I am conducting this questioning and I would like to do it in my own way.

MR. GARRISON: I am conducting my question to the Chair.

MR. ROBB: You asked me and I answered it.

MR. GRAY: Where is that?

MR. ROBB: Starting at page 4 of the report, at the bottom of the page, the next to the last paragraph.

MR. GRAY: And how much?

MR. ROBB: Reading from there through the first full paragraph on page 6.

MR. GRAY: I am going to allow counsel to read these portions he has indicated.

MR. ROBB: Mr. Chairman, may I suggest that there are certain minor references in here to FBI reports which we are not permitted to disclose which is why I was going to undertake to read it to give counsel the benefit of it with those references deleted.

This Board, as I understand it, is to base its decision in this matter upon the whole file before it. If counsel does not want to hear this, and wants the Board to go ahead and consider it without him hearing it, that is all right with me.

MR. GARRISON: Mr. Chairman, what I object to is

reading into the record what I take to be allegations about Dr. Oppenheimer's past which are unsupported by anything approaching a signature, without any knowledge of the use to which this was put, or the source of it, without any possible means of our knowing what it is going to say. It seems to me to read an anonymous allegation of that kind about Dr. Oppenheimer into the record --

MR. GRAY: I don't believe that the portion that Mr. Robb proposes to read makes allegations with respect to Dr. Oppenheimer. Am I correct?

MR. ROBB: It concerns certain individuals employed on the project. I apprehend that this report was before Dr. Bacher at one time or another.

MR. GRAY: This report clearly came out of the Atomic Energy Commission files. As Mr. Robb said, I think it is safe to assume that even though Dr. Bacher may not remember seeing this particular document, that at one time he certainly had seen it in connection with the clearance procedures involved.

MR. GARRISON: Mr. Chairman, if this was a part of the material which Dr. Bacher went over, why can't it be shown to him now, and then questions put to him about individuals, rather than reading this into the record. There certainly can be no objection to a former member of the Commission reading something from the Commission's files, as I understand it, particularly if he has already read them in the past.

MR. ROBB: I certainly would not expect Dr. Bacher to remember this offhand.

MR. GARRISON: Why can't you show it? Mr. Chairman, wouldn't that be the appropriate procedure to let Dr. Bacher look at this, and then if counsel wants to ask him questions about particular individuals, he can.

MR. ROBB: Mr. Chairman, I want to ask Dr. Bacher questions about this memorandum. I think the record ought to reflect what it is before I start to ask him questions about it.

MR. GRAY: I think I shall have to talk with my colleagues on the Board. I understand you are objecting to the reading.

MR. GARRISON: Yes, sir. I don't object if it is shown to Dr. Bacher so he may read it, and then questions put to him about particular individuals, whatever questions that counsel wants to ask. I just have this feeling that to read into the record these anonymous passages about particular people is not sound procedure.

MR. ROBB: Of course, Mr. Chairman, I can't quite follow my friend because this report is before the Board in its entirety. I can't see why putting a portion in the record seems to be such a horrible step to take. The only thing that will happen if I read this is that counsel will get to hear it.

MR. GARRISON: It also will become a part of the

transcript, which may become a permanent record.

MR. ROBB: I assume these files are a public record.

MR. GARRISON: It may become public.

MR. ROBB: It won't become public through us.

MR. GRAY: I think it is not unreasonable to assume that some time this transcript may become a public record. I would hope not, but I think we can make no guarantees I would like to have a consultation with my colleagues on the Board. I think we will just move into the other room briefly so we won't have to send all of you out of the room.

(The Board withdrew.)

(The Board re-entered the room.)

MR. GRAY: After conferring with my colleagues on the Board, I am going to suggest that Mr. Robb show this document to Dr. Bacher, and if he wishes to point out particularly the paragraphs which he is now concerned with and then to ask him to question Dr. Bacher on the basis of these paragraphs without reading them into the record.

MR. ROBB: Mr. Rolander, is it all right for Dr. Bacher to make references to FBI?

MR. ROLANDER: Yes, but Dr. Bacher should not refer to references in discussion.

MR. ROBB: May we take time out while he reads it?

MR. GRAY: Yes.

MR. ROBB: May we proceed?

MR. GRAY: Yes.

BY MR. ROBB:

Q Dr. Bacher, you have read the paragraphs in that analysis to which I referred you?

A Yes.

Q Doctor, if the statements made in this analysis about Charlotte Serber are fact, would you have had her on the project at Los Alamos?

A Could I see this thing again to refer to?

Q Yes, sir. (Handing).

MR. GARRISON: Mr. Chairman, I would like to note for the record that Dr. Bacher's answer to that question, whether he answers yes or no, scarcely seems to me to be relevant to the subject of this inquiry for it has absolutely no bearing on the question of whether Dr. Oppenheimer knew those facts to be true or not, whatever these facts may be. This is a question in the cark about the witness' opinion about something not in the record about some member of the project. I fear that the inference which the question may wish to have drawn is that if the witness answers the question in the negative somehow that will be taken as directed to Dr. Oppenheimer. It just seems not to belong in the record, but I don't want to seem to be argumentative about this, but I do put it to the Chairman very seriously.

