[redacted]

Pages - 26

[redacted]

August 1, 1956

AEC 71/58

COPY NO. 16

Document No. TIDC/RSB 163-80
This document consists of 26
No. 1 of 2 copies, Series A

ATOMIC ENERGY COMMISSION

PROCESSING OF ALIENS FOR AEC CLEARANCE UNDER THE ACCESS PERMIT PROGRAM

Note by the Secretary

The General Manager has requested that the attached report by the Director of Civilian Application be circulated for consideration by the Commission during the week of July 30, 1956.

W. B. McCOOL
Secretary

19 + 20 destroyed May 1957
17 + 18 destroyed 8/26/59

DISTRIBUTION	COPY NO.	DISTRIBUTION	COPY NO.
Secretary	1	Org. & Personnel	32 - 33
Commissioners	2-5, 63	Production	34
General Manager	6	Raw Materials	35 - 36
Deputy Gen. Mgr.	7	Reactor Development	37 - 39
Asst. Gen. Mgr.	8	Security	40
Asst. Gen. Mgr. IA	9	Albuquerque Oprns.	41 - 43
Asst. Gen. Mgr. Mfg.	10	Chicago Operations	44 - 45
Asst. Gen. Mgr. R&ID	11	Grand Junction Oprns.	46 - 47
Asst. Gen. Mgr. Adm.	12	Hanford Operations	48
General Counsel	13 - 14	Idaho Operations	49
Biology & Medicine	15	New York Operations	50
Civilian Application	16 - 20	Oak Ridge Operations	51 - 53
Finance	21 - 23	San Francisco Oprns.	54
Information	24 - 26	Savannah River Oprns.	55 - 57
Inspection	27	Schenectady Operations	58
Intelligence	28	WASO	59
International Affairs	29 - 30	Secretariat	60 - 62
Military Application	31		

When separated from enclosures handle this document as....... UNCLASSIFIED

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Sec. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

THIS DOCUMENT HAS BEEN DECLASSIFIED UNDER THE PROVISIONS OF EO 12958, DATED 4/17/95
By Authority: Alyssa S. Vidos 2249 (Declassification authority number)
Date of Declassification 6/12/2000

[redacted]

[redacted]

[redacted]

ATOMIC ENERGY COMMISSION

PROCESSING OF ALIENS
FOR AEC CLEARANCE UNDER THE ACCESS PERMIT PROGRAM

Report to the General Manager by
the Director of Civilian Application

THE PROBLEM

1. To consider establishing policy governing security clearance of aliens employed by holders of Access Permits.

SUMMARY

2. The present policy of the AEC with respect to the processing of aliens for security clearance was established by AEC 71/9 in March 1949 and implemented by Security Letter No. 3, dated April 29, 1949. Based upon the premise that the granting of security clearance to an alien creates a security risk not present in the case of a U.S. citizen, the policy provides that before an alien may be processed for clearance there must be a clear showing that:

a. The alien has unique or very unusual talents or skills not possessed to any comparable degree by an available U.S. citizen; and

b. That the position for which he is being considered is one which is essential to the AEC's program.

If the requirements of a and b above are met, the benefits to be derived from the alien's employment are weighed against the possible risk to security in determining whether he should be processed for clearance. Among the factors to be considered are:

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Sec. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

[redacted]

[redacted]

[redacted]

(1) The alien's intention to become a U.S. citizen;

(2) Whether sufficient investigation can be obtained upon which to base a security determination.

3. The considerations which entered into adaption of this policy were summarized in Security Letter No. 3, copy of which is attached as Appendix "A".

4. It is recognized that alien participation has been valuable in the development of certain phases of the atomic energy program. It is believed that qualified aliens might also make substantial contributions to atomic energy programs of private companies and thereby materially advance the civilian application of atomic energy, which would be to our national interest. Conversely, in some instances, it might well delay the progress of American industry in the field of atomic energy if technically qualified aliens were prohibited from participating in classified programs during the present critical years of development and shortage of scientists and engineers. Attached (Appendices "B" and "C") are letters from two Access Permit holders explaining their desire to clear aliens for their civilian atomic energy programs.

5. The Department of Defense sponsors a program for recruiting aliens for the DOD or its contractors, in which the Joint Intelligence Objectives Agency of the Joint Chiefs of Staff recruits top-level scientific personnel in Europe. Persons recruited undergo a background investigation and upon their arrival in the U.S. are immediately eligible for DOD secret clearances. Appendices "D","E","F" and "G" are resumes of the types of individuals who are presently available for American industry under the DOD recruiting program. We feel that such people can contri-

[redacted]

[redacted]

bute to the civilian application program and it would be a waste of manpower to automatically exclude them if they were hired by an AEC Access Permit holder.

