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### Publication Date

1989

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PUB-625
Vol. 23 c.1
January 1989

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JOURNAL OF

# GLENN T. SEABORG

Chairman, U.S. Atomic Energy Commission, 1961 - 1971

*September 1, 1970 - December 31, 1970*

Lawrence Berkeley Laboratory
University of California

Prepared for the U.S. Department of Energy under Contract DE-AC03-76SF00098

PUB-625 v.23
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PUB-625

JOURNAL

OF

# GLENN T. SEABORG

Chairman of the U.S. Atomic Energy Commission

1961 - 1971

VOLUME 23

This work was supported by the U.S. Department of Energy
under Contract DE-AC03-76SF00098

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# PREFACE

During the ten years (1961– 1971) that I served as chairman of the U.S. Atomic Energy Commission I kept, on a daily basis, a rather complete journal. During the early years, off and on until 1969, I recorded my day's activities each evening at home in my study, in an unclassified, handwritten form in my large ledger type notebooks. This was augmented during each working day in my office by the dictation of memos to cover the content of telephone conversations, appointments, attendance at meetings, congressional hearings, etc. During my many trips within the United States and my visits to foreign countries (some 60 in all) I recorded my activities in little pocket notebooks which were transcribed when I returned home to my office. On some of these occasions, as well as for some appointments or meetings at home, my activities were covered by one of my able assistants or secretaries.

Finally, in 1969 I gave up altogether the laborious task of recording each day's activity by handwriting a summary at home during the evening. Rather, I covered each day's entire activity by producing memoranda during the day with the help of my secretaries and assistants. Thus, the journal began to be assembled each day on a current basis. In addition, the accumulated earlier material began to be assembled into daily journal form, a task that was soon completed. In both cases, the current and past material was augmented by daily attachments in numerous categories--selected incoming and outgoing correspondence and other relevant documents (deemed to be unclassified, with classified material placed in a separate file), and unclassified Summaries of Commission Meetings, and Commission Regulatory Meetings, and Notes on Information Meetings and Regulatory Information Meetings, so ably produced by Commission Secretary Woodford McCool and Director of Regulation Harold Price and their staffs.

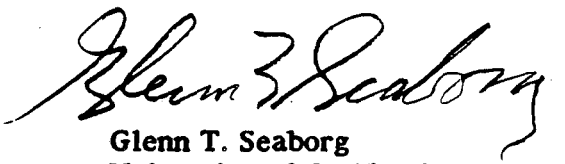
When I returned to the University of California, Berkeley, in November 1971, a couple of months after my tenure as Chairman of the Atomic Energy Commission, the two copies of my journal, which I presumed had been cleared, were sent there. Copy #1 eventually came to my Lawrence Berkeley Laboratory office and Copy #2 to my home, while the segregated, classified portions went to the local AEC–SAN office.

Due to the pressure of other activities no action was taken on my journal until early 1985, when I began working on editing my home copy (correcting spelling and typographical errors, adding first names or initials, etc.), preparatory to publication in DOE report form. About a year earlier, I had sent Copy #1, at their request, to the DOE History Division in Washington, D.C., for their use in the preparation of Volume IV of the official history of the Atomic Energy Commission. This led to questions as to whether my journal met present DOE declassification standards. As a result, a declassification officer was sent to my home in May 1985 to check my home copy (Copy #2). He made 162 deletions of a technical nature, which, in my opinion, reflected increased security standards but did not adversely affect the value of the journal. A second check, this time with my home copy sent to the Lawrence Livermore National Laboratory by a team of reviewers in October and November 1986, led to about 1,000 security actions (including the 162 deletions incurred in the earlier review). These actions included, in addition to deletions, the removal of 500 sections of or attachments to the journal for review by "other agencies" of our government or, in a few cases, of the British government. The majority of these documents have been returned to me either declassified or with some deletions. However, a number are still outstanding. I have decided to go ahead with the publication of my journal in the DOE report form with the intent of adding these now missing portions in an additional volume when they become available. Also, I have decided to proceed with such publication prior to the production of a name index; when this herculean task is completed, the name index will appear as an additional volume. It remains to be seen if a subject index will ever be added in such additional volumes. Although many news clippings are added as attachments, these were too numerous to include them all and, thus, there is a separate volume of these. (A little later Copy #1 underwent a similar security review, with similar results, and was returned to me.)

The journal consists of 25 volumes, averaging 700 pages each. This comprises about 15,000 items consisting of the approximately 4,000 daily journal entries and the average of about three attachments per day. The journal has three sections corresponding to each of the three presidents I served as chairman of the Atomic Energy Commission-- the first six volumes covering the John F. Kennedy years (February 1, 1961- November 22, 1963), the next 11 volumes covering the Lyndon B. Johnson years (November 22, 1963- January 20, 1969) and the final eight volumes, the Richard M. Nixon years and a few months of post-AEC chairman activities in Washington (January 20, 1969- November 6, 1971.

I am indebted to my many assistants and to the secretarial staff that served so ably during my AEC chairmanship (see Page 1 of Introduction) and to the Commission's administrative staff (Appendix B to Introduction) and feel grateful for the team help of my fellow AEC Commissioners (Appendix A to Introduction).

I also want to acknowledge the invaluable help of my staff at Lawrence Berkeley Laboratory for putting this journal in publishable form--June Jackson, Sherrill Whyte, Grace Nubla, and Margie Hollander, and temporary assistants Susie Campbell and Mildred Varner.



Glenn T. Seaborg
University of California
Berkeley, CA
January 1989

# INTRODUCTION

A complete introduction to the 25 volumes of my journal of 1961 to 1971, covering my years of service as Chairman of the Atomic Energy Commission, can be found at the beginning of Volume 1 (for Volumes 1–6, spanning the Kennedy years), at the beginning of Volume 7 (for Volumes 7–17 of the Johnson years), and at the beginning of Volume 18 (for Volumes 18–25 of the Nixon years). That introduction is written from the perspective of 1971, in order to reflect the attitudes expressed in my journal, which was written on a daily basis during that period. I express the points of view of that time rather than those of today (1989), which might occasionally be somewhat different.

In that introduction I describe in summary form my activities as AEC Chairman from early 1961 until late 1971. This includes my first meetings with President Kennedy and the commissioners and staff of the AEC; my reappointment as Chairman by presidents Kennedy, Johnson and Nixon; the change in composition of commissioners and staff over the years; the role of the Joint Committee on Atomic Energy (JCAE); the division of duties among the commissioners; our methods of conducting business at meetings; the Commission's system of advisory committees; problems created by our system of multiple headquarters; unsuccessful attempts to replace the five-member Commission with a single administrator; the special role of Admiral Hyman S. Rickover; my service on many government committees; my authorship of several books during his time; and my special relationships with my three presidents (Kennedy, Johnson and Nixon).

I include an historical summary of the major accomplishments of the Atomic Energy Commission during the period of my chairmanship. This is done in a topical manner, i.e., by describing in summary form the accomplishments in each of a selected number of subject areas over the ten-year period. This is in preference to dividing the account into three parts, covering the Kennedy, Johnson, and Nixon administrations, which would inevitably result in a good deal of repetition in thus describing each of the subject areas three times.

I chose to touch briefly (not in any order of priority) on the following subjects:

I. The Limited Test Ban Treaty (LTBT)
II. The Nonproliferation Treaty (NPT)
III. The Strategic Arms Limitation Treaty (SALT) and ABM Treaty
IV. The Cuban Missile Crisis
V. The program of international cooperation, including my visits to 60 countries
VI. The program for support of research
VII. The Los Alamos Meson Facility and the 200 Bev Accelerator
VIII. The National Transplutonium Production Program
IX. The civilian nuclear power reactor program
X. The Raw Materials Program
XI. The Gas Centrifuge Program
XII. The Cutback in Production of Fissionable Materials
XIII. The Regulatory Program
XIV. The Radioisotopes Program
XV. The nuclear power in space program
XVI. The nuclear weapons testing program
XVII. The Plowshare Program
XVIII. The Controlled Thermonuclear Research Program (CTR)
XIX. The Nuclear Education and Training Program
XX. The Technical Information and Exhibits Program

Following the summary I go on to some of the auxiliary and personal activities that are covered in my journal. I mention my extensive schedule of speeches, awards; our home in the Reno Park area of northwest Washington and its proximity to three levels of schools to accommodate our six children; the departure of our older children to attend colleges; the marriages of our two oldest children; the visits of my mother; our family vacations; my turn to hiking as a means of recreation; my membership on Boards of Directors (including the presidency of Science Service and my election to the presidency of the American Association for the Advancement of Science [AAAS]); and my many press conferences and appearances on the covers of Time and Newsweek.

I conclude the introduction with an expression of gratification that, with all this, I managed to read the scientific journals in my specialty, enabling me to stay abreast of my research field of transuranium elements and nuclear chemistry so that I was ready, in 1971, to return to the University of California in a position to resume research in my field.

Tuesday, September 1, 1970 - D.C.

I called Harold Agnew to ask him if he expects to be in town soon, and he said he does not have any plans to be here this month. I said I want to have a talk with him but that it could wait until my visit to Los Alamos on October 6. I said I have read an AP dispatch this morning, referring to his assuming command of the Laboratory and quoting him as saying, "There is a whole era of tactical weapons we have never addressed ourselves to. It is my belief that if people would prepare the right spectrum of tactical weapons, we might be able to knock off this sort of foolishness we now have in Vietnam and the Middle East or any place else." I asked him if he has said anything like that lately and he said he has not; furthermore, that quote is out of context and entirely distorts his thoughts on the matter.

Agnew said he had talked to an Albuquerque man (he thought his name was Stockton) two or three months ago about his philosophy, which is that a tactical deterrent could prevent these brush fire wars just as strategic deterrent has kept us out of full-scale war. Two weeks later he and the reporter went over the material again and Agnew thought the reporter understood it. Referring to the language in the quote, "knock off," etc., he said he doesn't talk that way. I told him that some people here are very disturbed about this and that as laboratory director he would have to become more skillful in discussing these issues. He said he hopes he will be able to learn to do this and looks forward to discussing it with me soon.

Dr. and Mrs. John Dunning of Columbia University, accompanied by Commissioner Larson, came in to say hello.

I had lunch at the University Club with Barbara Culliton (Science Service writer). This was in connection with her concern expressed in a letter to me about the discharging of Warren Kornberg as Editor of Science News. I explained to Barbara that this didn't represent any downgrading of the future of Science News. I indicated that there have been some delays in effecting the merger between Science Service and AAAS, but that I expect the problems will be overcome and the merger will be effected. She indicated that she will stay on the Science News staff until this merger question is settled one way or the other. We also discussed the current attack by many science writers on nuclear power and the need to introduce balance into the presentations.

At 4 p.m. I attended the swearing-in ceremony of Keith Glennan as U.S. Representative (Ambassador) to the IAEA. The ceremony was conducted in the Diplomatic Reception Room of the State Department. The oath of office was read by Marion H. Smoak (Deputy Chief of Protocol). This was followed by a few words of welcome by Alexis Johnson and a nice response by Glennan. An impressive group of people was present, including John Gardner, Bob Seamans, Sam dePalma, Jerry Tape, Henry G. Rowen (President, Rand Corporation), John Hannah (Administrator, AID), and Bill McElroy. The swearing-in was followed by a reception at which Dr. and Mrs. Glennan received the guests.

I sent a letter to Bob Wilson in response to his of July 21 (copies of each attached) concerning possibilities for the future development of the National Accelerator Laboratory.

Carol, Suki, and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, hiked along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Dianne had dinner with Lynne and Bill in their apartment and then helped them pack their books for shipment to California. Lynne and Bill visited with us for a while when they brought Dianne home.

UNCL. BY DOE
NOV 86

September 1, 1970

Dear Bob:

Thank you for your personal letter of July 21, 1970. I am much pleased with the news that you have had such an extensive and high quality response to your request for proposals for experiments on the accelerator. I understand that your Program Advisory Committee had quite a workout recently going over these proposals.