MR. GRAY: Your observation about it is in the

record, and I am certain the Board will take into account all of the circumstances, including the nature of the memorandum under discussion, and the related matters you pointed out about it.

THE WITNESS: Would you repeat the question?

(Question read by the reporter.)

THE WITNESS: In order to answer that question, Mr. Robb, I think it is necessary to go back and make a bit of a statement about what the basis for security clearance was at Los Alamos.

We as technical people at Los Alamos did not put ourselves in the position in any case of making a judgment as to whether scientific people should or should not be a member of the project. This was a question which was left up to the security officers. For example, to take the case of Philip Morrison -- I happen to remember this, and it is referred to in the same document which you have just asked me to look at -- in his case he was a member of the metallurgical laboratory at the University of Chicago. Some time in the summer of 1944 I was on a recruiting trip for the Los Alamos Laboratory. We were desperately trying to get people from other sections of the project to help us in the work out there. I went to the metallurgical laboratory, I went to the SAM laboratories in New York, and if I recall correctly, I went also to Oak Ridge. At each of these places I talked to people and

approached them with reference to coming to Los Alamos. Finally after finding that some of the people whom I had initially approached were unavailable for security reasons at Los Alamos, I took the precaution of not talking to people until I cleared it with the security officer. In other words, it was clear from this that the responsibility for as to who came to Los Alamos was held with the security office and not with the scientific director or any member of the scientific staff.

In the case of Philip Morrison I interviewed him in Chicago. Subsequently, if I recall correctly, a question was raised as to whether it was advisable for him to come to Los Alamos. We pointed out that he was a very able man, would help us more in our work out there than most of the other people that we might get, and after review somewhere, it was decided that he would come to Los Alamos and he did, and made a number of valuable contributions to the project.

I think this is only to indicate that judgment as to what had to be taken for fact in these matters and the decision as to what ought to be done on that was something which was in the hands of the security officer at Los Alamos.

BY MR. ROBB:

Q May I interpose, since we digressed a little bit, you have here, have you not, given a judgment on Dr. Oppenheimer as a security matter?

A I have given my personal opinion.

Q Yes, sir. Would you give that same personal opinion in respect of Charlotte Serber, assuming that the statements you have read about her in this memorandum are true?

A I will say this. I don't think Dr. Oppenheimer would not have had her at Los Alamos if he did not think she was reliable.

Q Would you please answer the question? I am asking for your opinion.

A I believe I would have relied on the security officer to make a decision on this.

Q Suppose the security officer told you the facts set out in this memorandum, and asked you for your opinion as to whether she should be there or whether she should not, what would you have done?

A In any security case, there are lots of acts and these may only be a part of the facts. A security judgment, as I understand it, is as a matter of balancing one thing against another.

Q In other words, you don't think you are qualified to give an opinion?

A I do think I am qualified to give an opinion.

Q Would you give one on Charlotte Serber?

A In answer to that question, I think you need all the facts and not just what you have given me.

Q Assuming that these facts were given to you, do you think that taking those facts as data that she had any business on that project?

A It seems to me that these are not necessarily facts. They are stated in the form of it as an opinion.

Q I am asking you to assume that they are facts.

A Could I read them again, please?

Q Yes.

MR. GRAY: I would say that the witness does not have to assume they are facts, but for the purpose of a question only you may, This is not to get you on record.

MR. ROBB: No, I am not asking you to say they are facts. I am merely trying to explore the witness' criteria of security standards.

THE WITNESS: Mr. Chairman, as you can see from my answers, I am a little reluctant to answer hypothetical questions.

MR. GARRISON: I think, Mr. Chairman, that when counsel put the question to Dr. Bacher, I thought he was making a comparison or parallel between that question to Dr. Bacher about Mrs. Serber, and the question I put to Dr. Bacher about his opinion of Dr. Oppenheimer. Quite clearly his opinion about Dr. Oppenheimer is based on many long years of intimate association in government work, and I think to analogize that to an opinion about Mrs. Serber based on a hypothetical

set of facts is quite misleading.

MR. ROBB: I don't think the Doctor is misled. Have you now read that again, Doctor?

THE WITNESS: I have now read it again.

I think, Mr. Robb, that there is a great difference between assuming that is a fact, and proceeding on the basis. I think the real question comes up as to whether that is a fact or not.

BY MR. ROBB:

Q Assume that you knew that these statements were the truth about Mrs. Serber, would you then be of the opinion that she should be cleared for service on a secret war project such as Los Alamos?

A In the case that all those facts are correct as stated, and werecurrent at the time, I would say no.

Q Yes, sir. What was Mrs. Serber's job down there?

