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OPERATIONS COORDINATING BOARD
Washington 25, D. C.

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DRAFT
January 25, 1955

SPECIAL REPORT TO THE OCB ON INFORMATION PLANNING ON NUCLEAR
ENERGY PROJECTS FOR 1955, AND U.S. INTERIM PROGRAM TO
DEVELOP PEACEFUL USES OF ATOMIC ENERGY (AS REQUIRED
BY TERMS OF REFERENCE DATED MAY 12, 1954)

Part I - Information Planning on Nuclear Energy Projects for 1955

Basic Approach

1. In the light of overseas climate of opinion considerations affecting the basic security interests of the United States, public announcements concerning nuclear weapons developments should be closely coordinated with announcements concerning peaceful applications of nuclear energy, including implementation of the President's December 8, 1953 UNGA proposals. Ways and means must be sought of increasing the impact of the latter program in order to reduce attention to nuclear weapons news items. One way of accomplishing this is to plan to issue peaceful application items preceding and following dates when weapons items are expected to receive heavy news play. Such dates, so far as can be determined at this time, will be the date of the news stories on the first shot of the series at the Nevada Test Site, and stories of any open shot at the Test Site.

2. Judgment as to the least disadvantageous timing of announcements concerning nuclear weapons effects, including radiation fall-out hazards, should also continue to be formulated in the light of various international political events of major concern to U.S. security in order to minimize unfavorable impact on relevant sectors of foreign climate of opinion, and avoid resultant foreign political actions adverse to U.S. interests. During 1955 such announcements should be timed to avoid unfavorable impact on: (a) key political developments affecting the ratification or implementation of the Paris Agreements, (b) Afro-Asian Conference, (c) meetings of SEATO, (d) meetings of the NATO Council, (e) opening ceremonies of the UNGA.

3. The negative foreign opinion impact of nuclear tests may be minimized if such tests are preceded by comprehensive and understandable statements on the beneficial international security results which such tests have had in the past, accompanied by repeated authoritative statements which describe the necessity for the continuation of such tests in the interest of free world security, particularly in view of Soviet failure to agree to a workable system of disarmament.

4. Additional reduction of overseas apprehensions concerning weapons tests may be obtained if it can be pointed out that these weapons also have defensive applications.

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5. In an effort to assist information planners in the timing of their releases, a calendar of events has been prepared (Tab A), which sets forth the dates of (1) significant international political events, (2) nuclear weapons events, and (3) peaceful program events.

6. The list of events will be amplified as a continuing project of the OCB Working Group, bearing in mind that the major task confronting planners is to seek ways and means of increasing the foreign climate of opinion impact of events in the peaceful utilization field.

Part II - U.S. Interim Program to Develop Peaceful Uses of Atomic Energy

(Summary)

7. Concurrently with the planning and negotiation of an Agreement setting up an International Atomic Energy Agency, first proposed by the President in his General Assembly speech of December 8, 1953, plans have been formulated for the U.S. to initiate several interim programs to assist friendly foreign countries in developing the peaceful uses of atomic energy, in accordance with NSC 5431/1.

8. These programs consist of the following:

a. The establishment of a Reactor Training School at Argonne National Laboratory in March 1955;

b. Technical assistance in the construction in friendly foreign countries of research reactors, including the necessary amounts of enriched nuclear materials;

c. Additional courses at Oak Ridge Institute of Nuclear Studies to train foreign nationals in radioisotope techniques;

d. Training courses in the utilization of atomic energy in the fields of biology and medicine and agriculture;

e. Training courses in industrial medicine and hygiene;

f. Invitations to a number of foreign doctors, surgeons and specialists to spend about two months in the U.S. visiting Argonne and Oak Ridge Cancer Hospitals and other research centers;

g. Presentation of a number of AEC technical libraries to countries or regional groups; and

h. Preliminary training in nuclear sciences, engineering, etc., where required to provide underdeveloped countries with cadres

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of personnel with appropriate basic training to qualify for participation in specialized atomic energy programs.

9. While participation of foreign nationals in one or all of the programs is being encouraged, no commitment is being made that all requests for assistance can be met. The U.S. Government will make the final decision as to who will participate in the various training programs. As a general rule requests will probably be handled on a first come first served basis; however, regional representation will be taken into consideration in making the selections. For example, it is expected that the Reactor Training School may be of most benefit to South American, Mediterranean, and Asian countries. Accordingly, applications from these areas may receive greater consideration. Advanced training in the field of industrial hygiene would appear to be of immediate benefit to Western European countries, and applications from that region for participation in this program may receive greater consideration.