I share your concern that the limited experimental areas that will be available to you initially will seriously handicap the vigorous research program that you wish to undertake. In this respect, I would hope that you could work out satisfactory solutions with our AEC office at NAL that would enable you to do whatever work is needed to firm up cost estimates for the additional experimental areas envisaged in the original proposal. In the meantime, we will need to explore what other governmental steps may be necessary if we are to proceed along these lines.

Your ideas regarding the doubling of the energy using small superconducting magnets are intriguing and again it seems to me that discussions with the local AEC office would be helpful. Sometime later this year when your plans and cost estimates are more firm, I and my fellow Commissioners should meet with you and discuss these matters in some detail.

Cordially,

Signed Glenn T. Seaborg

Glenn T. Seaborg

Dr. Robert R. Wilson
Director
National Accelerator Laboratory
Batavia, Illinois 60510

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JHR:ncm

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UNCL. BY DOE
NOV 86

ONAL ACCELERATOR LABORATORY

P.O. BOX 500
BATAVIA, ILLINOIS 60510
TELEPHONE 312 231-8800
DIRECTORS OFFICE

July 21, 1970

Dr. G. T. Seaborg
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Glenn:

I have been thinking about a number of possibilities concerned with the future development of NAL which I would like to convey to you in this letter. My remarks about them should be considered as purely personal. What we actually do of course must be as a result of a complicated interaction between the AEC, the JCAE, the URA, the physics community, and the Laboratory. However, I am anxious to inform you of my ideas at the earliest time in order to have your advice about what is realistically possible and how we might best proceed.

In anticipation of the early operation of the synchrotron we have appointed a Program Advisory Committee and have asked for proposals for experiments to be made with our proton beams. Over eighty proposals have been submitted, and we can expect more. I am sure that you will be as gratified as I am that the scientific quality of these proposed experiments is uniformly excellent. It certainly justifies the efforts that have been made by you and your colleagues in the AEC, as well as by Members of Congress, in getting the project under way. It also justifies the vigorous support you have given us that has allowed the project to reach its present state so soon. But it is frustrating to realize that only a fraction of what in many cases are superb experiments can be made in a reasonable time using the experimental areas that are projected within the present reduced scope of the project. The reason for reducing the scope was to make it possible to build the facility within a budget of $250,000,000. I am confident now that we can do that; indeed, I expect that we can do better.

In my letter of March 20, 1970 I pointed out that good luck and an economical design were bringing the accelerator proper toward a point of completion at a total cost that is considerably less than the original estimate including contingency and escalation allowances. I am now hopeful that we could build the experimental facilities up to the original scope of the project and still stay well within the present authorization. Accordingly it would be desirable to proceed now with designs for two more experimental areas, carrying

the plans eventually to a Title I stage. Of course the necessary governmental approvals would need to be obtained before proceeding to make construction plans or to go out for bids. By that time, we should be considerably more certain of the costs of the project as it is presently planned. The additional two experimental areas might be constructed at a cost of roughly $15 million. Thus a relatively modest sum of money can extend the capability of the NAL facility by a very significant factor. I emphasize that this might well be done within the presently authorized funds.

Looking further into the future, I have been thinking for some time about an idea to double the energy of the present machine at modest cost. Space has been left in the main tunnel and the present magnets are designed so as to allow a second superconducting magnet of small aperture to be placed directly below (or above) the present magnet. The beam would then be transferred from the old to the new ring of magnets at a field of about 20 kG and it could then be accelerated to 1000 BeV at a field of 45 kG. Since no new enclosure, service buildings, or utilities would be necessary, and because the magnets would be so tiny, I am optimistic that the costs might be as little as $10 million, - might even be less than that. Because the injection field would be high, the magnets might be made using present state-of-the-art superconductors. Problems related to frozen-in fields and to hysterisis are less severe because the magnetic field changes from 20 to 45 kG rather than from 0 to 45 kG.

As the present load of construction diminishes, I would like to develop the conceptual design and to make a reliable estimate of the cost of this component of an improvement program. It would be desirable eventually to build a prototype of one of the small superconducting magnets (at a cost of about $20,000). If we continue to receive low bids for the remaining construction, this energy-doubling device might also be built within the present authorization -- just as we are planning to make the increase from 200 to 500 BeV. There are, of course, important preliminary experiments at energies between 500 and 1000 BeV that could be made using our presently designed experimental facilities. Some of these experiments might give the clues for the proper exploitation of lower energies.

Another possibility for the future concerns storage rings. As you know, last year at the request of HEPAP we made rather detailed plans for such a device. As I understand it, there appears to be general agreement among the concerned groups that it is not desirable now to proceed with any particular urgency in this direction. It would seem best rather to see

the first operation of the CERN storage ring (ISR), probably sometime in 1972, before we decide what should be done about building a storage ring at NAL.

Sincerely,

Bob

Robert Rathbun Wilson

P.S. ... I am delighted at the good news that you will continue to head up the Commission. I have thoroughly enjoyed the first three years of my new relationship with you and I am looking forward to continued happy and equally satisfactory years in the future.

Bob

Wednesday, September 2, 1970 - D.C.

I had lunch with Lynne at the University Club. We discussed their forthcoming move to California and possibilities for employment for Bill, such as the San Francisco-Oakland Zoo or the San Francisco Aquarium. We also discussed the possibility of her joining the American Association for the Advancement of Science.

After lunch I met with Steve Lawroski to discuss my forthcoming visit to Chicago and his recollections in connection with my history of Section C-I of the Metallurgical Laboratory.

In response to his request, I sent a letter to Sven Gösta Nilsson indicating my views on the possibility of using a superheavy element in a nuclear bomb (copy attached).

I received a copy of NSDM 82 (copy attached) concerning the revision of the U.S. Port Security Program.

I received a memo from Henry Kissinger (copy attached) sending me copies of correspondence he has had with Chet Holifield concerning the attendance at Pugwash meetings of scientists who hold Top Secret clearances. He asks the heads of the relevant departments and agencies to respond further to Holifield.

Eric, Suki and I took a hike in Rock Creek Park. We started at Nebraska and Oregon Avenues, went north on the White Horse Trail to Cross Trails 3 and 4, past the police headquarters and returned to our starting point.

Eric told me that he shot a 91, including 40 on the first nine, in golf today with Bill Cobb at Rock Creek Park. His golf certainly is improving.

Thursday, September 3, 1970 - D.C.

Commissioner Thompson dropped in before lunch to tell me that he has come to the conclusion that we should stop the FFTF project despite the great amount of money and effort that have gone into it. He said that there is so much more yet to be spent, he feels it is better to stop it now than to continue to throw in good money after bad. He said that the present version has its flux reduced by a factor of 2 from the original version and the number of loops has been decreased to two so that it is only a whisper compared to its originally planned capability. I said I thought it would be very difficult to make such a drastic decision at this late date but that I would give it my consideration.

I had lunch with Tom Paine at the Metropolitan Club. He is leaving his position as Administrator of NASA on September 15, so this was a sort of farewell luncheon. We discussed the problems of Democrats operating in a strongly Republican Administration where the tendency is more and more to confine the appointments to Republicans. We also discussed the very difficult budget problems that are facing our agencies. He told me that Milt Klein has told him confidentially that he would like to leave his present position and take on a new responsibility, either in government or in industry. We also discussed the status of the nuclear rocket in the FY 1972 budget--this has been completely cut out from the AEC budget, but Paine wasn't sure of the situation in the NASA project from the standpoint of the Office of Management and Budget.

Carol, Suki and I went for a hike in Rock Creek Park. We started at Nebraska and Oregon Avenues, went north on the White Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting place.

UNITED STATES
ATOMIC ENERGY COMMISSION

UNCL. BY DOE
NOV 86

September 2, 1970

OFFICE OF THE CHAIRMAN

Dr. Sven Gösta Nilsson
Department of Mathematical Physics
Lunds Institute of Technology
University of Lund
P. O. Box 725
S-22007 Lund 7, Sweden

Dear Sven Gösta:

Your letter of August 21, 1970, raises an interesting question concerning the possibility of using a superheavy element in a nuclear bomb. I do not have any report that I could furnish you on this subject, but the problem is not new to me and I have given it considerable thought. My views are relatively straightforward and I am happy to express them here for whatever purpose you wish to make of them.

I see no practical possibility for such a use of superheavy elements. The reason for this view is that, even if the nuclear properties should turn out to be suitable, which is by no means certain, there seems to be no foreseeable method to produce them in the quantities required for this purpose. The superheavy elements apparently cannot be produced by the multiple neutron capture route, through the use of high flux reactors, starting with available elements such as uranium or plutonium or their neutron-produced derivatives. Production through neutron reactions seems to be the only way to produce any transuranium elements in quantity. Since the superheavy elements can only be produced, on earth, through charged particle reactions, the amounts that it will be feasible to produce are many orders of magnitude too small for use in nuclear weapons.

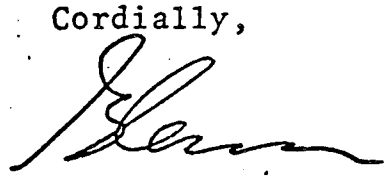
There are a number of relatively light transuranium isotopes which have unusual nuclear properties, properties which have been actually measured. Despite the fact that some of these can be produced by neutron absorption reactions, making them available in weighable amounts, the

problem of production is so formidable that they haven't been isolated in sufficient quantity to investigate their use as nuclear weapons even though they have been known for decades. Some others of these can be produced only by charged particle reactions, like the superheavy elements, and these, despite known yields much larger than those predicted for the superheavy elements, have never been isolated in larger than trace quantities.

The question of finding superheavy elements in nature must, of course, also be considered. The present prospects of finding such an element, with the proper nuclear properties, and in the quantities required, seem to me to be very dim on the basis of the results of searches that have been conducted so far.

I, personally, am greatly concerned about the prospects for proliferation of nuclear weapons made from plutonium or enriched uranium by countries which do not now possess these weapons (as well as the long standing problem of insuring that they are not used by the present nuclear powers). These prospects are real and immediate and should occupy the attention of all of those who are concerned with maintaining peace in the world. By comparison, to worry about making a weapon from a superheavy element is an exercise in intellectual frustration.

Cordially,



Glenn T. Seaborg

NATIONAL SECURITY COUNCIL
WASHINGTON, D.C. 20506

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1988

September 1, 1970

National Security Decision Memorandum 82

TO: The Vice President
The Secretary of State
The Secretary of Defense
The Attorney General
The Secretary of the Treasury
The Secretary of Commerce
The Secretary of Transportation
The Director of Central Intelligence
The Chairman, Joint Chiefs of Staff
The Director, Office of Emergency Preparedness
The Chairman, Atomic Energy Commission

SUBJECT: Revision of the U. S. Port Security Program

The President has approved the following statement of policy on U. S. port security, which supersedes National Security Action Memorandum No. 203 dated November 7, 1962, and previous issuances of national security policy statements on the subject.

## U. S. Port Security Policy

National security interests require that measures be taken for the protection of vessels, harbors, ports and waterfront facilities of the United States from threats of espionage; sabotage; intelligence collection operations directed against sensitive U. S. defense facilities from foreign vessels; and, related subversive activities including the introduction into the United States of persons or materials in the pursuance of such activities. It is also in our national interest to insist that entries of Soviet and East European vessels into U. S. ports be permitted only in direct reciprocity for the admissions of U. S. vessels to ports of the Soviet bloc countries. With a view to fulfilling these national requirements, the Secretary of Transportation is hereby assigned the responsibility for the promulgation -- in consultation with the Departments of State, Defense, and

Justice, and the Director of Central Intelligence -- of a U. S. port security program meeting the following objectives:

1. The exclusion from U. S. ports of vessels known to be under the effective control of or bearing the flag of Communist China, North Korea, North Vietnam, Albania, East Germany, and Cuba.