6. Since the AEC does not have direct program responsibilities for the activities of permit holders, it cannot evaluate specific alien cases on quite the same basis as is used for clearance of aliens for its own program. The Division of Civilian Application therefore proposes that the conditions for permitting the clearance of aliens in the Access Permit program would require the Access Permit holder to demonstrate that:

a. The Access Permit holders program for which the alien is to be cleared could reasonably be considered to be one which could make an important contribution to the peaceful application of atomic energy;

b. The position for which the alien is being considered is one that is essential to the furtherance of such program of the permittee relating to civilian applications of atomic energy;

c. The alien possesses the unique skills or talents needed for this position; and

d. That the Access Permit holder has been unable to secure the services of a U.S. citizen of reasonably comparable skill or talents through their normal recruiting practices.

7. Compliance with the foregoing requirements would not necessarily result in a determination to process an alien for clearance. A determination to do so would depend upon meeting the foregoing requirements, those discussed in paragraphs 8 and 9, and any other factors relating to the individual case.

8. As required by present AEC policy, in the case of requests to clear aliens for the Access Permit program, the application for personnel security clearance and all supporting papers will be reviewed to determine whether it is possible to obtain

[redacted]

[redacted]

[redacted]

sufficient data upon which to base a decision as to clearance eligibility. Additionally, since the processing of aliens for clearance is an exception to the general AEC clearance policy, requests by holders of Access Permits to clear aliens will not be considered unless the alien has evidenced his intention to become a U.S. citizen.

9. A full field investigation is required in the case of an alien for either "L" or "Q" clearance. In most instances investigations will have to be conducted in foreign countries, which may result in delays in clearances and may in some instances not produce sufficient data upon which to make a clearance determination.

10. The Presidential Directive of May 25, 1953, subject: "Making Classified Security Information Available to Foreign Nationals," (a copy of which is attached as Appendix "H") requires that classified security information be made available to foreign nationals only under the following conditions:

(a) on a real need-to-know basis;

(b) after determination that the furnishing of such information will result in a net advantage to the interests of the United States.

11. There is a question as to whether the proposed alien clearance policy is in conformity with the Presidential Directive, that is, whether the AEC could make a finding as to a "need-to-know," or "net advantage" as prescribed by the Presidential Directive. It appears that an opinion of the Attorney General should be solicited to resolve this question.

STAFF JUDGMENTS

12. The Office of the General Counsel concurs in the course of action proposed herein. The Divisions of Intelligence, Security, International Affairs, and Information Services concur in the proposed policy.

[redacted]

[redacted]

RECOMMENDATION

13. The General Manager recommends that the Atomic Energy Commission:

a. Approve a policy of permitting aliens to be cleared for classified work under the Access Permit Program under conditions set forth in paragraphs 6,7,8 and 9 subject to the receipt of an opinion by the Attorney General that this policy would be in conformity with the Presidential Directive of May 25, 1953.

b. Note that upon receipt of a favorable Attorney General's opinion and the subsequent implementation of this policy the JCAE and MLC will be advised by appropriate letters.

c. Note that upon implementation of this policy there will be no public announcement of this action, however, Access Permit holders will be notified by an appropriate letter.

LIST OF ENCLOSURES

		Page No.
APPENDIX "A" -	Security Letter No. 3 - Security Clearance for Aliens Employed on AE Program	6
APPENDIX "B" -	Letter January 4, 1956 from General Dynamics.....	11
APPENDIX "C" -	Letter April 2, 1956 from Westinghouse Electric Corporation.....	13
APPENDIX "D" -	Biographical and Professional Resume Hans H. Kanter.....	16
APPENDIX "E" -	Biographical and Professional Resume Dr. Otto Osberghaus.....	18
APPENDIX "F" -	Biographical and Professional Resume Helmuth Beck.....	21
APPENDIX "G" -	Biographical and Professional Resume Dr. Oldwig von Roos.....	22
APPENDIX "H" -	Confidential Security Information (The White House).....	25

[redacted]

[redacted]

[redacted]

APPENDIX "A"

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

April 29, 1949

MEMORANDUM SECURITY LETTER NO. 3

TO : All Operations and Area Offices
and Washington Divisions

FROM : John Gingrich, Director of Security
U. S. AEC, Washington, D. C.

SUBJECT: SECURITY CLEARANCE FOR ALIENS EMPLOYED ON THE ATOMIC ENERGY PROGRAM

1. At Meeting 252 on March 14, 1949, the Commission considered AEC 71/9, a report by the Director of Security. The Commission received and noted without objection the sections of AEC 71/9 reproduced below:

THE PROBLEM

1. To establish a policy to be followed in considering aliens for employment by the Commission, or for employment with access to "restricted data", by contractors and licensees.

BACKGROUND

2. A letter of February 14, 1947, from the General Manager to all field Operations, subject: "Personnel Clearance", contained the following instructions concerning the employment of aliens.

5. h. Aliens

Pending further instructions, no individual who is not a citizen of the United States will be permitted any ACCESS TO RESTRICTED DATA or entrance to any exclusion or limited area, or will be employed by the Commission or will be employed by any contractor or licensee of the Commission to perform any duties which would involve entrance to any security area, except as follows:

(1) The case of any alien whose employment or ACCESS TO RESTRICTED DATA appears likely to be highly beneficial to the program of the Commission will be called to the attention of Commission Headquarters for appropriate action.