MR. GARRISON: Mr. Chairman, please believe me, I am not trying to delay or obstruct. I think since we now have had put to the witness questions about these facts, those facts now ought to go in the record. I hoped when counsel had shown this document to Mr. Bacher that the course of questioning would have followed a different line. But the record as it now reads is absolutely blind and incapable of evaluation by us. While I had hoped to avoid this kind of reading of this raw undigested anonymous material into the

record I now see no recourse but to have it done, because otherwise the transcript is left in a meaningless state of affairs. I think it better go in. I am sorry it has taken this turn. But I didn't suppose that the questions would bring about that result.

MR. ROBB: I am perfectly satisfied with the record as it stands, Mr. Chairman. Mr. Garrison didn't want it read. I wanted to read it. I foresaw exactly what would happen. Now he wants it read.

MR. GARRISON: Mr. Chairman, I really think it should go in. I have thought from the argument that the question of counsel would put would be of an entirely different category than to say assuming these facts to be true, what would your opinion have been. I think we now ought to have the facts in the record. I would like to have them read into the record so we know what we are talking about.

MR. GRAY: The Chair proposes to suggest that these paragraphs be read into the record, but first I would like to know whether either of my colleagues feel that is not a proper procedure.

DR. EVANS: It is all right. If Mr. Garrison wishes to have it read, it is all right with me.

MR. GARRISON: I do think the end result is an objectionable one, but it is less objectionable now to have it in than to leave it blank.

MR. ROBB: Mr. Chairman, I am a little bit confused. Am I to read just the section dealing with the Serbers, or all the paragraphs I have in mind?

MR. GARRISON: I would just do the Serber one.

MR. ROBB: All right I will have to leave out certain portions.

MR. GARRISON: Would you indicate where the portions are left out?

MR. ROBB: "It is known" -- I am leaving out something -- "that subject was responsible for the employment on the project at Los Alamos of a number of persons" -- I left out a word -- "known to be either Communists or active Communist sympathizers" -- omissions -- "Robert and Charlotte Serber. With respect to the persons mentioned above, it is known the Charlotte Serber's family is prominent in Communist Party ranks in Philadelphia, Pennsylvania; that she herself was probably a Party member and possibly a member of the Comintern, and that she has always been active in radical activities and front organizations wherever she has lived. Her husband, Robert Serber, perhaps under her influence, has been active in the same circles since he married her, although there is no conclusive evidence that he is a Party member. Robert Serber" -- blank, blank -- "were graduate students of the University of California under subject." -- blank, omissions. "It is known that all of them" -- referring to

certain other persons and the Serbers -- "perhaps influenced by subject were extremely active in Communist activities on the campus at Berkeley during this time. After finishing their studies all" -- blank -- "of the men went to the University of Illinois where they are also known to have associated with known Communists, and to have taken part in Communist activities. When the Manhattan Project came into being, the Serbers were employed at Los Alamos by subject" -- omissions -- "all of these people were very close personally to subject and there is little room to doubt that he was aware of their sympathies and activities. In evaluating this information, it must be kept in mind that both"-- blank -- " and Serber were technically very well qualified for the work for which subject wanted them, despite their youth."

I think that is all on Serber.

MR. GRAY: Just one other place. After a blank, "Serber, too, is highly regarded."

MR. ROBB: Yes. "Serber, too, is highly regarded."

MR. GRAY: I think the record should show that this without omissions that are important to this discussion represents excerpts from a memorandum in the Atomic Energy Commission files on Atomic Energy Commission stationery, entitled, "Memorandum to files. Subject: Analysis of Report on J. Robert Oppenheimer." Unsigned, and dated March 14 1947, and with no identification as to its author.

MR. GARRISON: Mr. Chairman, may I now point out what seems to be the vice in this matter of using as a hypothetical case to Dr. Bacher -- I have no objection to putting hypothetical cases to him to see how his mind works on these things -- but here are some people called Serber. All we know on the record is that Dr. Serber was cleared by a distinguished panel of which Admiral Nimitz was Chairman, and cleared by the Atomic Energy Commission itself for top secret Q clearance. Presumably this material was taken into account. It is certainly clear from the Commission's criteria that in evaluating Professor Serber's qualifications, his wife's background must also have been taken into account. Here now are two people that I don't know from Adam, but it seems to me most unfair to use them as a framework for a hypothetical question. A document of this kind, anonymous and full of blanks, in the case of people who have been cleared by Admiral Nimitz and Mr. Neyland and General Joyce, and by the Commission itself. To me it serves no purpose in proceeding and is most unfair to all concerned. It leaves the inference in the record that in spite of the subsequent clearance of the Serbers that --

MR. ROBB: Of the who?

MR. GARRISON: If Dr. Oppenheimer ever sees them at all it is something very wrong. This is a backhanded accusation against the Serbers in this record -- I am not defending them

at all -- but I am questioning the validity of this procedure. I would specifically request the chairman that hypothetical cases to Dr. Bacher be put in the form of X or what have you, and not names of people to be used for material of this character.