2. The requirement that requests for entry into U. S. ports by merchant vessels known to be under the effective control of or bearing the flag of the USSR, Czechoslovakia, Hungary, Romania, Bulgaria and Poland are to be considered on the basis of direct reciprocity for actions taken by the Governments of those countries with respect to requests for the admissions of U. S. vessels to their ports. (In exercising primary responsibility for obtaining an understanding with the Soviet Union and East European Governments regarding this requirement, the Department of State will limit reciprocal arrangements to such non-security matters as the designation of accessible ports, advance notice of arrivals, and frequency of port calls. The U. S. port security measures prescribed in Paragraphs 3-b and 3-c of this policy statement are not subject to modification through reciprocal agreement and are therefore to be excluded from discussions of understandings reached with the USSR on the reciprocity issue.)

3. Application of the following port security measures in the case of requests for entry into U. S. ports on the part of vessels known to be under the effective control of or bearing the flag of the USSR, Czechoslovakia, Hungary, Romania, Bulgaria and Poland:

a. Each such vessel must submit an advance request for entry into a U. S. port and notification as to scheduled time of arrival.

b. The Secretary of Transportation -- in consultation with the Departments of State, Defense and Justice, and the Director of Central Intelligence -- shall determine the action to be taken with respect to each such vessel seeking admission to a U. S. port, including Great Lakes ports, as follows:

-- denial of entry, if information indicates that the presence of a particular vessel in a U. S. port would constitute an unacceptable risk to the national defense and security; or

-- depending upon the degree of security threat judged to be present, admission of the vessel subject to continuing dockside and seaside surveillance, or admission without the requirement for surveillance;

-- when a vessel is admitted, timely notification to other U. S. Government departments and agencies having internal security responsibilities and programs associated with the arrivals of such vessels admitted to U. S. ports.

c. Each such vessel shall be boarded and searched by the United States Coast Guard prior to admission to a U. S. port.

Henry A. Kissinger

THE WHITE HOUSE

WASHINGTON

UNCL. BY DOE
NOV 86

September 2, 1970

MEMORANDUM FOR

The Secretary of State
The Secretary of Defense
The Chairman, Atomic Energy Commission
The Director, Arms Control and Disarmament Agency
The Director, Office of Science and Technology

SUBJECT: Correspondence from Congressman Chet Holifield Concerning Pugwash Conferences

Enclosed are letters dated February 23 and July 20, 1970, which I have received from Congressman Chet Holifield in his capacity as Chairman of the Joint Atomic Energy Committee. I would very much appreciate it if you could see that he receives the information he requests.

I am also enclosing a copy of my reply to Congressman Holifield for your consideration. Please send me copies of your responses to his questions.

Henry A. Kissinger

Attachments

THE WHITE HOUSE

UNCL. BY DOE
NOV 86

September 2, 1970

Dear Congressman Holifield:

Thank you for your letter to me of July 20, 1970, in which you asked again about the attendance at Pugwash meetings of scientists holding Top Secret clearances. Please accept my apology for the delay in replying.

You should be hearing shortly from the departments and agencies directly concerned with the subject matter discussed at Pugwash meetings, namely, the Departments of State and Defense, the Atomic Energy Commission, the Arms Control and Disarmament Agency, and the Office of Science and Technology. As I'm sure you know, Executive Order 10501 (as amended) assigns them the responsibility of insuring that classified information is properly safeguarded. These agencies have copies of both your letters to me, and I have asked them to make sure that you receive the information you requested.

I appreciate your bringing this matter to our attention.

Best regards,

Henry A. Kissinger

The Honorable
Chet Holifield
House of Representatives
Washington, D. C. 20515

WAYNE N. ASPINALL, COLO.
JOHN YOUNG, TEX.
ED EDMONDSON, OKLA.
CRAIG HOSMER, CALIF.
JOHN B. ANDERSON, ILL.
WILLIAM M. MC CULLOCH, OHIO
CATHERINE MAY, WASH.
EDWARD J. BAUSER, EXECUTIVE DIRECTOR

# Congress of the United States

JOINT COMMITTEE ON ATOMIC ENERGY

WASHINGTON, D.C. 20510

CLINTON P. ANDERSON, N. MEX.
ALBERT GORE, TENN.
HENRY M. JACKSON, WASH.
GEORGE D. AIKEN, VT.
WALLACE F. BENNETT, UTAH
CARL T. CURTIS, NEBR.
NORRIS COTTON, N.H.

February 23, 1970

UNCL. BY DOE
NOV 86

Dr. Henry A. Kissinger
Assistant to the President for
National Security Affairs
1600 Pennsylvania Avenue
Washington, D. C. 20500

Dear Dr. Kissinger:

For some years now there have been periodic international meetings which had their origin at the so-called Pugwash Conference in Nova Scotia. It is my understanding that the next such symposium is scheduled for the period June 26-30, 1970. It is sponsored by the Committee on Science and World Affairs (Pugwash) on the topic "Impact of New Technologies on the Arms Race." A tentative outline of matters to be discussed include Ballistic Missiles, ABM, MIRV, ABM counter measures, command and control of military systems, new submarines, sonar and other sensors, computers and data processing, and control of military R&D.

It is my understanding that this international group has traditionally had representatives of the Soviet Union and other Communist bloc countries as well as other foreign nationals and, of course, participants from the United States.

I have been informed that some experts who are being asked to participate in this conference are at the same time currently holding top secret clearance which allow them access to highly classified matters relating to the subjects they will be discussing in the conference.

It would appear to be extremely difficult for an individual to compartmentalize those matters that he deals with on a classified basis from matters that he may discuss during this conference. It would seem to be appropriate and prudent to at least consider whether it would be in the National interest to recommend that scientists and technicians possessing top secret clearances and who are called to work on these matters by the Government be requested to refrain from participating in such a venture to avoid the possibility of inadvertent disclosures of classified information.

I strongly support the concept of East-West negotiations and particularly support the forthcoming Strategic Arms Limitations Talks (SALT). I believe that this is the proper international setting in which these matters should be discussed.

I would appreciate your views on this matter.

Sincerely yours,

Chet Holifield

Chet Holifield
Chairman

CHAIRMAN
MELVIN PRICE, ILL.
WAYNE N. ASPINALL, COLO.
JOHN YOUNG, TEX.
ED EDMONDSON, OKLA.
CRAIG HOSMER, CALIF.
JOHN G. ANDERSON, ILL.
[illegible]
CATHERINE MAY, WASH.
EDWARD J. BAUSER, EXECUTIVE DIRECTOR

# Congress of the United States

Joint Committee on Atomic Energy

VICE CHAIRMAN
RICHARD B. RUSSELL, GA.
CLINTON P. ANDERSON, N. MEX.
ALBERT GORE, TENN.
HENRY M. JACKSON, WASH.
GEORGE D. AIKEN, VT.
WALLACE F. BENNETT, UTAH
CARL T. CURTIS, NEBR.
MORRIS COTTON, N.J.

WASHINGTON, D.C. 20510

July 20, 1970

UNCL. BY DOE
NOV 86

Dr. Henry A. Kissinger
Assistant to the President for
National Security Affairs
1600 Pennsylvania Avenue
Washington, D. C. 20500

Dear Dr. Kissinger:

On February 23, 1970, I wrote to you regarding United States scientists and technicians who have Top Secret clearances attending so-called Pugwash conferences. I mentioned specifically a symposium scheduled for June 26-30, 1970, sponsored by the Committee on Science and World Affairs (Pugwash) on the topic "Impact of New Technologies on the Arms Race." In this connection, I said that it would seem to be appropriate and prudent to at least consider whether it would be in the National interest to recommend that scientists and technicians possessing Top Secret clearances, and who are called to work on these matters by the Government, be requested to refrain from participating in such a venture to avoid the possibility of inadvertent disclosures of classified information.

I asked for your views on this matter.

Your May 5 letter indicated you would discuss this with officials responsible for these matters.

The symposium has been held. I would appreciate it if you or the appropriate agency in the Executive Department would provide the Joint Committee with the following information:

Did any individuals with Top Secret clearances attend the conferences? If so, did they provide a report on matters covered during the meetings? If so, please supply us a copy.

What were the results of your discussion with officials on this matter as mentioned in your May 5 letter?

Sincerely yours,

Chet Holifield
Chairman

Steve, Eric and Bill played 18 holes of golf at Rock Creek Park. Steve shot 91, Eric 98 and Bill 100. Steve is a good golfer with a fine, natural golf swing.

Lynne and Bill dropped in during the evening.

Friday, September 4, 1970 - Germantown

At 9:55 a.m. I presided over Regulatory Information Meeting 422 (notes attached). We approved the announcement (copy attached) that the public rule-making hearing on the question of the finding of practical value will be held on September 17. Ramey wanted to again postpone this because the opinion supporting and opposing (Senator Aiken) the JCAE legislation eliminating the need for the determination of practical value have not yet been published. However, I insisted that we cannot have the timing of our affairs determined by relating them to the JCAE actions.

I then presided over Information Meeting 1060 (notes attached). We approved the leasing of 50 square miles of land in the Uravan Mineral Belt of western Colorado.

I had lunch with Bob Hollingsworth, Ed Bloch, John Abbadessa and Julie Rubin. We discussed Weinberger's September 1 letter (copy attached) which suggests a substantial reduction in the funding for the LMFBR program and a reduction in defense-related research and development. With respect to the latter Weinberger also sent a letter to DOD Secretary Melvin Laird (copy attached). We agreed that I would call Dave Packard in order to coordinate AEC and DOD actions on the nuclear weapons budget. I mentioned Commissioner Thompson's expressed intention to suggest the elimination of the FFTF. We discussed the problems in shutting down the N or KE reactors at Hanford in order to meet the stringencies of the FY 1972 budget. We also discussed the restoration of $5 million for Plowshare in our FY 1972 budget request; the original recommendation from the General Manager had suggested the complete elimination of Plowshare.

At 2:30 p.m. I presented a 10-year Federal Service Pin to Connie Owen in a little ceremony in my office in the presence of the my office staff. Pictures were taken.

I attended a briefing on Plowshare from 3:45 until 4:30 p.m. given by Dr. Edward G. Struxness (ORNL), Dr. Edward H. Fleming, Dr. Glenn C Werth (LRL), John S. Kelly and Carl Gerber. Others present were Commissioner Thompson, Jack Rosen, Myron Kratzer, Allan Labowitz and Julie Rubin. They described international criteria for limits on the debris in other countries from Plowshare excavation projects, based on technical criteria agreed to by U.S. and U.S.S.R. representatives at the last meeting (copy attached). This should be the basis for a briefing of the Under Secretaries Committee.

I sent a letter to Vice President Agnew (copy attached) transmitting a draft bill proposing an amendment to the Atomic Energy Act of 1954 to clarify the AEC's authority to conduct a program for material access approval of persons having access to or control over significant quantities of special nuclear material.

Eric, Suki and I took a hike in Rock Creek Park. Starting at Nebraska and Oregon Avenues, we went north on the White Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

Eric and Bill played golf at Rock Creek Park. Eric shot a 96 and Bill a 102.