(2) An alien who was employed by Manhattan District, either on full time or on consultant basis, and who was transferred to the Commission as of January 1, 1947, may continue to be employed by the Commission. Each

[redacted]

[redacted]

[redacted]

Area Engineer shall notify the Commission of the continued employment of any such person.

(3) An alien who was cleared for ACCESS TO RESTRICTED DATA by Manhattan District and who has been employed regularly since prior to January 1, 1947 by contractors or licensees of the Commission either on full time or consultant basis, may be permitted ACCESS TO RESTRICTED DATA upon approval of the Area Engineer, who shall notify Commission Headquarters of his action.

3. In the course of handling requests from the field for consideration of aliens for personnel security clearance, it has been the practice under 5.h.(1) of the General Manager's letter of February 14, 1947, to require the following information:

a. A statement as to the uniqueness of the alien's qualifications.

b. A statement that no U. S. citizen is available for the job to be performed, or that it is impossible to obtain a U. S. citizen with comparable qualifications to those of the alien applicant.

c. A statement as to the intention of the alien to become a U. S. citizen.

4. Monthly alien reports submitted to the Division of Security by the field Security Offices reflect: (a) name, (b) position, (c) present citizenship, (d) status of application for U. S. citizenship, and (e) degree of access to "restricted data" for each alien employed on the atomic energy program.

5. A review of these reports discloses that from January 1, 1947, through October 1948, 84 aliens have been employed by the AEC or its contractors. Twenty-eight of these people have had access to restricted data and have been granted "Q" clearance. Only 19 aliens from this group are now employed, the others having terminated their connection with the program. All of these are employed by the Commission's contractors. Of the 19 aliens granted personnel security clearance and presently employed on the program, eight have become naturalized, six have received their first papers for U. S. citizenship, four have made no effort to become U. S. citizens and one applied for first papers but later abandoned the effort to become a citizen.

6. The other 56 aliens (of the total 84) have been employed by Commission contractors on unclassified jobs, thus not requiring personnel security clearance. Of this group, 23 have subsequently terminated their employment.

DISCUSSION

7. Section 10 (a) of the Atomic Energy Act of 1946 states that, "It shall be the policy of the Commission to control the dissemination of restricted data in such a manner as to assure the common defense and security". It is necessary to prevent the unauthorized disclosure of restricted data by persons who have been granted access to such data, both during their employment and subsequent thereto.

[redacted]

[redacted]

[redacted]

8. Insofar as citizens of the United States are concerned, even after they have terminated their employment with the Commission or its contractors, a semblance of control remains. The criminal provisions of the Atomic Energy Act of 1946, and of the Espionage Act and other Federal Statutes, will act as a deterrent to their disclosing "restricted data". If there is serious question concerning their intentions or reliability in this regard, there is a possibility of preventing their travel abroad or of limiting the extent of such travel. In the case of the alien employee, once he has departed from the territory of the United States there would seem to be no semblance of control over disclosure of information secured by him as a result of his employment, other than the moral obligation resulting from his agreements with the Commission. In the case of an alien who has returned to his own country, any moral obligation he may have to the U. S. would seem to be overcome by his duty and allegiance toward his country of citizenship. Since the alien travels on a passport issued by a foreign country, there is virtually no way to prevent foreign travel even if there is real reason to question his intentions.

9. In the event of an increase in international tension, it is not unthinkable that a potential enemy might use pressure on individuals physically located outside of the U. S. who are possessed of broad knowledge concerning atomic energy research and development. In such a case it would be possible to control the travel of U. S. citizens falling in such a category to prevent their being placed in such a position, but it would be much more difficult, if not impossible, to exercise similar control over aliens who fall in the same category.

10. The provisions of the Atomic Energy Act of 1946 concerning clearance, as set forth in Section 10 (b) is that "The Federal Bureau of Investigation shall have made an investigation and report to the Commission on the character, associations, and loyalty of such individual". The Commission must then determine that permitting such person to have access to "restricted data" will not endanger the common defense or security. In the case of an alien who is not resident in the United States, or who has resided here for only a short time, the Commission may be required to make its determination on the basis of an investigation, which of necessity, is incomplete because of the foreign residence of the alien.

11. It is recognized that there are aliens who have unique or unusual talents or skills not possessed to a comparable degree by U. S. citizens. It is also recognized that alien participation has been valuable in the development of certain phases of the atomic energy program. It is possible that there will be cases where the potential contribution of the alien applicant may outweigh the risk attendant upon granting him access to a given type of "restricted data". It appears, therefore, that it will be necessary to examine each case on its own merits to determine if the job to be performed by the alien is sufficiently important to the program to outweigh any risk to security which arises as a result of his employment. The risk to security will depend on: (a) the nationality of the alien; (b) whether proper FBI investigation can be obtained; (c) length of stay in the U. S.; (d) what "family ties" the alien has abroad; and (e) whether the alien intends to become a citizen. Before processing the alien applicant

[redacted]

[redacted]

[redacted]

for personnel security clearance, the determination must be made, in the individual case, that the potential contribution outweighs the security risk arising from the alien status of the applicant.