10. All of our missions abroad have been advised of the content of these programs and requested to bring them to the attention of the appropriate foreign officials. Separate follow-up instructions have been sent to the Missions concerning the special course in May at, and the changed policy regarding foreign applicants for, Oak Ridge Institute of Nuclear Studies and the Reactor Training School. In the latter case, twenty-four posts have been requested to extend invitations for the nomination of two individuals to attend the first course which will begin on or about March 1.

11. A detailed description of these programs is set forth in Tab B.

Attachments:

TAB A
TAB B

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CALENDAR OF EVENTS FOR 1955 - First Quarter

Work Sheet

TAB A

International Political

Weapons Program

Peaceful Utilization

January	Mid-January - German Parliamentary action on Paris Agreements	AEC Public Education Campaign prior to activation of Nevada Test Site	Jan. 17 - Meeting of Advisors to UNSYG on Peaceful Uses Conference AEC Semi-annual Report Budget message noting \$75,000,000 for accelerated power reactor research program Jan. 31 - Senate-House Atomic Energy Committee holding 2-week series of hearings on Progress in the Atomic Energy Industry
February	Mid-February - French Council of Republic Action on Paris Agreements Feb. 21 - UN Disarmament Subcommittee, London Feb. 23 - SEATO, Bangkok Feb. (second half) - Budapest - Exhibition on Atomic Power by the Hungarian-Soviet Society	News stories at Nevada Test Site News stories on first shot at Nevada Test Site	Ambassador Patterson's speech on progress made in peaceful Uses Program (tentative). Policy announcement on construction of power reactors overseas (tentative).

March

Argonne Reactor School ceremonies.

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CALENDAR OF EVENTS FOR 1955 - Second Quarter



International Political

Weapons Program

Peaceful Utilization

April	April 25 - 30-nation Afro-Asian Conference April (tentative) NATO Council to meet in Athens, Greece (tentative).	Mid-April - (tentative) Possible Open Shot at Nevada Test Site	Opening of USIA exhibits in Japan, Burma, Thailand (tentative) Possible AEC announcement of results of domestic bids to construct experimental reactors.
May	Meeting of World Peace Council		Opening of Special Course at ORINS. AEC exhibits in Argentina and Norway
June	June 20 - UN Commemorative Session at San Francisco	FCDA nation-wide Civil Defense Tests - June 14 and 15.	June 20 - USIA Special Peaceful Uses Exhibit at San Francisco.

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CALENDAR OF EVENTS FOR 1955 - Third Quarter

International Political

Weapons Program

Peaceful Utilization

	International Political	Weapons Program	Peaceful Utilization
July			AEC Semi-annual Report Industrial Hygiene Course for foreign students Tentative issue of Atoms-for-Peace Stamp.
August	Aug. 6 - International rally of protest against atomic & hydrogen weapons in Hiroshima (proposed). Aug. 8 - World Congress on Peaceful Uses of Atomic Energy, Geneva (date tentative).		Aug. 8 to 20 - International Conference on Peaceful Uses of Nuclear Energy - in Geneva Specialized exhibits to be developed by AEC Possible announcement of plans to proceed with construction of research reactor in a qualifying country.
September	Opening of UNGA		

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CALENDAR OF EVENTS FOR 1955 - Fourth Quarter

International Political

Weapons Program

Peaceful Utilization

	International Political	Weapons Program	Peaceful Utilization
October			Second Course at Argonne
November			
December			Dec. 17 - Nuclear Engineering Congress, Cleveland, Ohio.

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TAB B.

Detailed Description of the U.S. Interim Program to
Develop Peaceful Uses of Atomic Energy

Reactor Training School

1. This school will be opened in March 1955 at Argonne National Laboratory (near Chicago, Illinois). It is expected that up to twenty foreign students and scientists can be accommodated at the first course, which is expected to last approximately seven months. The second course will begin in October or November 1955 with accommodations for up to 50 foreign students and scientists. The courses will include lectures, laboratory work, and actual work with reactors, their components and associated facilities. The tuition for the first course will be approximately \$500.00. The AEC will have final responsibility for selecting students, taking into account State, FOA, and field recommendations. It is felt that this type of training will be of most benefit to representatives from the underdeveloped areas.

Aid in the Design and Fueling of Research Reactors Abroad

2. The U.S. will be prepared to assist friendly foreign countries in the design and fueling of research reactors. These reactors, utilizing slightly enriched uranium, are valuable research tools and a basic necessity for training in the atomic energy field. (No country can realistically plan to construct a reactor for power without first having a group of trained personnel.)