UNCL. BY DOE
NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

September 4, 1970

# REGULATORY INFORMATION MEETING 422

9:55 a.m., Friday, September 4, 1970, Room A-458, Germantown

1. Dr. Beck's September 3 Memorandum re Revision in AEC/DOT Procedures

   Approved. (DDR-ADRA)

2. Mr. Price's September 2 Memorandum re Control of Combustible Gas Concentrations Following a Loss-of-Coolant Accident

   Approved with a request. (DDR-ADRA)

3. Report on the Tarapur Reactor Accident

   Requested. (AGMIA-ADRA)

4. Mr. Price's September 1 Memorandum re Request for Exemption by the Virginia Electric and Power Company, North Anna Power Station, Units 1 and 2, Docket Nos. 50-338 and 50-339

   Approved. (ADRA-DRL)

5. Preparation of Detailed Environmental Statement for Point Beach

   Further exploration with the applicant is requested.
   (Asst. GC for Lic. & Reg.-ADRA)

6. Hearing Board Order for Production of Documents (Palisades Plant)

   Noted with requests. (Asst. GC for Lic. & Reg.-ADRA)

7. SECY-326 - Public Announcement of Presiding Officers for Practical Value Hearing

   Approved with a deletion. Commissioner Ramey abstains. (GC-SECY)

8. Mr. Hennessey's September 1 Memorandum re Response to Letter from Senator Hart re Environmental Matters at Issue in the Palisades Proceeding

A revised letter for the Chairman's signature and a related staff response are requested. (GC)

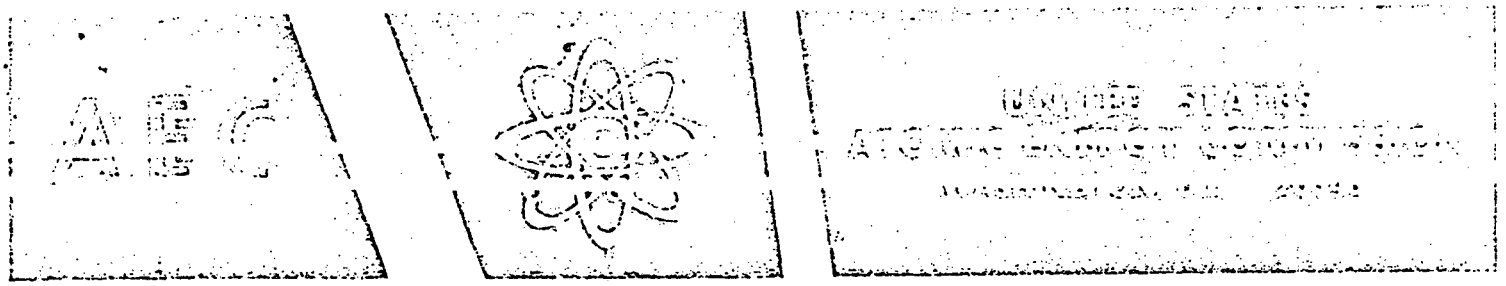
W. B. McCool
Secretary of the Commission

11:30 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Beck | Commissioners |
| Commissioner Ramey | Mr. Henderson | Dir/Regulation |
| Commissioner Johnson | Mr. Hennessey | General Manager |
| Commissioner Thompson | Mr. Shapar | General Counsel |
| Commissioner Larson | Mr. Hanauer | Secretary |
| | Mr. Buck* | |
| | Mr. Rogers* | |
| | Mr. Low* | |
| | Mr. Giambusso* | |
| | Mr. Rubin | |
| | Mr. McCool | |

*Partial Attendance



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973-5371 (Copies)

FOR IMMEDIATE RELEASE

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NOV 86

# AEC APPOINTS THREE TO PRESIDE AT SEPTEMBER 17 HEARING ON QUESTION OF FINDING OF PRACTICAL VALUE

The Atomic Energy Commission has designated three members of its staff to preside at the September 17 public rule-making hearing on the question of whether a finding of practical value should be made for some type or types of light water nuclear power reactors.

The hearing will be conducted by Bertram H. Schur, Associate General Counsel, Chairman; Edson G. Case, Director, Division of Reactor Standards; and Merrill J. Whitman, Assistant Director for Program Analysis, Division of Reactor Development and Technology.

The hearing will be held at 10:00 a.m. September 17 in Room P-114 at the AEC offices at 7920 Norfolk Avenue, Bethesda, Maryland. Following the hearing, the record will be certified to the Commission.

The Atomic Energy Act provides that whenever the Commission has made a finding that any type of reactor has been sufficiently developed to be of practical value for industrial or commercial purposes, the Commission may thereafter issue licenses for facilities of such type under section 103 of the law. On December 29, 1965, the Commission found, after a public rule-making hearing, that no type of light water reactor was then sufficiently developed to enable the Commission to make a statutory finding of practical value. This determination was reaffirmed by the Commission on December 21, 1966. Licenses for nuclear power reactors built to date have been issued under section 104 b., a section which pertains to developmental facilities.

(more)

In connection with the September 17 hearing, AEC is requesting that persons who plan to participate in the hearing notify the Commission's Secretary in advance so that an allocation of time may be made. Such notifications should be sent to the Secretary, U. S. Atomic Energy Commission, Washington, D. C. 20545. Either oral or written statements will be accepted. Persons planning to submit statements are requested to send six copies to the Commission's Secretary in advance of the hearing.

#

September 4, 1970

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

3

COPY NO. _____
September 4, 1970

# INFORMATION MEETING 1060

11:30 a.m., Friday, September 4, 1970, Room A-458, Germantown

1. Report on Changes on Government Patent Policy Committee

   Noted.

2. Agenda for the Weeks of September 7, 14, 21, and 28, 1970

   Approved. (SECY)

3. Pending Meetings and Briefings (See September 2 Pending Business List)

   Changes are noted. (SECY)

4. Topics for Commissioners' September 11 Meeting with the ACBM (See September 3 Draft Agenda)

   Approved. (SECY)

5. NTS Events for the Week of September 7, 1970

   Noted. (AGMMA)

6. SECY-325 - Comments on S.4092 - Commission on Fuels and Energy

   Approved with an addition. (GC)

7. SECY-167 - Long-Range Plan for Germantown Site

Approved with a change. (AGMA-HQS)

8. SECY-307 - Leasing of AEC-Controlled Uranium Bearing Lands

Approved with requests. (RM)

9. SECY-226 - Proposed Extension of Contracts

Approved. (DC)

10. SECY-321 - Construction of Additional ANL Transient Housing by AUA and the University of Chicago

Further negotiation is requested. (AGMR&D-DC)

11. SECY-313 - HEPAP Membership for FY 1971

Approved. (R)

12. Mr. Baranowski's August 27 Memorandum re Report of Consultants - Atlantic Richfield Hanford Company Waste Management Program

Noted with requests. (P)

13. Mr. Traynor's September 1 Memorandum re Semiannual Report on Equal Opportunity and Nondiscrimination - January 1, 1970 - June 30, 1970

Noted. (Asst. to GM)

14. Pending Contractual Matters Report No. 372

Noted with a request. (PAR-EAGM)

15. SINB Committee Meeting September 20-22, 1970, Biloxi, Mississippi

Staff will attend. (AGMO-IP)

W. B. McCool
Secretary of the Commission

12:45 p. m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Abbadessa
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. Vinciguerra*
Mr. Barrow*
Mr. Quinn*
Mr. Nininger*
Mr. Greenleigh*
Mr. Hack*
Mr. McDaniel*
Mr. Smith*
Mr. McGee*
Mr. English*
Mr. Traynor*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

UNCL. BY DOE
NOV 86

SEP 1 1970

Honorable Glenn T. Seaborg
Chairman, U.S. Atomic Energy
Commission
Washington, D.C. 20545

Dear Mr. Chairman:

During our initial review of the outlook for the FY 1972 budget, we were struck by the magnitude of AEC's spending in two program areas which have enjoyed a relatively high priority. These are defense-related research and development (about $700 million of outlays in FY 1971) and the Liquid Metal Fast Breeder Reactor (LMFBR) program (about $175 million of outlays in FY 1971). Because of the severity of our current fiscal situation, we believe that it is essential to reexamine critically the necessity for spending such large sums on these programs and to see whether there are any means of achieving significant economies. The purpose of this letter is to ask you to examine how spending on these programs might be reduced and what the programmatic effects of such reductions would be, prior to the submission of AEC's FY 1972 budget request to the Office of Management and Budget.

Our definition of defense-related R&D includes nuclear weapons development, weapons testing, and the development of naval propulsion reactors. We are requesting that, in cooperation with DOD, you prepare and submit an analysis of the actions which would be required to achieve a 10% dollar reduction in FY 1972 below FY 1971 spending levels for defense-related R&D. The analysis should include the various organizational and management alternatives available to minimize the adverse programmatic effects of such a reduction. For example, are there any functions which could be consolidated or any organizations eliminated in

these areas? What would be the appropriate balance between weapons development and weapons testing in this situation? In addition, the analysis should describe as specifically as possible the programmatic consequences of such a funding reduction.

As you know, we have written to you previously expressing our concern at the magnitude of AEC's spending for the development of a commercial product like the Liquid Metal Fast Breeder Reactor (LMFBR). We have hoped, and we continue to hope, that private industry will greatly increase its spending on this program. Although we have not yet received your study of industrial cost sharing on the LMFBR program, we understand that AEC is not optimistic about the prospects for achieving a large near-term increase in private funding for the development of LMFBR. We also note that a recent report by an influential industrial group has concluded that the growth rate of nuclear power capacity and the availability of uranium ore do not dictate a rapid development of reactors which are characterized by low ore requirements.

In view of the above, and considering our current fiscal stringency, we believe that now is an appropriate time for AEC to reassess its planning concerning the urgency and scope of the LMFBR program. We understand that, if the LMFBR program proceeds as currently planned, outlays for the program would increase in FY 1972 by more than $50 million. We are requesting that AEC examine what actions would be required to achieve two alternative FY 1972 outlay targets. Alternative One would be a continuation in FY 1972 of the FY 1971 outlay level for the program (operating and capital, including applicable portions of Reactor Safety and General Reactor Technology). Alternative Two would be a reduction to a technology program for several years (about $50 million below the FY 1971 outlay level). The analysis should cover such questions as consolidation of activities, shutdown of lower priority facilities, possible deferral or stretchout of the construction of the Fast Flux Test Facility, and the support

of only one demonstration plant by the Government. The analysis should also include the programmatic and economic consequences of the two alternative outlay levels in the light of other nuclear powerplant alternatives and the projected availability of uranium ore.

Considering our serious overall fiscal problems, we continue to be particularly concerned about AEC's desire to support as many as three cooperative LMFBR demonstration projects over the next several years. As was indicated during the FY 1971 budget review, we doubt that the Government can realistically afford such a program, and we continue to believe that AEC support of more than one cooperative demonstration project is not essential. We, therefore, request that you include in your analysis of the LMFBR program a plan for how AEC will proceed assuming that only a single cooperative demonstration project is supported by the Government.

We recognize that completion of the analyses requested above will be difficult to accomplish by September 25, 1970. However, because of the large impact these programs have on AEC's budget, we believe it very important that these studies be completed before the review of the FY 1972 budget. In a separate letter we are requesting Secretary Laird to assist in your analysis of defense-related R&D. I thank you for your cooperation.

Sincerely,

Caspar W. Weinberger
Deputy Director

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

UNCL. BY DOE
NOV 86

SEP 1 1970

Honorable Melvin R. Laird
Secretary of Defense
Washington, D. C. 20301

Dear Mr. Secretary:

During our initial review of the outlook for the FY 1972 budget, we were struck by the magnitude of the Atomic Energy Commission's spending in defense-related research and development (about $700 million of outlays in FY 1971). Because of the severity of our current fiscal situation, we believe that it is essential to reexamine critically the necessity for spending such a large sum on this program and to see whether there are any means of achieving significant economies. The purpose of this letter is to ask you to assist the AEC in examining how spending on this activity might be reduced and what the programmatic effects of such reductions would be, prior to the submission of AEC's FY 1972 budget request to the Office of Management and Budget. A letter concerning this is also being sent to Chairman Seaborg.

Our definition of defense-related R&D includes nuclear weapons development, nuclear weapons testing, and the development of naval propulsion reactors. We request that you cooperate with the AEC in the preparation of an analysis of the actions which would be required to achieve a 10% dollar reduction in FY 1972 below FY 1971 spending levels for defense-related R&D. The analysis should include the various organizational and management alternatives available to minimize the adverse programmatic effects of such a reduction. For example, are there any functions which could be consolidated or any organizations eliminated in these areas? What would be the appropriate balance between weapons development and weapons testing in this situation? In addition, the analysis should describe as specifically as possible the programmatic consequences of such a funding reduction.

We recognize that completion of the analysis requested will be difficult to accomplish by September 25, 1970. However, because of the impact this program has on AEC's budget, we believe it very important that this study be completed before the review of AEC's FY 1972 budget. I thank you for your cooperation.