12. It has not been the practice to require Washington approval for the employment of an alien by a Commission contractor in an unclassified capacity. However, the Managers of Operations normally obtain an FBI file check on each alien applicant before he is hired. In some instances, where the alien has recently entered this country, appropriate checks are made with the Department of State by the Division of Security in Washington, at the request of Managers of Operations.

* * * * * * * * * *

CONCLUSIONS

14. It is concluded that:

a. It must be recognized that granting personnel security clearance to an alien creates a security risk not present in the case of a U. S. citizen. The decision to consider an alien for clearance must, therefore, be on the basis of "calculated risk". In such cases, there must be a clear showing that the applicant has unique or very unusual talents or skills not possessed, to any comparable degree, by an available U. S. citizen, and that the position for which he is being considered is one that is essential to the furtherance of the Commission's program.

b. If it cannot be demonstrated that the alien applicant possesses unique or very unusual talents or skills and that the atomic energy program will be materially benefited by his employment, he will not be considered for personnel security clearance. If these requirements are met, then the benefit to be derived from his employment will be weighed against the possible risk to security in determining whether he should be processed for security clearance.

* * * * * * *

15. e. Note that the following procedure will be followed in determining whether aliens should be considered for personnel security clearance:

(1) The Manager of Operations will furnish the responsible Division in Washington with all available documentation concerning the unique or very unusual skills or talents of the alien; the essentiality of the job for which he is being considered; all data concerning the availability of U. S. citizens for the job, and detailed biographical data of the alien applicant.

(2) The responsible Washington Division will forward to the Director of Security with recommendations only the cases it approves, returning to the appropriate Manager of Operations those cases which it disapproves.

[redacted]

[redacted]

[redacted]

(3) The Director of Security will endeavor to reach agreement with the responsible Division whether the alien applicant should be considered for employment. In the event no agreement can be reached, the entire matter, including the views of the Managers of Operations, the recommendations of the responsible Division, and his own recommendations, will be submitted by the Director of Security to the General Manager for final determination.

2. In processing applications for employment of aliens, the procedure set forth above shall be followed.

3. Documentation of requests for employment of aliens approved or disapproved by the Director of Security or the General Manager shall be returned to the Manager of Operations. Requests approved shall be processed for clearance in accordance with established procedures.

/s/

John Gingrich
Director of Security

Appendix "A"

[redacted]

[redacted]

[redacted]

APPENDIX "B"

GENERAL DYNAMICS
San Diego 12, California

January 4, 1956

Dr. Frank Pittman, Deputy Director
Division of Civilian Applications
U.S. Atomic Energy Commission
Washington 25, D.C.

Dear Dr. Pittman:

This letter concerns itself with the problem of clearing a non-citizen for work in the civilian application field, when it is believed that the person involved can very materially contribute to the U.S. effort. The person involved is Professor Freeman J. Dyson, of the Institute for Advanced Study at Princeton, New Jersey. Before reviewing his particular case, I would like to make some general observations on the role of theoretical physicist in the U.S. reactor effort which I believe has some bearing on the subject.

After the war, the majority of university theoretical physicists engaged in the Manhattan Project returned to university jobs. Contrary to the accepted spirit in the chemistry field, university physicists and particularly theorists have, as you know, continued to feel quite aloof to industrial projects. It was particularly fashionable after the war to suggest to students that a purely university career was the only worthwhile goal for a good scientist. The fields of research quite naturally tended toward such subjects as field theory. As you know, in the weapons field the Commission did succeed in re-enlisting the help of university theoretical physicists beginning from about 1949-1950 onwards. As soon as this step was taken, it once again became "fashionable" for students to turn to work in weapons laboratories after graduation. I believe that a similar trend has not yet matured in reactor work.

As you know, one of the guiding philosophies which underlies the establishment of our research laboratory (primarily concerned with reactor work) is our hope to help bridge this gap between work vital to the national interest and university research. To this end, I believe it is very important that we get some of the top university people to associate themselves with our effort. As you know, we have already had success along these lines, particularly with the acceptance of the directorship by Professor Creutz. I believe it is now of considerable importance to involve a man such as Dyson in the civilian application field just because he is known as such a pure theorist. His joining the program would serve as an important example that the field of reactor physics is indeed one of interest to top theorists.

Now as to the qualifications of Dyson. Dyson, who is only 32, has been contributing to the field of advanced the-

[redacted]

[redacted]

[redacted]L

oretical physics since a very early age. He obtained his undergraduate degree at Cambridge, England, in 1945 and came to the United States in 1951 where he was appointed professor of physics at Cornell at the age of 28. He is now a full professor at the Institute for Advanced Study. He is not only very good at abstract mathematical problems but also a wonder at "problem solving;" in fact, he enjoys the latter activity and would therefore excel in the reactor physics field.

I am happy to report to you that Dyson has accepted the invitation of General Atomic Division of General Dynamics Corporation to spend the summer of 1956 working in the civilian application field. I believe that his work will be much more effective in the national effort if he is granted an AEC clearance. Dyson is a man who will very rapidly absorb the unclassified literature and could most effectively work at frontiers of present day knowledge which will most likely involve classified rather than the unclassified field.