MR. ROBB: Mr. Chairman, Mr. Garrison keeps arguing about the clearance of the Serbers. So far as I know, Mrs. Serber has never been cleared by the Atomic Energy Commission but she was employed at Los Alamos as a librarian. She had access to all the classified information that was there. My questions to Dr. Bacher were directed at his opinion of Mrs. Serber. I read the matter about Mr. Serber just because I felt sure if I didn't read it all, Mr. Garrison would say I should have read it all. I have not asked him anything about Mr. Serber yet. May I proceed, Mr. Chairman.

MR. GRAY: I think the witness has already answered the question.

MR. ROBB: Yes.

BY MR. ROBB:

Q Doctor, do you know what evidence might have been presented to the Board which cleared Dr. Serber?

A No, I was not present.

Q May I ask you, Doctor, do you recall whether or not in 1947 the Commission had its security officer prepare some analysis of the FBI reports in the file for you?

MR. GARRISON: Which file is this, Dr. Oppenheimer's

file?

MR. ROBB: Yes.

THE WITNESS: Mr. Robb, I remember reading a summary but I don't believe I remember anything that would allow me to answer your question either in the affirmative or negative.

BY MR. ROBB:

Q I notice here in Mr. Jones' memorandum to the file which refers to entries which is March 10, 1947, the last page of that contains this notation, "The results of the discussion with Mr. Clifford were reported to the Commission at a meeting at 5 p.m. this afternoon." That would be March 11

MR. GARRISON: Is this the document read into the record before?

MR. ROBB: Yes, sir. "At that meeting the General Manager reported that a detailed analysis of the FBI summary was in process of preparation by the Commission's security staff, as an aid to evaluation."

BY MR. ROBB:

Q Assuming such summary was made, no doubt you had it before you?

A It sounds so, but I don't remember it, Mr. Robb.

Q I was not there, but my thought is that probably this paper that I showed you which purports to be an analysis of the report on Dr. Oppenheimer was the analysis referred to in that note of March 11.

A I am afraid I can't help you on that.

Mr. Chairman, could I make an observation on this last discussion?

MR. GRAY: You certainly may.

THE WITNESS: In view of the fact now that this has been read into the record, I tried in my answer to you about Mrs. Serber on the hypothetical question to make it clear that if that information was (a) fact, and (b) current, that the answer I gave then applied. I think the question that I had in my mind, and the reason I found it so difficult to answer the hypothetical question which you posed was that I would assume that the Board and also the Commission in reviewing a case did not believe that was either (a) fact, or (b) current. I think these are the pertinent questions in making a decision.

BY MR. ROBB:

Q Are you talking about the Commission or the Board considering Dr. Oppenheimer's case?

A No, I am talking about the Serber case, which is the question you asked me about.

Q Of course, Mr. Serber's case was distinct from that of Mrs. Serber. My question related to Mrs. Serber, and perhaps to make it perfectly clear whether I am getting at it, I will ask you this: If you had that data before you in 1942 and 1943, and had to make a decision as to whether Mrs.

Serber would come to Los Alamos, would you have decided that she should come or that she should not come?

A Once again my answer to you would be that I would leave that to a full investigation by security officers under those circumstances, because this does not constitute a full record.

Q But assume that the investigation disclosed that those statements were true, and you then had to make the decision, what would it have been?

A I said if they were true facts and were current, that is, applied as of that day, which is not clear, I might add, from the record you have read, then I would say no.

MR. ROBB: I think that answers my question. Thank you. That is all I have to ask.

MR. GRAY: Dr. Evans.

MR. EVANS: Dr. Bacher, did you have a graduate student at your school by the name of Sheehan in the last two years?

THE WITNESS: It could be, but I don't recall him in physics.

DR. EVANS: He was a chemistry student, but he took a lot of physics. He was one of my students, and I just wondered if you knew him.

THE WITNESS: I did not know him.

DR. EVANS: Dr. Bacher, you have never been a Communist?

THE WITNESS: No.

DR. EVANS: Never been a fellow traveler?

THE WITNESS: No.

DR. EVANS: Have you belonged to any of those subversive organizations that the Attorney General listed?

THE WITNESS: As far as I know I have never belonged to any organization that is on the Attorney General's list.

DR. EVANS: Do you think that a man can be completely loyal to his country and still be a security risk?

THE WITNESS: Yes. If he is a drunkard, he might be a security risk and be completely loyal.

DR. EVANS: Just suppose because of his associates.

THE WITNESS: It seems to me that on this question of association that is a different question. If you have full confidence in a man's character and his integrity and his discretion, I don't believe that one can rule him out as a security risk on the basis of his knowing people who have in the past had connection with the Communist Party, mostly because I don't believe there would be many people left in the United States that would satisfy that criterion.

DR. EVANS: Then you are answering the question this way. You think a man can be completely loyal, and if he is completely loyal, he is not a security risk? Is that what you are saying?

THE WITNESS: I believe I specified a little more

than that, Dr. Evans. I said, if I recall correctly, that if he is a person of high character, a person of integrity, and a person who is discreet, and is at the same time a person who is clearly loyal, then he is not a security risk, assuming of course that other criteria such as he is not a drunk or things of that sort are included.