Sincerely,
(Signed) Cap

Caspar W. Weinberger
Deputy Director

Honorable Glenn T. Seaborg

UNCL. BY DOE
NOV 86

The technical criteria for conducting these excavation exp sions, which these studies will address themselves to, should proceed from the premise that the dose to populations in co ries other than the country (or countries) in which such exp sions are carried out should be:

a) smaller than the population dose limits recommended b International Commission on Radiological Protection (ICRP);

b) smaller than the dose from natural background; and

c) such that the fallout of $Cs^{137}$ and $Sr^{90}$ from such exp sions should in no case lead to an increase of the already e ing world-wide average amounts of these isotopes.

Working out quantitative criteria can be the subject for future joint meetings.

1) Based on internationally accepted data.

2)

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

SEP 4 1970

Honorable Spiro T. Agnew
President of the Senate

Dear Mr. President:

Transmitted herewith is a proposal of the Atomic Energy Commission in the form of a draft bill "To amend the Atomic Energy Act of 1954, as amended, to clarify the authority of the Atomic Energy Commission to authorize the establishment of a material access approval program for individuals having access to certain quantities of special nuclear material, and for other purposes." The proposed legislation is attached as Enclosure 1. An analysis of the legislation is attached as Enclosure 2. A comparative draft bill is also attached as Enclosure 3.

The proposed legislation would amend Subsection 161 i.(2) of the Atomic Energy Act of 1954 to clarify the authority of the Atomic Energy Commission to conduct a program for material access approval of persons having access to or control over significant quantities of special nuclear material.

It is not at present possible to estimate the budgetary impact of this proposal. It is anticipated that there will be some increase in the number of man years devoted to the safeguards program in the ultimate implementation of the measure, but the extent of the increase cannot at present be defined because it will depend in large measure on the nature of the safeguards to be imposed, the prospective growth of the industry, and the extent of investigation which will be involved in the material access approval program.

No additional costs are expected to be incurred by the Atomic Energy Commission for material access approval of licensee personnel, since such costs will be subject to the AEC full cost recovery policy. The charges for each individual approval would be the same as for an "L" access authorization in the access permit program, namely $15.

While it is not contemplated at this time that there be any higher material approval than one comparable to an "L", in the future it may prove advisable to require a full background investigation comparable to a "Q" clearance investigation in the case of key individuals who, because of their position, would have unusual opportunity to divert or conceal the diversion of significant quantities of special nuclear material. The charge to AEC by the Civil Service Commission for a full background investigation will be $510 and the licensee will be charged $590 to effect full cost recovery.

The Office of Management and Budget has advised that there is no objection from the standpoint of the Administration's program to our submission of this proposed legislation to the Congress.

Cordially,

Chairman

Enclosures:
1. Proposed Legislation
2. Bill Analysis
3. Comparative Draft Bill

Saturday, September 5, 1970 - D.C.

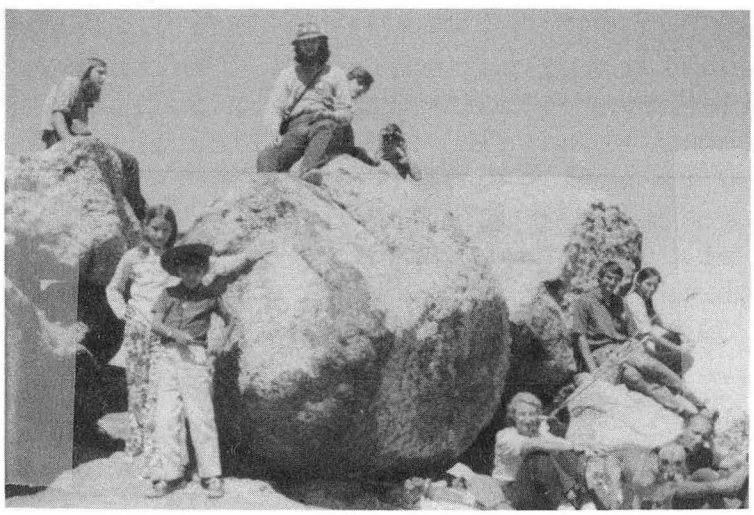
I worked at the office until about 1 p.m. and then had lunch with Syd Gaarder at the Paramount Coffee Shop on 18th Street.

I played 18 holes of golf with Eric at the Chevy Chase Club. Eric shot 102 and I, 95.

Dave, Carol and Dianne went to the Ford Theatre.

Sunday, September 6, 1970

We hiked Old Rag Mountain. Helen, Dave, Steve, Eric, Dianne, Carol, Suki and I, together with Jim Saunders and Don Schuirmann, drove to the Nethers parking lot where we met George and Paul Sakalosky and Phil and Eleanor Lautenschlager and their friend, Bob Willems. Starting about 10:30 a.m. we hiked to Old Rag summit where we all had lunch. Lynne and Bill joined us after we finished our lunch--about 2:15 p.m.--having come up the back side. Lynne had driven Bishnumaya Miller back to school in Harrisonburg, she having spent the night with the Roths where Lynne and Bill are spending the Labor Day weekend.



At the top of Old Rag; September 6, 1970.
L to R: (below rocks) Dianne Seaborg, Paul Sakalosky, Helen Seaborg, Suki, George Sakalosky, Dave Seaborg, and Carol Chealander; (above rocks) Steve Seaborg, Jim Saunders, friend of Don Schuirmann, and Eric Seaborg.

We hiked down to the Old Rag parking lot at Nethers and then the Seaborg family, Carol, Lynne and Bill drove in the Chrysler and the Falcon to Panorama at Thornton Gap, where we had a birthday dinner for Lynne, including a cake with candles that Helen had brought along. Helen was a little ill and decided not to join us for dinner.

Monday, September 7, 1970 - LABOR DAY

I spent a quiet day working on forthcoming speeches, including "The Plutonium Economy of the Future" to be given at the Fourth International Conference on Plutonium and Other Actinides in Santa Fe, New Mexico on October 5, and "Plutonium Revisited" to be given at the 20th anniversary observance of the Division of Radiobiology at the University of Utah on October 8.

Steve and Eric went to a baseball game at Kennedy Stadium where they saw the Washington Senators defeated by the New York Yankees, 4-3.

Dave and Carol visited Curtis and Lee Mansion and Theodore Roosevelt Island.

Tuesday, September 8, 1970 - Germantown

At 9:55 a.m. I presided over Information Meeting 1061 (notes attached). We discussed the potential conflict of interest situation involving Rickover whose wife has an amount of General Electric stock well above the AEC de minimis limit and refuses to sell it. In view of the fact that this seems very unlikely to influence Rickover's actions concerning General Electric, we tentatively decided to make an exception but to notify Rickover in writing that we urge him to try to get Mrs. Rickover to sell because of the appearance of conflict of interest that this presents. We learned that the Rocky Flats strike was settled last Saturday morning.

I presided at 11:35 a.m. over Commission Meeting 2431, where we began our first session of the FY 1972 Budget (action summary attached).

I had lunch with John Flaherty and Julie Rubin. We discussed a number of items, including the need for revised pricing for enrichment services under the new criteria, the role of increased tails assay in the enrichment picture, the need to bring private industry into the gas centrifuge picture, the KMS problem, etc. We also discussed his impressions as a recent outsider coming into the fold of the AEC and its operation.

At 2:30 p.m. the Commission continued consideration of the FY 1972 budget in Commission Meeting 2432 (action summary attached). We went over a program which meets the OMB ceiling of $2.330 billion for new obligational authority and $2.075 billion for outlays. We decided on some $400 million (NOA) and $200 million (outlays) to call to the attention of OMB as additional items of great importance to the AEC program.

Craig Hosmer called to express his concern, in connection with curtailed electric power availability, regarding the long delays that are incurred in licensing (particularly operating licenses) of new plants. He wanted to be sure that Wells is briefing his Board people on what the attitudes are so that there is some kind of guidance and so that everything doesn't have to go up on appeal. I said that, as an administrative agency, we have to be careful not to be wearing our promotional hat in the regulatory field. Hosmer said we have to realize also that we are in the position where there will be some sharply curtailed electric power availability. He said there is about a month lost in these delays, which we cannot accept without doing something about it. He said Wells doesn't have to tell them anything more than when a formal ruling comes. I said I would give it some thought, and I would say a word to Wells.

I called Dave Packard to ask whether he had seen Caspar Weinberger's letter of September 1 to Secretary Laird. He had not. I said that Weinberger suggests that we cut back on our weapons production activities in FY 1972 by about 10 percent below FY 1971. In addition, we have our budget ceiling for 1972; in order to meet that, we would have to cut down on some plutonium production - closing a reactor or two. Also, we would have some problems in meeting the DOD tactical weapons requirements. Packard will have Walske get together with our people, maybe tomorrow. I asked whether he has become involved with the Japanese, Mr. Nakasone (article in this morning's Washington Post), regarding enriched uranium for power reactors in Japan. I said this is a very involved

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

COPY NO. 5
September 8, 1970

# INFORMATION MEETING 1061

9:55 a.m., Tuesday, September 8, 1970, Room A-458, Germantown

1. Executive Session Item

   A draft letter is requested. (GC)

**********

2. SECY-322 - SAS 70-D: Industrial Financial Participation in LMFBR Program

   Approved with changes. (RDT)

3. SECY-331 - Soviet Bloc Travel by LRL-L Employee

   Noted. (AGMIA)

4. SECY-333 - August 13 OST Meeting on Health Effects of Environmental Agents

   Noted. (BM)

5. Request from Political Candidates

   Approved. (AGMA)

6. SECY-334 - Reorganization Plan No. 3: Draft Legal Opinion

   Approved. (GC)

7. SECY-312 - D. C. Office Space

The improvements listed in Attachment B are approved. (SECY)

8. Oral Report on Settlement of Rocky Flats Strike

W. B. McCool
Secretary of the Commission

11:15 a. m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Rubin
Mr. Hennessey
Mr. McCool
Mr. Schur*
Mr. Kavanagh*
Mr. Bloch*
Mr. Brown*
Mr. Kull*
Mr. Whitman**
Mr. Shaw**
Mr. LeGassie**
Mr. Flaherty**
Mr. Kratzer**
Mr. Totter**
Mr. Vinciguerra**
Mr. McKinney**

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Commissioners
General Manager
General Counsel
Secretary

*Partial Attendance
**Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION

September 8, 1970
Approved REH
Date

R. E. Hollingsworth, General Manager

ACTION SUMMARY OF MEETING 2431, TUESDAY, SEPTEMBER 8, 1970, 11:35 A.M., ROOM A-410, GERMANTOWN, MARYLAND

SECY: FG

Commission Business

SECY-287 - FY 1972 Budget (See also SECY-286, SECY-290, SECY 328 and SECY-262

The Commission requested revision of the proposed changes to SECY-290 circulated at the Meeting by the Controller. (OC)

Commissioner Thompson requested information on the interrelationship of CIP/centrifuge and its impact on the 1975 decision on additional new plant capacity. (OC)

The Commission also requested the following be noted for further consideration:

a. Commissioner Thompson's August 20, 1970 memorandum concerning the feasibility of requesting $2 million in the 1972 budget for the treatment of all inactive uranium tailings; and

b. the HTGR fuel storage facility at NRTS.