It might be pertinent that Dyson is actually intending to become a U.S. citizen and has declared his intention to do so. Except for the legal technicality that 1956 will be an election year he would be eligible for his citizenship even before next November.

I hope that the Commission will find it of advantage to the U.S. national scientific effort to consider Professor Dyson's clearance at an early stage.

Please do not hesitate to call on me if I can supply any further information which you may need in this connection.

Yours sincerely,

/s/ Frederic de Hoffmann
Vice President

[redacted]

[redacted]

[redacted]AL

APPENDIX "C"

WESTINGHOUSE ELECTRIC CORPORATION
P. O. BOX 355
Pittsburgh 30, Pa.

April 2, 1956

U. S. Atomic Energy Commission
Division of Civilian Application
1717 H Street
Washington, D. C.

ATTENTION: Mr. Frank K. Pittman,
Deputy Director

SUBJECT: L-Clearances for Non-Citizens

Gentlemen:

Reference is made to my letter of December 21, 1955 on the above subject to Mr. H. L. Price and your reply of January 6, 1956. Since the problem of recruiting a sufficient number of competent technical and scientific personnel is one which faces us (as well as other industrial firms and Government laboratories), each and every day we have been giving considerable thought to the exchange of letters referenced above. It would appear that we are not alone in this concern since the lack of scientific personnel has been the subject of innumerable speeches and addresses, not only by personnel in the education field, but also has been given great emphasis in recent months by such members of the Commission as Chairman Strauss, Commissioner Libby, Admiral Rickover and many others.

During the last few months, since our first letter, our Division has received many inquiries concerning employment from non-citizens whom we feel could make a substantial contribution to our program of developing the peaceful uses of the atom, thereby materially aiding the Commission's program of Civilian Application.

Inasmuch as a large portion of our present development activity is classified no higher than CONFIDENTIAL and, in view of the rapid rate at which declassification activities are now proceeding, we feel that if an L-Clearance could be obtained for certain of these non-citizens, it would enhance our program. While we realize that citizens of certain nations whose interests may be inimical to the United States may not be susceptible to clearance, there are many persons who are natives of nations whose interests are friendly to the United States, which nations are cooperating in our Atomic Energy Program and thus may be much more susceptible to clearance action (i.e., Canada England, Belgium, France, etc.). As indicated in our previous letter, many of these nationals have already applied for United States citizenship and are merely awaiting the time limit involved in the naturalization procedure.

[redacted]

[redacted]

[redacted]

I believe I indicated in my previous letter that the present rules and regulations of the Commission governing "contractors' operations" stated that no individual who was not a citizen of the United States shall be permitted access to restricted data.

Upon further review, we find that the provision contains a qualifying statement indicating clearance may be granted if the employment of the alien would be highly advantageous to the Atomic Energy Commission's program. In light of the qualifying phrase and with full understanding of the narrow range of the qualification, I do feel that it should be possible to make a determination that the employment of non-citizens by access permit holders would be highly advantageous to the Commission's program.

We would appreciate further consideration and comments of yourself and other members of the Commission Staff concerning clearances for certain selected non-citizens.

Yours very truly,

/s/ W. P. Kelly, Jr.
Assistant to Manager

Appendix "C"

[redacted]

[redacted]

[redacted]AL

APPENDIX "D"

BIOGRAPHICAL AND PROFESSIONAL RESUME

KANTER, Hans H. June 1956

NAME: Hans Helmut Victor Rudolf KANTER

BIRTHDATE: [redacted]

PROFESSIONAL FIELD: Physicist, interested in nuclear physics, particularly problems associated with neutrons and nuclear power.

EDUCATION:

1934 - 1946 Completed grammar and secondary schools in Hamburg, Germany. Classical and scientific studies in preparation for the University. Nine months service in German Army and as a U.S. POW in 1945.

1948 - 1953 Studied at the University of Marburg, Germany. Majored in Physics, Mathematics and Chemistry. Awarded Diploma in Physics (master) on 15 May 1953 with academic honor "very good".

1953 - 1956 Post graduate studies at University of Marburg in the Department of Physics as candidate for Doctorate which is expected to be awarded in August 1956. Study and work has been on thesis entitled: "Backscattering of electrons by solids with energies from 10 - 100 KeV with special study of the spectroscopy of weak beta-emitters."

In this work the distribution in angle and energy of backscattered electrons are measured. From this data the influence of the surroundings of the betaemitter is analysed in detail, especially the deviations of the low energy-range of beta-spectra caused by the geometry used in beta-spectrometers. The work is done under the direction of Prof. Dr. W. Walcher, Physics Institute of the University of Marburg/Lahn, Renhof 5.

LANGUAGES:

	SPEAK	READ	WRITE
German	Native	Native	Native
English	Good	Good	Good
Latin	Fair	Good	Good
French	Fair	Good	Fair

EMPLOYMENT HISTORY:

1946 - 1948 Apprentice radio technician with the Neufeldt Radio Manufacturing Company in Marburg. Training and work in assembly and repair of radio receivers and associated apparatus. Since 1948 worked summer vacations with this firm.