DR. EVANS: You think Dr. Oppenheimer is always discreet?

THE WITNESS: I do.

DR. EVANS: Do you think he was discreet when he refused to give the name of somebody that talked to him? Do you remember that Chevalier incident?

THE WITNESS: I don't remember the point you refer to, I am afraid.

DR. EVANS: Someone approached Dr. Oppenheimer about getting security information, and Dr. Oppenheimer refused to give the name of the man that approached him.

THE WITNESS: I thought he did give the name, Dr. Evans.

DR. EVANS: He refused twice I think, and for quite a long time he didn't give it. Am I right on that?

MR. ROBB: I believe that is correct.

MR. GARRISON: That is right.

DR. EVANS: Was that discreet?

THE WITNESS: Could you ask the question again, Dr.

Evans.

DR. EVANS: Yes. If you were on a project, and you had access to a lot of secret information, and I came to you and told you that there was somebody that knew that I could give information to if you would give it to me, would you have gone and told somebody that I had approached you?

THE WITNESS: I think that should have been reported.

MR. GARRISON: Mr. Chairman.

DR. EVANS: Maybe I put the question very badly.

MR. GARRISON: All right. I accept it as a hypothetical question.

DR. EVANS: You have never been approached by people?

THE WITNESS: No, never.

DR. EVANS: Do you believe a man should place loyalty to his country before loyalty to a friend?

THE WITNESS: Yes.

DR. EVANS: That is all I want to ask.

MR. GRAY: Dr. Bacher, did you know -- I am not sure whether this was covered in earlier testimony -- David Hawkins?

THE WITNESS: Yes.

MR. GRAY: Did you know him well?

THE WITNESS: I met him first at Los Alamos, Mr. Chairman, when he was a member of that laboratory. I cannot remember exactly when he came to Los Alamos. I would guess

some time in the last part of 1943 or early 1944. I met him there, knew him fairly well at Los Alamos, and have known him a bit since the war. He lived in Washington for a time and did some work, I think, at the end of the war in finishing up a history that he had been preparing of the Los Alamos Project. I knew him a bit while he was here in Washington. I have not seen him now for some time. I believe he is in Colorado.

MR. GRAY: At the time you knew him at Los Alamos or later, did you have any information about his what I believe are sometimes referred to as political affiliations? Did you know anything about his connections?

THE WITNESS: I did not discuss politics with him. I believe I read some testimony since that he has had and I must say I was very surprised at what came out in that testimony, because I believed Hawkins and believe him today to be a person of character, and I don't believe one who could today subject himself to the rigid control that would be required if he were to have the affiliations of which I believe he was testified since then.

MR. GRAY: I don't believe he has testified to any current affiliation.

THE WITNESS: No, I meant in the past.

MR. GRAY: You testified that you interviewed Philip Morrison.

THE WITNESS: Yes.

MR. GRAY: With respect to his employment.

THE WITNESS: Yes, that is right.

MR. GRAY: Did you know anything about his political affiliations?

THE WITNESS: I didn't at that time, no.

MR. GRAY: Would it surprise you if he had had Communist associations or connections as a personal matter?

THE WITNESS: Today?

MR. GRAY: Perhaps I am not making my question clear. My question is whether it would surprise you today to know that he then at the time you interviewed him had political connections which you would feel would not make him a good security risk today?

THE WITNESS: After all, Mr. Chairman, in the meantime I have read some of these things so I could not easily be surprised by it.

MR. GRAY: Were you surprised when you read them?

THE WITNESS: I was surprised when I found out in that particular case.

MR. GRAY: When you interviewed people for the laboratory this kind of question was not asked?

THE WITNESS: No, I had no relation to that. Any interview by a scientific person was concerned entirely with the question of whether that man would be an appropriate

addition to the laboratory on scientific and technical ground. The question of whether he came to the laboratory or not was left to the security officer to pass on.

MR. GRAY: That was the system you used; that probably is not the system today, is it? Everybody concerned with the project is expected to take some interest in security?

THE WITNESS: Yes, I would say also at the time I interviewed Morrison, I didn't know anything at all about his background.

MR. GRAY: On the question of identification of people and with no conclusions to be drawn from the question, did you know Fuchs well?

THE WITNESS: I knew him reasonably well at Los Alamos, because he was a member of the Theoretical Division and did a certain amount of work for the Division for which I was responsible there. I didn't know him well outside work, but within the laboratory there I saw him fairly frequently. I probably knew eight or ten members of the Theoretical Division better than I knew Fuchs, and my knowledge of him was entirely through the work of the project.

MR. GRAY: He was considered to be a doing a good job?

THE WITNESS: He did a good job, I believe.

DR. EVANS: You were very surprised when that came out

THE WITNESS: I was certainly surprised.

DR. EVANS: You might have lost a little faith in

your own judgment of people?

THE WITNESS: I didn't know him very well personally, that is, I didn't spend many hours with him. I saw him mostly in a scientific and technical capacity. So I didn't have an opportunity to form a personal judgment of Fuchs very much. He was a very quiet, very retiring person.