(OC)

Original signed
W. B. McCool

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

September 11, 1970
Approved REH

R. E. Hollingsworth, General Manager

Date

ACTION SUMMARY OF MEETING 2432, TUESDAY, SEPTEMBER 8, 1970, 2:45 P.M., ROOM A-410, GERMANTOWN, MARYLAND

SECY:RDL

Commission Business

SECY-286 - Statistical Tables for FY 1972 Budget Estimates and SECY-290 - Draft Letter to OMB Re FY 1972 Budget; (See also SECY-262, SECY-287 and SECY-328)

The Commission tentatively approved the FY 1972 Budget (SECY-286) and the draft letter to the OMB (SECY-290), with the following requests, subject to discussions with DOD and NASA and to resolution of questions raised in the September 1 OMB letter regarding defense-related R&D and LMFBR expenditures:

a. SECY-286 - Statistical Tables for FY 1972 Budget Estimates

(1) consideration, as a major policy issue in Weapons Production and Surveillance, of an additional $10 million for tactical weapons systems to be offset by a $10 million reduction in the Weapons Testing Program;
(2) additional staff review of retention of the $10 million staffing expenditure proposed for Bettis during FY '72 in the event of LWBR termination;
(3) the GM Case for NERVA Reactor Propulsion Development be reduced by $3 million to $35.5 million, and an addition of $3 million to the GM's Case for the Phoebus-Pewee, resulting in a $13 million total for Phoebus-Pewee Advanced Research & Technology;
(4) the GM and OMB Cases for Compact Convertor Technology be reduced by $.7 million to a total of $1.350 million, and $.7 million be added to the GM and OMB Cases for the Zirconium-Hydride Flight Qualified System Development, resulting in $3.0 million total for this Program;
(5) staff review for a possible upward revision of fellowship and traineeship funds contained in the OMB Case;
(6) $5 million in Operating Costs and $0.2 million for equipment for PNE be added to the OMB Case with offsetting reductions elsewhere as recommended by the GM; and
(7) preparation of a fact sheet on current and proposed FY 1972 GM and DR staffing levels.

b. SECY-290 - Draft Letter to OMB re FY 1972 Budget

(1) deletion of all reference to "proposed AEC additions" to the FY '72 OMB ceiling;
(2) the statements on Gas Centrifuge and CIP be combined;
(3) the LMFBR statement on pages 5-6 be strengthened;
(4) deletion of statements on Nuclear Safety, Bedrock Waste Storage and Atmospheric Pollution Control Facilities at SR, Fire Protection & Safety Facilities, and those items listed on pages 8-9, noting that these activities should not be deleted from the GM Case; and
(5) consideration of the revised letter to the OMB at the September 9 Commission Meetings.

(OC)

Original signed
W. B. McCool

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

and complicated matter, and certainly some of the AEC people would have to get involved in that. I said I don't know why Nakasone would be involved in that line. Packard said he will be having lunch with Nakasone tomorrow, and will take that occasion to probe him out a little and will let me know.

Caspar Weinberger called, mentioning that I had written him a couple of weeks ago indicating some concern that actions have been taken by OMB about which we have not been consulted. He expressed the hope that that is the last time I will have occasion to make that particular complaint. He said that after about September 25 they will have a presidentially-appointed policy man--Don Rice, who will be an Assistant Director--who will be responsible for these matters. Weinberger said that he would like to come to the AEC with Rice and talk with us. I said I wish they would come, maybe in early October, because there are many things in our program about which we would like them to have firsthand knowledge. I mentioned specifically the breeder reactor. Weinberger said that Rice, with his DOD background, should be very helpful.

I sent a letter to Gerard Smith (Director, ACDA) advising that Labowitz will be joining the U.S. Mission to the IAEA in Vienna, and that his former responsibilities will be taken over by the Division of International Affairs by Myron Kratzer and specifically Harold Bengalsdorf.

I sent my biweekly status report to the White House today (copy attached).

Dave, Carol, Helen and I went to the farewell reception given by the Mexican Ambassador and Senora de Margain at the Mexican Embassy (2829 16th Street, NW).

Wednesday, September 9, 1970 - Warrenton, Virginia - D.C. - Chicago

I went to Airlie House in Warrenton, Virginia, to participate in the Advanced Management Seminar for Electric Utility Executives sponsored by the American Public Power Association. Accompanied by Stan Schnedier, I arrived at 8:50 a.m. and was met by J. D. Brown (Deputy General Manager, APPA). I also met John R. Kelly (President, APPA) of Gainesville, Florida, who introduced me as the opening speaker of the seminar. I spoke for about a half-hour on "Where We Are and Where We're Going--I Think." My remarks were followed by a question period in which I responded to questions on the breeder and fusion, fuel reprocessing and waste disposal, the date for the LMFBR demonstration plant, the utilization of fuel, the possibilities for a National Energy Agency, the question of recapturing young talent, the fusion torch concept and the transfer of enrichment plants to private industry. We left Airlie House at 10:05 a.m. and arrived at the H Street office at 11 a.m.

We continued the budget session. General Giller, with the support of Commissioners Thompson and Ramey, argued strongly for bringing in the weapons laboratories' directors for consultation at this point, but I indicated that this would not be wise, particularly in view of the potential White House reaction to the directors leaking information to the JCAE. I did agree, after some argument, that the directors might come in order to advise and furnish information with respect to the answers to Weinberger's letter of September 1 (copy attached on September 4).

I attended a luncheon meeting at the Executive Office Building with Ed David, David Beckler, Eric Ward and Myron Tribus, as a sort of agenda-planning session for the FCST. It included discussion of ways of increasing the interest of its members in the FCST and its meetings.

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AEC BIWEEKLY STATUS REPORT FOR SEPTEMBER 8, 1970

1. For the tenth consecutive year Chairman Seaborg will head the U.S. Delegation to the IAEA's General Conference, which convenes in Vienna on September 22. Commissioner Larson will be an alternate representative. The election of the President of the Conference and the Chairman of the Board of Goyernors for the coming year is presenting a conflict between India and Pakistan, which are competing for both positions. The conflict will probably have to be resolved by secret ballot. The United States is planning to support the Agency's regular budget for 1971 of more than $13 million, which represents an increase of 10 percent over the 1970 level. The major increase is in the safeguards field. The General Conference will also have under consideration enlargement of the twenty-five member Board of Governors. The United States supports the Italian proposal, which would enable Italy and West Germany to serve continuously on the Board. This proposal has a good chance of receiving approval, although there is some indication that the Soviet Union may seek to postpone a Conference decision on this matter.

2. A thirteen-state conference aimed at establishing standards for midwest nuclear power facilities will be held October 14-15 in Chicago. A proposal for such a meeting was approved by the thirteen governors at the Midwest Governors Conference in Columbus, Ohio, in July. The Conference, to be sponsored by the Illinois Commission on Atomic Energy, will deal with the need for regional cooperation and regulation of electrical energy produced by nuclear plants. The nuclear power standards reportedly would become operative after ratification by state legislatures.

A bomb explosion at the University of Wisconsin on August 24 resulted in the death of Dr. R. E. Fassnacht, who was working on an AEC project at the time. Four other persons were injured in the blast, which was apparently meant to destroy an Army mathematics center on the second floor of the physics building. The AEC-owned 10 MeV accelerator located in the basement was damaged, along with electronic scanning machines and computers on the first floor. There was no release of radioactivity from the licensed nuclear materials on hand. Of the total estimated damage of nearly $10 million, AEC's loss is estimated at $200,000 to $300,000.

4. The Atomic Energy Commission will announce jointly with the Department of Defense, on September 10, that the two agencies plan to test launch a Thor booster with a high altitude

test vehicle from Johnston Island in the Pacific on or about September 21. No nuclear components or explosive warheads will be used in the test. The planned launch is part of the national program to be ready to conduct nuclear tests in the atmosphere, should that ever be deemed necessary.

5. A Pennsylvania state legislative panel, created to investigate the environmental effects of nuclear power plants, is considering placing a five-year moratorium on construction of all aboveground nuclear power facilities in the state. Such a proposal was advanced by Dr. John Gofman at an August 20-21 hearing conducted by the Pennsylvania panel. Three nuclear plants are already operating in the state, five are under construction, and four more are firmly planned. According to the panel, those under construction would probably be allowed to go forward under strict regulation, but efforts would be made to halt those in the planning stage. The legislative panel is planning another hearing in September.

6. Labor strikes have been under way for several months at the Nevada Test Site and the Rocky Flats plant in Colorado. While these work stoppages have not seriously affected AEC program objectives at either site, they have disrupted operations. The Federal Mediation and Conciliation Service is making every effort to bring the unions and contractors together on new labor agreements at these installations.

7. The AEC gaseous diffusion plants, which had reduced by 650 electrical megawatts their use of power this summer so it could be diverted to power-short areas in the Midwest and East, have resumed use of 350 MW of this amount as of September 1. This leaves 100 MW still being diverted to the Midwest and 200 to the New York area.

8. Tennessee Valley Authority has placed orders for four large power reactors to add to their electric generating capacity in the 1976-78 period. Westinghouse and Babcock & Wilcox will each supply two reactors and fuel at costs of $184 million and $174 million, respectively. TVA invited both coal and nuclear bids, but received no response from coal companies. The Authority already has five power reactors under construction and the four new reactors will raise TVA's total announced nuclear capacity to more than 10,000 MWe. This is now the greatest nuclear power commitment of any electric utility in the U.S. and constitutes nearly 12 percent of the total nuclear capacity ordered.

Milt Klein dropped in and told me that he has decided to seek another position outside of the AEC in another government agency or industry and asked me for advice and help in locating such a position. I said I would think about it and get in touch with him after my return from Europe in October.

At 2:30 p.m. we continued the budget discussion at Commission Meeting 2434 (action summary attached). After much argument and disagreement we finally came around to pretty much the same recommendation as the staff's. We also agreed on a transmittal letter to the OMB. We will make our final determination on the budget and the wording of the transmittal letter at our windup meeting next Tuesday.

From 4 until 6 p.m. I attended a meeting of the Domestic Council Subcommittee on the National Energy Situation, in Room 415 of the Executive Office Building. Others present were Herbert Stein, H. S. Houthakker and Sidney L. Jones (CEA); John Nassikas (FPA); Secretary Walter Hickel and Hollis Dole (Interior); Bill Lee and Owens (Commerce); George P. Shultz and Fenton (OMB); Hubert Heffner (OST); Russell Train and Alvin Alm (CEQ); George A. Lincoln and Eugene Quindlen (OEP); Richard W. McLaren and Cosyge (Justice); Jim Akins (State); James Loken (Consumer Affairs); John T. Middleton (HEW); and John Whitaker and Will Kriegsman (White House).

Stein presided in the absence of Paul McCracken, the Subcommittee Chairman. Whitaker said that the report will be written so that it can go to the President directly, rather than through the Council.

Stein emphasized that the first assignment is the problem of the coming winter. He said that we may not have any serious trouble on electric power supply this winter, but we should be ready to take actions in the event that we do. Stein gave us each a copy of "First Report to the Energy Subcommittee of the Domestic Council" which we proceeded to read individually. Under "C. Additional Measures Recommended for Prompt Consideration," item 7 suggests that "the AEC should give immediate consideration to the problems involved in extending the restrictions on the operation of its gaseous diffusion plants."

A great number of additional documents were also handed out.

Stein then began to go through the items in the report, beginning on page 6. Nassikas spoke on item 1 at Stein's request.

Stein questioned item 6 but there was no one from ICC to comment. He asked about item 8 (page 7), and the response from a representative of Interior was that only limited or minimal help would be available from that channel (i.e., from the Emergency Petroleum Supply Committee). Lincoln said he thought this committee was already doing about all it can.

Stein then went on to items under C on page 7. He asked if it is possible to promote greater domestic production of fuel oils, or increased importation of distillate fuel into District 1. Lincoln, in replying, emphasized the limitation of storage space. Also the shortage of supply of residual oil was discussed, although this is complicated by the price question. Nassikas emphasized the possibility of the utilities utilizing crude oil. However, this introduces some safety problems in the boilers--these can be overcome by boiler modifications requiring six months to put into effect. Lincoln said he didn't think we have any shortage of crude oil.

The discussion of coal went into the production of coal. Although Dole doubted the existence of a real coal shortage, Nassikas questioned this view and said

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

September 14, 1970
Approved REH

R. E. Hollingsworth, General Manager

Date

ACTION SUMMARY OF MEETING 2434, WEDNESDAY, SEPTEMBER 9, 1970, 2:30 P.M., ROOM 1115, D. C. OFFICE

SECY:FG

Commission Business

SECY-290 - Draft Letter to OMB re FY 1972 Budget (See also SECY-286, SECY-287 and SECY-328)

The Commission requested the following changes in the draft letter to OMB:

a. inclusion of Reactor Safety and Regulation in a sub-category under Growing Priority Programs Unfunded;

b. revision of the funding table on research effort to insure consistency with the statement concerning the 5 percent dollar increase in the GM case for FY 1972, and indenting the table to reflect it as a sub-heading.