[redacted]

[redacted]

[redacted]AL

PUBLICATIONS:

Two articles for publication in Autumn 1956, one on thesis work, and the other on a problem regarding electrons.

REFERENCES:

Prof. Dr. W. Walcher, Physics Institute, University of Marburg, Marburg, Germany.

Dr. Oldwig von Roos, Physics Institute, Univeristy of Marburg, Marburg, Germany.

Dr. Herman V. Felde, Monette Cable Works, Marburg, Germany.

HOBBIES:

Has pilot license for light plane flying; amateur photography and outdoor sports.

COMMENTS:

Interview notes furnished by U. S. Scientific Consultant based on interviews in Germany, May 1956.

"KANTER is tall, thin and presents a pleasant appearance. He is courteous and somewhat reserved but thaws quickly and converses quite easily. He is well regarded by the faculty and his associates at the Physics Institute as a scientist devoted to his work. Ranked well within the upper quarter of his group. Very interested in emigrating to the United States which he regards as the only desirable location for a scientist. Will receive his doctorate in late summer 1956 and would be available for employment in October 1956.

SUMMARY OF DIPLOM - THESIS

The subject of my thesis for Diplom is "Backscattering of the beta-radiation of the ^{87}Rb.

Comparing the values for the half life of ^{87}Rb. determined by different authors, one finds that all come to the same value of $T \approx 6$ lo^{10}a, in spite of quite different results of measuring the decay rate, decay schemes and corrections for backscattering. After in another work (Bahnisch, Huster, Walcher: Naturwiss. 39,397 (1952)), carried out in this department, the correct scheme of decay was determined, it followed, that either the results of measuring the decay rate or the corrections for backscattering were incorrect. To clarify these discrepancies my work was marked out.

Therefore a work done by Kemmerich (Z.Phys. 126,399 (1949)) with thin Rb-layers in a counting tube was repeated and confirmed. On the other side the dependence of the counting rate of Rb from the material, which carried the Rb-layer, was investigated and compared to that of another beta-emitter (^{89}Sr). There also were to examine the difference of the counting rate

[redacted]

[redacted]

[redacted]

effected by the different ways of preparing the layer, that means the size of the cristallytes.

To carry out these experiments a counting tube apparatus was built, which permitted the exchange of the foils (Al, Cu, Ag, Au), lying on the inner wall of the counting tube and carrying the emitter. For different thicknesses of the emitter the specific counting rate was determined and extrapolated for zero thickness. From the known bounderies of the half life of ^{87}Rb and also ^{89}Sr followed the bounderies for the coefficient of backscattering (30-50%, corresponding to the uncertainty of the half life).

The exact values of this coefficients and also its dependence on angle and energy will probably result from my thesis.

The comparison of different shaped Rb-layers (evaporated, cristalized from solutions) yielded fluctuations of the counting rate up to 25%.

[redacted]

[redacted]

[redacted]

APPENDIX "E"

BIOGRAPHICAL AND PROFESSIONAL RESUME
DR. OTTO OSBERGHAUS

NAME: Otto OSBERGHAUS, Dr. June 1956

DATE OF BIRTH: [redacted]

PROFESSIONAL FIELD: Physics, particularly problems associated with mass spectrometry. Experience in nuclear studies particularly of atomic beam experiments. Would be interested in working in high energy physics (accelerators).

EDUCATION:

1925 - 1937 Completed grade and secondary schools in Solingen, Germany. Classical and science studies for university admission.

1937 - 1940 University of Munich, Germany. Major studies in Physics and Chemistry. Completed and graduated with degree in Chemistry.

1940 - 1944 Military service, German Army, First Lieutenant of Artillery. Released from active service to scientific research in 1944.

1944 - 1946 Graduate studies, Physical Chemistry Institute, University of Munich.

1946 - 1949 Graduate study in Physics at Goettingen University Germany under Professor Dr. Kopfermann. Awarded doctorate in science, December 1949. Theses was supervised by Prof. Dr. Paul and was entitled: "The isotope frequency of boron. Mass spectrometrical investigations of the electron impulse products of BF3 and BC13." A mass spectrometer was constructed and used for the determination of the B10/B11 ratio in several minerals.

LANGUAGES:

	Speak	Read	Write
German	Native	Native	Native
English	Good	Good	Good

EMPLOYMENT HISTORY:

July 1944 - April 1946 Scientific assistant in Physical Chemistry Institute, under Prof. Dr. Claus Clusius. Munich University.

[redacted]

[redacted]

[redacted]

Dec. 1949 - Sept. 1950 & Oct. 1951 - Oct. 1953 — Scientific Assistant, Physics Department, Goettingen University under Prof. Dr. Kopermann. Worked on initial energy of ions formed by electron impact in a mass spectrometer and on the influence of temperature on the mass spectrum of organic compounds.

Sept. 1950 - Oct. 1951 — Department of Physical Chemistry of Glasgow University, Scotland, under Prof. J. M. Robertson. Scholarship of the British Council, about 30 pounds per month. Work on X-ray crystallography of organic compounds with retating groups.