Some of the uses of such reactors are:

- a. Production of radioisotopes for use in medicine, chemistry, biology, agriculture, and other fields of research or industrial application.
- b. Medical therapy by use of external beams of neutrons and gamma rays.
- c. Basic research in areas such as solid state physics, nuclear properties of matter, radiation physics measurements.
- d. Reactor engineering experiments on such things as radiation effects on corrosion, strength of materials, instrumentation, etc.
- e. As a versatile training tool for reactor operators and a laboratory for students specializing in various aspects of nuclear science.

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3. Prior to the actual construction of such a reactor utilizing fissionable material from the U.S., an Agreement for Cooperation must exist between the recipient country and the U.S. under Section 123 of the Atomic Energy Act of 1954. Each field Post has been requested to report their recommendations on the possibility and feasibility of U.S. assistance in the design and fueling of research reactors in the country in which they are located.

4. Each foreign government or group requesting assistance must bear the cost of construction of the reactor and the fuel elements. These reactors range in price from \$100,000 to several millions of dollars for construction, and require from a few tens of thousands to several hundreds of thousands of dollars per year for operating costs. Necessary amounts of enriched nuclear materials to charge the research reactors would be available from the AEC.

Training Course in Radioisotope Techniques at Oak Ridge Institute of Nuclear Studies (ORINS).

5. Radioisotope technique courses of four weeks duration each are designed for individuals who have the equivalent of a Bachelor's Degree and adequate training and experience in the field in which they propose to use radioisotopes. An understanding of the English language is also necessary. A special course for up to 32 foreign nationals will be given at ORINS in May 1955. Thereafter there will be billets for about five foreigners in each regularly scheduled course. Students will be expected to pay their own living expenses, which should amount to approximately \$200-\$300 exclusive of travel. Deadline for receipt of applications by the AEC for the special course beginning in May 1955, is February 1, 1955.

Training Courses in Utilization of Atomic Energy in the Fields of Biology, Medicine, and Agriculture

6. Pre- and post-doctoral training of from one to two years will be provided at Oak Ridge, the Brookhaven National Laboratory, the Argonne National Laboratory and the Argonne Cancer Research Hospital at the University of Chicago, the AEC Projects at the University of California, Berkeley, the University of California, Los Angeles, and the University of Rochester School of Medicine and Dentistry, for a number of qualified foreign students per year under this program. In addition, the Harvard University medical physics laboratory and the New England Deaconess Cancer Research Laboratory in Boston, and the Western Reserve University School of Medicine offer similar opportunities in biophysics, pathology, radiation toxicity, and biochemistry, for from two to four foreign scientists each year.

7. As presently envisaged the program will be set up along the following lines: persons accepted by the above-named institutions for

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for pre- and post-doctoral training and research in the peacetime applications of atomic energy will spend six to eighteen months as active participants with a research group using the tools of atomic energy under the leadership of an outstanding scientist in the field of science constituting the applicant's principal interest. It is recommended that those not previously familiar with radioisotope techniques plan to take the regular Oak Ridge Institute of Nuclear Studies radioisotope training course referred to above before embarking on this type of training. The average cost for each trainee will be about \$2,500 per year, exclusive of travel.

Course in Industrial Hygiene for Industrial Dealing with Atomic Materials.

8. This training will be opened to five to ten foreign applicants per year. The first course will be offered by mid-1955. Applicants should have good speaking, reading and writing knowledge of English. This type of training at present will be of more practical benefit to those countries in which there are now industries which handle atomic materials. As the uses of this material become more widespread, it is believed this type of program will become of greater interest to a wider number of countries. This nine-month program will give indoctrination in the following fields: industrial hygiene, engineering techniques and radiological health physics. Costs will run from a few hundred dollars to \$1,200. Living expenses exclusive of travel should be about \$1,500.

Invitation to Foreign Doctors and Specialists to Visit U.S. Cancer Hospital Facilities.

9. Beginning early in 1955 invitations will be extended to a limited number of doctors, surgeons, etc., to visit the U.S. for study and conversations over a two-month period at various research facilities such as the Argonne Cancer Research Hospital. This program will be carried out under the administration of the Educational Exchange Program of the Department of State. It is expected that a number of those who will be invited to visit the installations will already be in the U.S. on various exchange programs. It is also expected that one group of ten to twelve doctors from approximately as many different countries will be invited to make a special trip to the United States for this purpose. The special group would make their visit in the Spring of 1955 in order that they might also attend the Conference of the Third Inter-American Congress in Radiobiology in April 1955. Expenses of the doctors in the special group will be a charge against the money allocated to each country for leaders. A circular instruction on this subject will be dispatched soon to those countries which it is hoped will participate, and to those which indicate a desire to select one or more leaders for this program.