MR. GRAY: Would you say, Dr. Bacher, that aside from the security aspect, you were responsible for the employment of Philip Morrison as a member of the project? I asked that badly. You have already testified that you didn't concern yourself with the security angle.

THE WITNESS: Yes.

MR. GRAY: Did Dr. Oppenheimer suggest Morrison as a prospect?

THE WITNESS: I don't recall that he did. I think as a matter of fact that I interviewed him at the metallurgical laboratory and how I got the list of people that I interviewed at the metallurgical laboratory, I just don't remember. I think it was presented by the metallurgical laboratory of people on the project whom they thought would be helpful in the work at Los Alamos, and who in the emergency they could manage to get along without or were willing to get along without.

MR. GRAY: In any event, you were exercising your own best judgment in interviewing Morrison for possible

employment?

THE WITNESS: Yes, I think a question was raised about Morrison. If I recall correctly, we from Los Alamos said he was one of the people that would be most useful to us from the scientific and technical end. The question was reviewed, I don't know whether by local security people or whether in Washington, and Morrison then came to Los Alamos. I think this was along about in the early fall of 1944.

MR. GRAY: Do you have any more questions?

MR. GARRISON: May I ask one more question about Morrison?

REDIRECT EXAMINATION

BY MR. GARRISON:

Q Did you interview a group of young men at the metallurgical laboratory?

A Yes.

Q And he was one of a group?

A Yes.

Q And in interviewing them what did you seek to find out

A I sought most to find out what their work had been at the metallurgical lab, and whether they would fit into the work that we had to do at Los Alamos and in part to find out whether they would be willing to pick up their belongings and their families and move out to New Mexico to undertake work on that project.

Most of the people wanted to know quite a little bit about what the circumstances were, because they didn't have very good information on this point, and they were unwilling to make a decision in the matter until they learned a little more about the physical surroundings, and so on.

Q And had all of these young men been cleared for work on the metallurgical project?

A Yes.

Q Have you ever been fooled in your judgment of the loyalty of anybody whom you have known as long and as intimately as Dr. Oppenheimer?

A No.

Q Do you think you could be?

A I doubt it.

MR. GRAY: Do you have any more questions?

MR. GARRISON: Since Dr. Evans put a hypothetical question about the Chevalier case, I think I would like to read from the Commission's letter and put a question myself.

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BY MR. GARRISON:

Q I am reading, Dr. Bacher, from the Commission's letter of December 23, 1954, on page six which you testified you had read, but I want to refresh your memory of it.

"It was reported that prior to March 1, 1943, possibly three months prior, Peter Ivanov, Secretary at the Soviet Consulate, San Francisco, approached George Charles Eltenton for the purpose of obtaining information regarding work being done at the Radiation Laboratory for the use of Soviet scientists that George Charles Eltenton subsequently requested Haakon Chevalier to approach you concerning this matter; that Haakon Chevalier thereupon approached you, either directly or through your brother, Frank Friedman Oppenheimer, in connection with this matter; and that Haakon Chevalier finally advised George Charles Eltenton that there was no chance whatsoever of obtaining the information. It was further reported that you did not report this episode to the appropriate authorities until several months after it occurrence; that when you initially discussed this matter with the appropriate authorities on August 26, 1943, you did not identify yourself as the person who had been approached, and you refused to identify Haakon Chevalier as the individual who had made the approach on behalf of George Charles Eltenton; and that it was not until several months later, when you were ordered by a superior to do so, that you so

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identified Haakon Chevalier. It was further reported that upon your return to Berkeley following your separation from the Los Alamos Project, you were visited by the Chevaliers on several occasions; and that your wife was in contact with Haakon and Barbara Chevalier in 1946 and 1947."

In Dr. Oppenheimer's answer at page 22, he said as follows:

"I knew of no attempt to obtain secret information at Los Alamos. Prior to my going there my friend Haakon Chevalier with his wife visited us on Eagle Hill, probably in early 1943. During the visit, he came into the kitchen and told me that George Eltenton had spoken to him of the possibility of transmitting technical information to Soviet scientists. I made some strong remark to the effect that this sounded terribly wrong to me. The discussion ended there. Nothing in our long-standing freidnship would have led me to believe that Chevalier was actually seeking information; and I was certain that he had no idea of the work on which I was engaged.

"It has long been clear to me that I should have reported the incident at once. The events that led me to report it -- which I doubt ever would have become known without my report -- were unconnected with it. During the summer of 1943, Colonel Lansdale, the Intelligence Officer of the Manhattan District, came to Los Alamos and told me that he was worried

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about the security situation in Berkeley because of the activities of the Federation of Architects, Engineers, Chemists and Technicians. This recalled to my mind that Eltenton was a member and probably a promoter of the FAECT. Shortly thereafter, I was in Berkeley and I told the security officer that Eltenton would bear watching. When asked why, I said that Eltenton had attempted, through intermediaries, to approach people on the project, though I mentioned neither myself nor Chevalier. Later, when General Groves urged me to give the details, I told him of my conversation with Chevalier. I still think of Chevalier as a friend.