Nov. 1953 to date (1956) — Department of Physics of Bonn University under Prof. Dr. W. Paul. Salary: About 500 DM in the beginning of 950 DM now. Position: Assistant, supervising of post-graduate work. Special field: Investigation in the mass spectrometer of free radicals produced by thermal dissociation or electron impact. Ion sources for mass spectrometers. High frequency mass spectrometers. Semiconductors as detectors for atomic beams (CuO and CdS) Oscillator strength of spectral lines (Fe) from the average lifetime of excited atomic states.

PUBLICATIONS:

"The isotope frequency of Boron. Mass spectrometrical investigations of the electron impact products of BF3 and BC13" Journal for Physics 128, 366 (1950).

"Mass spectrometrical investigations on wall reactions of organic molecules upon high temperatures", together with R. Taubert, Journal for Physical Chemistry 4, 264 (1955).

"A ion cage", together with E. Fischer and W. Paul, Research Reports of the North/Rhine-Westphalia Physics Society, 1956.

TRAVEL:

Sponsored as visitor to following scientific meetings:

(1) 1950 and 1951, England and Scotland, British Scholarship Council.

(2) Dec. 1954 - Jan. 1955 - in USA to visit at Cornell, Chicago and Indiana Universities. Accelerator studies.

(3) August 1955 - Geneva, Switzerland, International Atomic Energy Meeting.

(4) September 1955 - Harwell, England. Isotope Separation Conference.

[redacted]

[redacted]

[redacted]

REFERENCES:

(1) Professor Claus Mueller, Koelnstr. 161, Bonn, Germany (visiting lecturer, New York University).

(2) Prof. W. Walcher, Physics Institute, University of Marberg, Germany.

(3) Dr. G. Falk, Physics Department, Aachen Technical University Aachen, Germany.

(4) Dr. Peter Meyer, Institute for Nuclear Studies, University of Chicago.

(5) Dr. Geo. Wessel, General Electric Company, 398 Crosset St., Syracuse, New York.

HOBBIES:

Outdoor sports, skiing, swimming etc., and historical studies.

COMMENTS:

Notes by U. S. Scientific Consultant based on interviews in Germany in 1956.

> "Dr. Osberghaus was highly recommended by Prof. Mueller as a person who would be of interest to the United States as a promising scientist and citizen. Other acquaintances spoke highly of him professionally and personally. Dr. Osberghaus is pleasant and neat in appearance, speaks excellent English and desires to emigrate to the United States. He is unmarried, and will consider any employment offers in the field of physics.

[redacted]

[redacted]

[redacted]

APPENDIX "F"

BIOGRAPHICAL AND PROFESSIONAL RESUME
HELMUTH BECK

NAME: Helmuth Hans BECK

BIRTH DATA: [redacted]

PROFESSIONAL FIELD: Graduate physicist interested in field of electronics and nuclear physics

EDUCATION:

1935 - 1948 Attended and completed grammar and secondary schools.

1949 - 1955 Attended and graduated from the University of Erlangen, Germany. Majored in physics and was awarded diploma (Masters) July 1955.

Doctor's Thesis: "Production of a High-Frequency Ion Source by means of a Superimposed, Constant Magnetic Field"

Production of hydrogen atomic nuclei by means of the phenomenon discovered by Thonemann, consisting of gas ionization by an electro-magnetic high-frequency field. This effect is increased by a constant magnetic field, lying either at a right angle or lengthwise to the magnetic high-frequency field. By means of an ion optical system, the nuclei, which are being formed, are pulled out of the discharge space and post-accelerated with the aim of producing nuclear reactions. The influence of various parameters like discharge pressure, high-frequency power, tension at the el.-stat. lenses and strength of the constant magnetic field in this process had to be determined and by appropriate choice of the various factors a maximum and optimum result had to be obtained.

The work was performed at the Physical Institute of the University of Erlangen under the guidance of Prof. Dr. R. Fleischmann.

LANGUAGES:

	Speak	Read	Write
German	Native	Native	Native
English	Good	Good	Good

EMPLOYMENT

No employment since I have just completed my studies. Am interested in obtaining a position in the United States.

[redacted]

[redacted]

[redacted]

APPENDIX "G"

BIOGRAPHICAL AND PROFESSIONAL DATA
von ROOS, OLDWIG DR.

February 1956

NAME: Oldwig von Roos

DATE OF BIRTH: [redacted]

MARITAL STATUS: Married, one child.

PROFESSIONAL FIELD: Physicist, working in solid state and reactor physics.

EDUCATION

1931 - 1944 Grammar and secondary schools, Germany.

1949 - 1954 University of Marburg, Germany. Majored in physics. Awarded Diploma in physics, June 1954. Thesis entitled: "Mass Spectrometic Investigation of Exchange Charges of Rare Isotopic Gas Ions."