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Technical Libraries

10. The AEC is prepared to give ten or more technical libraries to friendly foreign countries and regional research groups such as the Cooperative Organization for European Nuclear Research. A technical library consists of about 10,000 AEC research and development reports, 28 bound volumes of the Commission's National Nuclear Energy Series, 9 volumes of abstracts of some 50,000 technical reports and articles published in the U.S. and abroad, and 25,000 sets of index cards and other material. The collection is a duplicate of material now available in 42 repository libraries in the U.S. Recipients will receive the same additions to the libraries that are added from time to time to the American libraries. One such library was recently presented to the Japanese Government; others, earlier, were made available to Belgium, the U.K., and Canada. Requests for libraries have been received from several countries, including France.

11. In the case of the technical libraries, decisions as to the distribution will be based on the recommendations received from the field. Here again efforts will be made to see that they are distributed so that no geographic area will be slighted. The U.S. will ask in return for these libraries that the recipient countries provide, on a current basis, their collections of similar official unclassified papers.

Preliminary Training

12. Arrangements will be made for a few outstanding students with proper scientific aptitudes but lacking basic technical training to receive one to two years of such basic training in nuclear sciences, engineering, etc., where required to permit them to qualify for participation in specialized atomic energy programs. Such training will be under the auspices of universities cooperating in the Atomic Energy Commission's program. Participation in this pre-training program will be limited to underdeveloped countries which presently lack personnel with necessary basic training.

Financing and Implementation Procedures

13. The U.S. Government, through AEC, will be bearing heavy costs of previous development work and provision of training facilities necessary for above programs. The general assumption is that other governments' interest in these programs will be so great and direct costs of participation for most of them relatively so small that governments and other foreign sponsors will, in most cases, be willing and able to carry direct costs of participation themselves. Such costs include transportation, living costs and tuition for trainees, costs of U.S. technical advisors, and construction costs of reactors.

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14. However, primary consideration is to stimulate participation by other countries in a manner which will best serve broad objectives of program as outlined by the President and the Secretary of State. The U.S. will therefore utilize existing government foreign assistance and educational exchange programs where feasible, and will endeavor to arrange U.S. private foundation support to the extent required to avoid in so far as possible financial difficulties preventing otherwise desirable participation.

15. Regardless of financial arrangements, requests for participation in training programs will be processed through existing mechanisms of FOA technical cooperation or technical exchange program, or the State Department's Educational Exchange Program.

16. The attached chart illustrates department and agency responsibilities for processing applications for the foregoing programs.

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CHART



PROCESSING CHANNELS FOR PEACEFUL USES PROGRAMS

COUNTRIES IN WHICH FOA HAS
TECHNICAL COOPERATION OR TECH-
NICAL EXCHANGE PROGRAMS

OTHER COUNTRIES

PROGRAM	COUNTRIES IN WHICH FOA HAS TECHNICAL COOPERATION OR TECH- NICAL EXCHANGE PROGRAMS	OTHER COUNTRIES
1. Reactor Training School	To be handled as FOA Project on behalf of AEC	To be handled under IES Educational Exchange Program on behalf of AEC
2. Construction of Research Reactors		Direct approach to AEC through Department of State (preferably in Washington) on behalf of AEC
3. Radioisotope training		To be handled pursuant established application procedures.
4. Training in practical applications	a. Handle as FOA Project where field of interest is public health, agriculture or industry. b. Handle under IES Educational Exchange program where field of interest is curative medicine, biology or physical sciences.	To be handled under IES Educational Exchange program on behalf of AEC.
5. Training in industrial medicine and hygiene	Handle as FOA project on behalf of AEC	Handle under IES Educational Exchange on behalf of AEC
6. Doctors study tour	Handle under IES Educational Exchange program	Handle under IES Educational Exchange Program.
7. Preliminary basic training.	a. Handle as FOA project where field of interest is public health, agriculture, or industry. b. Handle under IES Educational Exchange program where field of interest is curative medicine, biology or physical sciences.	To be handled under IES Educational program on behalf of AEC
8. Technical Libraries		Direct application to AEC through Department of State

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