Supposing that the evidence here showed that Dr. Oppenheimer's statement about the approach by Chevalier included a statement by him to the security officers to whom he initiated the mention of the name of Eltenton the fact that Chevalier, whom he did not name, had approached three people; that actually Chevalier, according to Dr. Oppenheimer's testimony, approached him only; that he invented the fact that there were three people and not one; that in his discussions with the security officers he said that Eltenton had a contact with the Russian Consulate and that there was somebody that had microfilm or some other method of getting secret information to Russia and that those details were also inventions.

Taking all that now into account, and taking further

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into account the fact that General Groves pressed Dr. Oppenheimer for the name of the intermediary, namely, Chevalier, that Dr. Oppenheimer said he would tell him if ordered and General Groves said that he did not want to order him and asked him to think it over and that later General Groves said he must have the name and that if it were not told to him he would have to order it, that Dr. Oppenheimer revealed the name of his friend Chevalier to General Groves. Taking all of that into account and assuming for the purpose of this question that this is the record before you, would your previous answer about your confidence in Dr. Oppenheimer's loyalty be altered in any way in your mind?

MR. ROBB: May I just enter my usual caveat to the record as to the accuracies of the hypothesis, Mr. Chairman.

MR. GARRISON: Quite right.

MR. GRAY: That means, Dr. Bacher, that Mr. Robb does not necessarily accept ---

THE WITNESS: I fully understand that.

MR. GRAY: It puzzled Dr. Bacher.

THE WITNESS: Thank you.

MR. GRAY: This is Mr. Robb's statement for the record and now you can proceed with the answer.

BY MR. GARRISON:

Q I say that is my version of the hypothesis.

A Would you restate the question, not the whole hypothesis.

Q Having all of this before you now, you previously testified that on the basis of your experiences with Dr. Oppenheimer, you were confident of his loyalty to the United States and also that you considered him to be a good security risk.

I ask you now, accepting what I told you to be the case for the purpose of the discussion, would your conviction about the matters that you expressed about his loyalty and his security be the same.

A No. I think he made a mistake in not reporting it immediately, but this does not change my judgement of Dr. Oppenheimer.

Q When you say no, you mean by that---

MR. ROBB: I think he meant yes if there is any question.

THE WITNESS: The question was did it change my opinion?

MR. GARRISON: That is correct.

THE WITNESS: The answer is no. I believe Dr. Oppenheimer made a mistake in not reporting that incident immediately, but what you have told me and read into the record does not change my judgement given previously.

BY MR. GARRISON:

Q Do you think that Dr. Oppenheimer would today do

what he did in 1943 in this incident if the facts I have told you are the case?

A I do not. I think he realizes he made a mistake on that by your statement there.

Q I do not want you to accept my statement.

A By the statement in the record and I believe the same thing of my own knowledge.

DR. EVANS: That is, he was not particularly discreet at that time.

THE WITNESS: I think this is more a question of judgement rather than discretion.

DR. EVANS: He did not have good judgement at that time. How is that?

THE WITNESS: It seems to me this is more a question of judgement than discretion.

DR. EVANS: I do not know the difference.

BY MR. GARRISON:

Q Was there involved in this case, Dr. Bacher, as I put it to you any leakage of information by Dr. Oppenheimer?

A No, not that I know of. The word discretion is usually used in security matters with reference to someone saying something that might conceivably be classified where someone can hear it who is not authorized to receive the information. That is why I made that difference.

Q Would you say it was the fact here that quite contrary

to the leaking of information, Dr. Oppenheimer declined to have anything to do with even a notion of leaking information and after much delay revealed finally the names of the people above?

A He seems to have reported the incident fully, judging from what you read me. The only question seems to be one of time.

MR. GARRISON: That is all.

MR. ROBB: That is all. I have no further questions.

MR. GRAY: I have one question and this won't take long.

There are those in the scientific community today, Dr. Bacher, who think that the fact of this proceeding is an outrage. There are some, I say, would feel that way. You have heard that view expressed?

THE WITNESS: I have heard that it has been expressed.

MR. GRAY: I do not say that is a universally held view but there are those who hold it.

As a former member of the Commission, I would like to ask you whether you feel that this matter is of such serious consequences that this kind of hearing is a good thing. I am not talking about the publicity angles and the rest of it. I mean in the interest of the government and of the individual himself.

I will put it this way: If such a hearing had been

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had in 1947, it would not have been an outrage, would it?

THE WITNESS: I find it very difficult to answer that question, Mr. Chairman. In the first place, it is hard to know what one means by an outrage.

MR. GRAY: That is my characterization and I agree that it is bad to have it in the record. I should not perhaps express it this way, but to say that there are those in the scientific community who see absolutely no justification for this hearing, is that an exaggeration of a point of view which exists?