The Chairman suggested reconsideration of the gas cooled fast reactor after Congressional action on the FY 1971 funds authorized for this item, and requested staff give additional consideration to Regulatory staffing requirements.

Commissioner Johnson requested insertion of language in the draft letter to OMB on AEC encouragement of private industry participation in the centrifuge program and the interim need for government financing, and noted he would provide the Controller further editorial comments in the draft letter to OMB.

Commissioner Thompson noted his concern with the consideration given to several programs including centrifuge, support for the Fermi reactor, fast gas reactor, nuclear engineering traineeships, and controlled fusion. He wished to consider further comments on these matters.

The revised draft letter to OMB will be scheduled for consideration on September 15, 1970.

(OC/SECY)

Original signed
W. B. McCool
W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

there is a shortage; that we might very well have trouble this winter. I mentioned the recent inability of TVA to get any bids at all on a coal burning plant which led them to choose nuclear plants as a result of their recent call for bids. Nassikas read a message from Governor Holton stating that there is a coal supply crisis in Virginia. Nassikas reiterated his statement that he believes there is a crisis in the supply of coal. It was stated that more coal could be mined if the coal cars could be turned around faster. The question was raised whether the ICC could require the railroads to decrease their turnaround time. It was decided to go to the ICC to determine the maximum action they could undertake.

Stein read recommendation 6 on page 8. Here Train objected to "permitting variances" (from clean fuel regulations). However, it was pointed out that this is a problem that cannot be avoided. Nassikas pointed out that there might be situations where the need for power (schools, hospitals, etc.) would take precedence over environmental considerations. Lincoln suggested ending the sentence after the words "in detail." Train suggested keeping the following phrase.

Next we came to item 7 on page 9 (the AEC item) and I made the essential points that I made in our letter to McCracken, especially the last paragraph where we say that OEP's report, regarding potential shortages of electric power in the coming months, should specify that in regions in critical need of power, any utility should make arrangements with our power suppliers (the Ohio Valley Electric Corporation, Electric Energy Inc. or the Tennessee Valley Authority) to obtain the assistance required. We, in turn, can notify our suppliers of our willingness to curtail loads.

Whitaker inquired about the pricing for the power we furnish to Consolidated Edison and whether in the future we are prepared to make our pricing policies public. I replied by explaining the initial nature of this venture, the problem of recovering overhead, and indicated that I thought if there should be subsequent occasions of this type, we could certainly establish a more regular way of operating and I expect that our pricing policy would be made public.

I had to leave the meeting at this point.

I sent a letter to Russell Train (copy attached) enclosing a Notice of Rule Making concerning the siting of fuel reprocessing plants and related waste management facilities.

I received a memorandum from the President approving in principle the underground nuclear testing program proposed for FY 1971 (EMERY) and giving specific approval of the program planned for the first quarter (EMERY I).

I received a memorandum from the President addressed to Heads of Departments and Agencies (copy attached) concerning the Administration effort to assist local, state, and Federal agencies to do their part in employing the disadvantaged in permanent jobs.

I received a letter from Phil Farley (ACDA) concerning the reporting of isotopic data to the IAEA in connection with safeguard verification.

I received a memorandum from the President approving a proposed Amendment to the Agreement for Cooperation on the Civil Uses of Atomic Energy between the Government of the United States and the Government of the United Kingdom.

Attached are notes on Information Meeting 1062 and Regulatory Information Meeting 423 which were held in my absence this morning.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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SEP 9 1970

Mr. Russell Train, Chairman
Council on Environmental Quality
1016 Sixteenth Street, N.W.
Washington, D.C. 20036

Dear Mr. Train:

The enclosed Notice of Rule Making incorporates a statement of policy which the Commission proposes to issue concerning the siting of fuel reprocessing plants and related waste management facilities. A draft of a related public announcement is also enclosed.

The statement of policy begins on page 14 of the Notice of Rule Making. The principal elements of the policy are:

1. A fuel reprocessing plant's inventory of high-level liquid waste will be limited to that produced in the prior five years. Shipment of waste in a specified solid form must be made to a Federal repository no later than ten years after the fission products were separated from the irradiated fuel.

2. Upon arrival of the solid waste at the repository the Federal government will assume permanent custody but industry will pay all costs of disposal of the material.

3. Disposal of high-level fission product waste will be permitted only on land owned and controlled by the Federal government.

4. A design objective for fuel reprocessing plants shall be to facilitate decontamination and removal of all significant radioactive waste at the time the facility is permanently decommissioned.

5. With respect to the fuel reprocessing plants already licensed, the licenses will be appropriately conditioned to carry out the purposes of the policy.

The Commission has been carrying out research and development programs for the past fifteen years to develop methods for effectively and permanently removing high-level radioactive wastes from man's biological environment.

The Commission has concluded that disposal of such wastes should be made in selected deep geologic formations. We have recently announced plans to acquire a bedded-salt formation near Lyons, Kansas for the purpose of constructing the initial repository for the disposal of such wastes generated by privately-owned fuel reprocessing plants. We will be submitting to the Council in the near future an Environmental Statement concerning this repository.

The Commission published on June 3, 1969, a Notice of Proposed Rule Making regarding this subject. The enclosed notice includes a discussion of several aspects of the policy upon which comments were received after the initial publication, as well as a discussion of other aspects of the policy on which we have provided clarification and further information.

This policy will have long-term and far-reaching implications, particularly as they relate to the handling and disposal of high-level radioactive wastes. In view of these implications we are forwarding the proposed policy statement to the Council for its information and review.

We shall be pleased to meet with you and other members of the Council at your convenience in order that we may respond to such questions as may arise in connection with your review.

Since this statement of policy relates to matters of wide and immediate interest to the nuclear industry, we would appreciate any comment you may have on the proposed policy at an early date.

Sincerely,

Chairman

Enclosures:
1. Notice of Rule Making
2. Draft Public Announcement

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NOV 86

THE WHITE HOUSE

WASHINGTON

September 4, 1970

MEMORANDUM FOR HEADS OF DEPARTMENTS AND AGENCIES

SUBJECT: Public Service Careers Program

This Administration is launching the Public Service Careers Program, a nationwide effort to assist local, state, and Federal agencies to do their part in employing the disadvantaged in permanent jobs.

For several months the Department of Labor and the Civil Service Commission have been developing special plans to increase employment opportunities in the Federal service for our disadvantaged citizens.

In addition, we have been deeply concerned with the need to increase the advancement opportunities for thousands of Federal employees currently locked in lower level jobs.

The result of this planning is the Federal Employment Component of the Labor Department's new Public Service Careers Program.

Under the leadership of the Civil Service Commission, we have established the following goals for the Federal service during the first program year:

-- to hire up to 25,000 disadvantaged persons through the use of the Worker-Trainee Examination;

-- to provide these worker-trainees with the training, education and supportive services needed to increase their productivity in entry jobs and where feasible to prepare them for next level responsibilities;

-- to provide upgrade training for 10,000 - 20,000 current lower level Federal employees to help qualify them for promotion;

-- to provide training for 500 - 1,000 current lower level employees to qualify them for entry into Federal apprenticeship programs.

Public Service Careers funds will be used to reimburse the employing agency for the extraordinary costs of training disadvantaged workers. The employing agency pays the trainee's salary, fringe benefits, and normal training costs out of regular budgeted funds.

In addition, worker-trainees hired under this program will be given a personnel ceiling exemption through their first 12 months of federal employment or through their first two grade level promotions within that period. After this, the hiring agency must absorb the employee under its regular personnel ceiling.

Chairman Hampton of the Civil Service Commission will communicate with you in the near future regarding your agency's participation. I expect you to cooperate fully with him to help us achieve our goals.

Your efforts in this program will be of continuing interest to me.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
September 9, 1970

# INFORMATION MEETING 1062

10:00 a.m., Wednesday, September 9, 1970, Chairman's Conference Room, D. C.

1. General Manager's Discussion with Mr. Willis Shapley, NASA, re the Nerva Program

2. September 4 Letter from Mr. Hampton, Federal Labor Relations Council, re Public Hearing October 7, 8, and 9, 1970

   A statement will be prepared. (LABR)

3. SECY-346 - U.S. Statement for Fourteenth IAEA General Conference

   Approved with changes. (AGMIA)

4. SECY-338 - Laboratory Salary Increase

   Approved. (LABR)

5. SECY-344 - Per Diem for AEC Board and Committee Members and Consultants

   Approved as revised. (PER-SECY)

6. SECY-339 - Contractual Operations on University Campuses

   Approved with changes. (AGMA)

7. SECY-337 - Proposed SNR Contract for Reactor Cell Assemblies

Approved with a request. (NR-DR)

8. Pending Contractual Matters Report No. 373

Noted. (PAR)

9. September 16 JCAE Hearing on Cooperation with Europe

W. B. McCool
Secretary of the Commission

10:50 a.m.

(Chairman Seaborg has approved the action items.)

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Commissioner Ramey | Mr. Hollingsworth | Commissioners |
| Commissioner Johnson | Mr. Brown | General Manager |
| Commissioner Thompson | Mr. Hennessey | General Counsel |
| Commissioner Larson | Mr. Rubin | Secretary |
| | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Kratzer* | |
| | Mr. Vinciguerra* | |
| | Mr. Hack* | |
| | Mr. English* | |
| | Mr. DeRenzis* | |
| | Mr. Griffin* | |
| | Mr. Greer* | |
| | Mr. Fournier* | |

*Attendance by Topic (s)

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UNITED STATES
ATOMIC ENERGY COMMISSION

September 9, 1979

REGULATORY INFORMATION MEETING 423

10:50 a.m., Wednesday, September 9, 1970, Chairman's Conference Room, D. C.

1. Mr. Price's September 9 Memorandum re Policy on Siting of Reprocessing Plants - Council on Environmental Quality

   Discussed and circulated. (SECY)

2. Oral Report on Status of Wisconsin Electric Power Company and Wisconsin-Michigan Power Company, Point Beach Nuclear Plant Unit No. 2, Docket No. 50-301

W. B. McCool
Secretary of the Commission

10:55 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Commissioner Ramey | Mr. Henderson | Commissioners |
| Commissioner Johnson | Mr. Hennessey | Dir/Regulation |
| Commissioner Thompson | Mr. Hollingsworth | General Manager |
| | Mr. Rubin | General Counsel |
| | Mr. Griffin | Secretary |
| | Mr. Kull | |
| | Mr. McCool | |

Steve and I flew to Chicago on American Airlines Flight 377, leaving National Airport about 8:20 p.m. and arriving at O'Hare Airport, Chicago about 8:50 p.m. We took the house car to the Marriott Motor Hotel and checked into room 3209, in a new wing, the first time this room was used.

Thursday, September 10, 1970 - Chicago - Marquette, Michigan

Steve and I had breakfast in the Marriott restaurant (Fairfield Inn) and then rode in the house car to O'Hare Airport. We caught North Central Flight No. 459 to Green Bay, leaving about 8:30 a.m. and arriving about 9:20 a.m. Here we took North Central Flight No. 343 to Marquette, leaving at 9:40 a.m. and arriving at 10:50 a.m. We were met by Chuck Sanders and Henry Sietz of the Ishpeming Diplomats, who drove us to the Holiday Inn in Marquette where we checked into room 202.

Sanders and Sietz then drove us to Ishpeming for a lunch to honor Sam Cohodas given by the Diplomats in the Coach Room of the Mather Inn. (We also did some sightseeing of family places in Ishpeming on the way.) Among those present at the luncheon were Charles E. Sanders, Jr. (President of Ishpeming Diplomats), Henry Sietz (Public Relations Department, Cleveland-Cliffs Iron Company), Sam Cohodas, Willard Cohodas (Sam's nephew), Bill Peterson (just returned from a visit to Sweden, including Kopparberg), John F. Edmondson (Administrator of Bell Memorial Hospital and President, Ishpeming Chamber of Commerce), Jim Flaa (who played end for Ishpeming in the 1919 Ishpeming-Green Bay Packers football game which I attended--now 76 years old), John Potts (Metropolitan Life Insurance Company, Milwaukee), Homer Guidon (Ishpeming representative of the Marquette Mining Journal, who asked me questions about the peaceful uses of nuclear energy--I said I would send him my booklet), Paul Petosky (Manager, Radio Station WJPD, Ishpeming), Charles R. (Bob) Markert (brother of Bill who lives in Washington, D.C.), Irvin W. Horton (TV Channel 6, WLUC, Marquette).