The charge - exchange of isotopic ions has been investigated both experimentally and theoretically. Two ion-beams of different isotopes, prepared by a mass spectrometer, have been brought to absorption in their own "mothergas". A comparison measurement of the absorption-rates permitted to determing possible differences in the charge exchange cross-sections. This has been done with NE NE and natural neongas as an absorber. A difference in the charge exchange reactions: NE + NE ≡ NE + NE+ ; NE + NE = NE + NE+ ect., coming from the fact, that the nuclei in the mentioned reactions are either equal or unequal and therefore care must be taken in properly symmetrising the state-vector of the system has not been observed.
This has been shown to be in agreement with theoretical calculations based on a generalization of a certain "ansatz" used by Mott and Massey in their calculations of exchange-scattering of electrons (s. their book "Theory of Atomic Collisions" Oxford, at the Clarendon Press 1952).
The method is well suited for handling rearrangement-collisions in general. The well known "post-prior-discrepancy" can be avoided. (not published)
The work has been performed under the direction of Professor Walshcer, Director of the Physics Institute der University of Marburg.

1954 - 1956 Commenced graduate study and research as candidate for Doctor of Physics degree in June 1954. Degree expected June 1956. Thesis completed and accepted in December 1955 is entitled "Theory of Reflection of Positive Ions from Metal Surfaces."

[redacted]

[redacted]

[redacted]

The mecanism of the reflexion of ions from metal surfaces has been assumed to be entirely due to "backdiffusion" of slowed down energetic primaries (1-10 KeV). This back-scattering depends on the interaction between the impinging ions (called "strangers" for brevity) and the lattice-ions.
For the calculation of the backdiffused (reflected) "strangers" and interaction of the form (r distance between "stranger" and a lattice-ion, A eff. charge, a screening-constant, adjustable parameters) has been taken on several grounds.
Then we have determined the so-called distribution-function of the "strangers" N( ) (number of "strangers" per volume- and velocity-interval) with the aid of the Boltzmann-transport-equation using the scattering-cross-section following from the above mentioned potential (in born-approximation).
The number of reflected ions will be given by the distribution-function in a straightforward manner.
The solution of the transport-equation, only possible by expanding N in a series of powers of 1/a (screening) and spherical harmonics, had then the following result: in the first approximation, regarding screening, (essentially a pile-theoretical approach) the reflection coefficient becomes independent of the primary-energy and the parameters of the potential (A,a).
In the second approximation there is a slight <u>decrease</u> with <u>increasing</u> primary-energy.
We have performed explicit calculations using alcaline-ions as "strangers" and Molybdenum as targetmaterial. The proposed theory is in perfect agreement with experimental investigations performed in this institute, but in contrast to former measurements, where never <u>clean</u> surfaces had been used!
The theory also gives the key to the understanding of the problem of sputtering and kinetic secondary-electron-emission. A work regarding these questions is under performance. The work was completed under the supervision of professor Walcher.

Major Courses of Study:

Analysis (2 courses)	Electrontheory of Metals
Special Functions	Quantum - Mechanics (2 courses)
Theory of Functions (2 courses)	Gas - Kinetics
Laplace - Transforms	Quantumtheory of Wavefields
Theoretical Mechanics (2 courses)	Theory of Molecular Forces
Thermodynamics	Theory of Nuclear Forces
Magnetism	Electrodynamics

LANGUAGES

	Speak	Read	Write
German	Native	Native	Native
English	Good	Good	Good
French	Good	Good	Good

EMPLOYMENT HISTORY

Since June 1953, employed as scientific assistant by the Physics Institute, University of Marburg. Duties consist of supervising laboratory work of students in such fields as

[redacted]

[redacted]

[redacted]

Electricity, Optics, Mechanics, etc. Conducting own research and investigations. Income of 200 DM per month from fellowship awarded by German Research Society.

PUBLICATIONS

"A new method permitting the elimination of divergencies in quantum electrodynamics." von ROOS. To be published in the Physics Journal (Germany) in February 1956.

REFERENCES IN U.S.

Mr. Homer Hagstrum, Bell Laboratories, Murray Hill, New York, N.Y.

HOBBIES:

Painting, music and sports.

Type of employment desired:

Expects to be available in June 1956, will consider any professional openings in the United States.

[redacted]

[redacted]

[redacted]

APPENDIX "H"

[redacted]

THE WHITE HOUSE
WASHINGTON

May 25, 1953

Heads of all Departments and Agencies:

T: Making classified security information available to foreign nationals.

I shall henceforth hold responsible the head of each and agency in the Executive Branch for insuring that ces classified security information is made available to eign nationals only under the following conditions:

On a real need-to-know basis.

After determination that the furnishing of information will result in a net advantage to the erests of the United States.

Except in the case of necessary conversations with ng foreign civilian and military personnel, appropurity checks will be made, to the extent feasible, ct to prospective recipients of security informaassified "secret" or higher, and

a. The results of such security checks and the fact of the release of such security information will be made a matter of official record in the files of the department or agency releasing such information.

b. Derogatory information derived from such security checks will be recorded in the files of the security office of the Department or agency concerned and will be made available to the Federal Bureau of Investigation and the Central Intelligence Agency.

3. The above conditions shall be considered minimum in character.

4. I deem that strict adherence to the spirit and letter of this directive is of the greatest importance to the national security. Consequently, I request that the head of each department and agency in the Executive Branch personally acknowledge to me the receipt of this directive.

/s/ Dwright D. Eisenhower

[redacted]