THE WITNESS: It may exist. I have tried rather hard not to talk to too many people before testifying here and I do not have a good view of what people think, so I cannot answer your question really very well on that.

With respect to the procedures that AEC has for handling security cases, these, of course, were worked up rather carefully by the Commission over a long period of time. Our General Counsel pointed out to us that the essence of a proper system for handling security cases was the procedure and, therefore, the Commission in setting up the present procedure tried hard to follow as nearly as possible those procedures which over the years have come to be recognized in courts of law. This can't be followed fully where questions touching on classified information and involving classified information must appear. This poses very grave difficulties.

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I can think of no way, for example, in which hearings of the present sort could be held in public as some people have requested. I just do not know how a thing like that could be done. I am not sure that I get the flavor of your question.

MR. GRAY: That wasn't directly responsive, but do you feel that having established the procedures, I suppose while you were a member of the Commission--

THE WITNESS: Yes.

MR. GRAY: The Commission having established them and I assume your having felt at the time that they were fair, do you as a former Commissioner and as a scientist and as a former associate and a friend of Dr. Oppenheimer feel that the Commission should not have instituted this proceeding?

THE WITNESS: That, Mr. Chairman, would depend on my assessment of whether there has been substantial new derogatory information brought to bear about Dr. Oppenheimer. I have no seen any such in reading the set of charges that have been brought up and listed by the General Manager that were not know before. There may be information which I do not have. But on the list of charges that were there, I did not see any substantial amount of new derogatory information.

MR. GRAY: Without in any way endorsing or rejecting the information about the Hydrogen Bomb, that certainly is new since 1947. I am speaking now of the material in the

General Manager's letter.

THE WITNESS: Yes.

MR. GRAY: Also, I think that it is true that there are files which are in existence which were not available to the Commission in 1947.

THE WITNESS: You see, I am not aware of that, Mr. Chairman.

MR. GRAY: Again, I am not suggesting that there is anything that should or should not be concluded from those files, but that is the fact.

Finally, I suppose the question of formal action of clearance of Dr. Oppenheimer in 1947 remains to be a matter surrounded by some mystery. Would counsel accept that in view of the fact that the reference to this action which apparently finally was written down in August referred to action which took place in February, although in fact any clearance which may have been passed upon by the Commission must have been done by it in March and there is some confusion. I do not cite this as having a bearing on the ultimate question of Dr. Oppenheimer's clearance as much as having a bearing on the propriety of these proceedings.

If I seem to be making an argument, it is not my intention, but I was interested actually in having your view because, in a sense, you have been on both sides of this kind of thing.

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THE WITNESS: Let me see if I can answer your question this way: If what I read in the papers has been correct and most of my information on this does come from reading newspapers, there seems to be two possible ways in which the case could be handled. Either the Commission could have, on the occasion of the case being raised, again recommended to the President that there be an administrative clearance, either by the Commission or directly by the President, or as the second alternative a hearing could be set up.

I presume from what I have read in the papers that the President made the decision that there should be a hearing. These, I think, are the only two alternatives as far as I know that exist. There may be others with which I am not familiar. With that decision, I think a hearing is being held under all of the regulations that have been set up and the procedures of the AEC.

I find it very difficult to answer hypothetical questions without all of the information that went into this decision.

MR. GRAY: I think I should, as Chairman, make an observation for the record, that an assumption about the participation of the President of the United States in this matter is the assumption of the witness.

THE WITNESS: It was only what I read in the paper, Mr. Chairman.

MR. GRAY: We will allow the witness certainly to report anything of his recollection of what he has read in the press, but I do not want to involve the President of the United States in this proceeding, because I have no information in that regard myself.

MR. GARRISON: Mr. Chairman, I think a little while back you put a question to counsel on this side which remained unanswered, when you said wouldn't counsel agree that there was confusion as to whether Dr. Oppenheimer had been cleared--

MR. GRAY: Whether it was formal action.

MR. GARRISON: If I might be permitted to respond--

MR. GRAY: You certainly may.

MR. GARRISON: I would say at this point we simply do not know. I do not know precisely what the course of action was that was taken. I made a request a little earlier today for a copy of the minutes of the August meeting relating to it which has been taken under advisement. I have some other questions having to do with the record which I would like to put to the Board in the morning. I do not want to take your time this afternoon.

MR. ROBB: Mr. Chairman, as I advised the Chairman, I have to leave. I would like to leave as soon as I may. Does Mr. Garrison have anymore questions?

MR. GARRISON: No, sir.

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(At this point, Mr. Robb departed from the hearing.)

DR. EVANS: If you had been a free agent and not connected with these projects, just an ordinary of the country, and you had been asked to serve on this panel as we have been, would you have thought it your duty to do so?

THE WITNESS: Yes.

MR. GRAY: Thank you very much, Dr. Bacher. We appreciate your coming here.

We are recessed now until 9:30 in the morning.

(Thereupon, the hearing was recessed at 5:30 p.m., to reconvene at 9:30 a.m., Tuesday, April 27, 1954.)

END AJG