After lunch Sanders introduced most of those present, including Steve and me. Edmondson presented me with a plaque making me an honorary member of the Ishpeming Chamber of Commerce. I responded with an expression of appreciation and some description of my Ishpeming background. Sanders then presented me with a plaque making me an honorary member of the Ishpeming Diplomats and also gave me a set of cuff links and matching tie clip, each with polished hematite (made by Bob Markert). Mitchell, Peterson, Flaa (describing the Ishpeming-Green Bay game), and Cohodas (in appreciation for my coming to honor him) each made short remarks.

Sietz then drove Steve and me to Channel 6, WLUC TV Station in Marquette where I was interviewed by Irvin W. Horton and Ron Heller for a half-hour show to be presented next Sunday and again the following Saturday. They asked questions on my boyhood in Ishpeming, Sam Cohodas, and the peaceful uses of nuclear energy. Heller then interviewed me on the peaceful uses of nuclear energy for a one-minute spot on tonight's 6 p.m. news. I met and talked to Soapy Williams before my TV interview and to Governor William G. Milliken (of Michigan) after the interview.

Sietz then drove us to the Holiday Inn where we prepared for the dinner. Rose Marie Cuyler phoned (they live just across the street from the Holiday Inn) to say they couldn't come tonight. She said Eddie is on his honeymoon and Dave is living in Menominee with Christine Seaborg while attending school.

Mr. and Mrs. Sietz picked us up and drove us to a bus that brought us to the Marquette Armory (surrounded by Northern Michigan University campus) for a

reception attended by most of the dinner guests. We then travelled by bus to the Forest Roberts Theater (on campus) where the head table guests assembled for entrance to the dinner (honoring Sam Cohodas on his 75th birthday) in the C. B. Hedgecock Fieldhouse. Steve sat at a table with the Cohodas family and the Angeli family (who acted as hosts for Sam Cohodas). Attached is a list of those who sat at the head table.

Dr. Harold Sponberg (President, Eastern Michigan University) presided, and following dinner I gave the principal address, entitled, "People." This was followed by testimonials to Sam Cohodas by W. H. Treloar (Marquette, retired Panax publisher), Fred W. Burrows (Washington, D.C., former vice president, International Apple Association), H. Stuart Harrison (President, Cleveland-Cliffs Iron Company), Dr. John X. Jamrich (President, NMU), Jack F. Davis (Grand Rapids, President, United Fresh Fruit and Vegetable Association), Colonel Jules M. Blomberg (Commander 410th Bomb Wing, Sawyer Air Base), William T. Dwyer (First National Bank, Chicago), Arnold M. Cohodas (President, Cohodas Brothers Company, Appleton, Wisconsin), Charles A. Mitchell (Ishpeming, general chairman of the 75th Jubilee), State Representative Dominic J. Jacobetti of Negaunee, State Senator Joseph S. Mack of Ironwood, Harold Elgas (President, Michigan Bankers Association), and William C. Peterson (President, Bell Memorail Hospital, Ishpeming). Sam Cohodas then expressed his gratitude to the crowd of about 1400 people, giving special thanks to the members of the committee which handled the program and the NMU staff for its arrangements. Among those I met was Robin Hoff (Dick Hoff's nephew).

Steve and I rode back to the Holiday Inn with Mr. and Mrs. Sietz.

Friday, September 11, 1970 - Marquette - Chicago

Steve and I had breakfast in the Holiday Inn restaurant. I had a call from the office in Washington, where everything seemed to be going well. However, Commissioner Thompson is in the hospital with a kidney stone condition.

We then drove to Ishpeming in Gordon Swanberg's Ford station wagon which he had left for us at the Inn last night. We drove around to see some more of Ishpeming and then drove to the Bell Memorial Hospital where we visited Edith Ericson in room 314. She is still in good health at the age of 92. While visiting with her, her doctor, Dr. Jaedecke (a nephew of Clarence Jaedecke) dropped in. The Casparsons, former manager of the Mather Inn (while Edith lived there) also dropped in. We talked with Edith for nearly an hour about our relatives and early Ishpeming history.

We then drove to the Gordon Swanberg home (on Duncan Street) where Helen Swanberg served a buffet luncheon. Those present were Alice and Paddy Fitzpatrick, Esther (Hedstrum) Arnott, Viola and Jerry DeGabrielle, Elsie Sundlie, Helen Swanson, Gordon and Helen Swanberg, Terry and Amarylee Thompson, Robert and Shirley Hedstrum (Harry's son), Helen Hedstrum (Harry's daughter) and Edith Moore (Harry Green's daughter and Amarylee's sister).

After lunch Steve, Helen Swanson, Elsie Sundlie, Helen Hedstrum, Esther Arnott and I drove around Ishpeming and Negaunee in Gordon's car to visit many old scenes of my childhood. We visited our family church, the Swedish Mission Covenant Church, where the organist, Mrs. Mudge (nee Maude Gustavson) showed us around; it is somewhat, but not entirely, changed from the way it was when I went to Sunday School there.

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| DR. | HAROLD SPONBERG | Robert Ling, Marq. Ambassador |
| 1) | MOST REV. CHARLES A. SALATKA<br>Bishop of Marquette | Hal Ternus<br>Marquette Ambassadors |
| 2) | MRS. ESKIL BOSTROM | Ray Nelson<br>Marquette Ambassadors |
| 3) | ARNOLD M. COHODAS<br>President - Cohodas Brothers Co. | Jack Payant<br>Iron Mountain Ambassadors |
| 4) | MRS. JACK DAVIS | Jerry Pulliam<br>Marquette Ambassadors |
| 5) | WILLIAM T. DWYER<br>Vice-Pres. - First Nat'l of Chicago | Robert Moore<br>Marquette Ambassadors |
| 6) | MRS. WILBERT H. TRELOAR | Colon James<br>Ishpeming Diplomats |
| 7) | FRED W. BURROWS, Exec. Vice-Pres.<br>International Apple Association | Harold Christensen<br>Marquette Ambassadors |
| 8) | H. STUART HARRISON<br>President - Cleveland Cliffs Iron Co. | Charles Sanders<br>Ishpeming Diplomats |
| 9) | MRS. JULES BLOMBERG | Jack Gingrass<br>Iron Mountain Ambassadors |
| 10) | WILBERT H. TRELOAR<br>Retired Publisher - Panax Papers | Eino Lehtinen<br>Ishpeming Diplomats |
| 11) | MRS. JOHN X. JAMRICH | Robert Polzin<br>Marquette Ambassadors |
| 12) | MRS. H. STUART HARRISON | Robert Markert<br>Ishpeming Diplomats |
| 13) | DR. JOHN X. JAMRICH<br>President - Northern Michigan University | Harlan Larson<br>Marquette Ambassadors |
| 14) | MRS. CHARLES MITCHELL | Joseph Mahoski<br>Ishpeming Diplomats |
| 15) | JACK F. DAVIS, President<br>United Fresh Fruit & Vegetable Ass'n. | Robert Luke<br>Marquette Ambassadors |
| 16) | MRS. WILLIAM T. DWYER | Roger Pietro<br>Ishpeming Diplomats |
| 17) | COL. JULES M. BLOMBERG, Commander<br>K. I. Sawyer AFB | Jerry Saundri<br>Marquette Ambassadors |

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| 18) | MRS. ARNOLD M. COHODAS | Roger Knapp<br>Iron Mountain Diplomats |
| 19) | CHARLES MITCHELL<br>General Chairman | Guido Donetti<br>Ishpeming Diplomats |
| 20) | REV. ESKIL E. BOSTROM, Pastor<br>Bethany Lutheran Church, Ishpeming | Arlin Violetta<br>Ishpeming Diplomats |
| 21) | DR. GLENN T. SEABORG, Chairman<br>U. S. Atomic Energy Commission | Henry Sietz<br>Ishpeming Diplomats |
| 22) | GOVERNOR WILLIAM MILLIKIN<br>State of Michigan | Thomas Peters<br>Marquette Ambassadors |
| 23) | SAM M. COHODAS "MR. SAM" | Michael Angeli<br>Marquette Ambassadors |

At the Swanberg's home, Ishpeming; September 11, 1970.
L to R: (back row) Paddy Fitzpatrick, Helen Swanberg, Shirley Hedstrum, Robert Hedstrum, Edith Moore, Amarylee Thompson, Steve Seaborg; (front row) Seaborg, Helen Marie Swanson, Elsie Sundlie, Helen Hedstrum, Esther (Hedstrum) Arnott, Alice Fitzpatrick.

After our tour we returned to the Swanbergs'. We met the Swanberg children, John, Scotty and Carol. Helen served us tea and refreshments. Gordon then drove Steve and me, with Scotty, to the Marquette airport where we caught North Central Flight No. 294 to Chicago, leaving about 4:50 p.m. and arriving at O'Hare Airport about 7:45 p.m. We were met by Carol and Eugene Flaumenhaft and Syd Gaarder and rode in Bob Duffield's car (with his driver) to the Argonne Guest House where Steve and I checked into room 2.

Carol, Syd and I discussed progress on our Section C-I history project while Eugene showed Steve the electron microscopes in the Biology Building.

Justin Bloom called from Washington, D.C. to discuss security precautions on my forthcoming European trip.

Saturday, September 12, 1970 - Chicago

Steve and I had breakfast in the Argonne cafeteria with Syd Gaarder, Mike Nevitt (Deputy Director, ANL), and Bob Laney (Associate Director, ANL). There was a general discussion of future ANL programs. I indicated that FY 1971 would be another difficult year for Argonne financially, although they were better off than most of the AEC laboratories. I mentioned that we might have to settle for only one breeder demonstration plant.

From 8:45 until 10 a.m. I reviewed progress made in selecting and copying documents of historical interest, first with Dr. Pettitt (ANL Classification Officer) in his office G170 in Building 2), then with Carol in her office in the Chemistry Building, F wing. Eugene took Steve on a tour of the ZGS.

At 10 a.m. Ken and Mrs. Dunbar picked me up at the Chemistry Building and drove me to the National Accelerator Laboratory where the Pugwash group was visiting. (Syd and Steve accompanied me.) We arrived about 10:35 a.m., considerably ahead of some of the Pugwash people who were late arriving from Geneva, Wisconsin. Among those present in the group were Mr. and Mrs. Sumner Rahr (Adlai Stevenson Institute), Mr. and Mrs. William Schwartz (USA), Dr. Bernard Feld (AAAS), Mr.

Wade (England, a science writer), Miss Lindop and Dr. Rotblat (U.K.), Mr. Faye (Senegal), Mr. Bedewi and Mr. Allam (UAR), Mr. Sarabhai and Mr. Bhagazantam (India), Mr. Perrin (France), Mr. Reutov (U.S.S.R.), Mr. Sach (Poland), Mr. Sawada (Japan), Mr. Torto (Ghana), Bob Wilson, Ed Goldwasser and Donald Getz (NAL) and Dr. Norman Ramsey. A short program followed. I spoke first, informally, touching on the way the site was selected and the remarkable accomplishments in construction so far, i.e., ahead of schedule, below estimated cost and the expectation of higher-than-planned operating levels. I expressed the hope that it would be possible to arrange some international cooperative use of the machine under suitable auspices and mentioned I had already spoken to Petrosyants in this regard. Bob Wilson was the only other speaker; he explained what would be seen on the tour.

The tour lasted from 11:50 a.m. to 12:50 p.m. and consisted of a bus ride to the injection site, followed by a walk through the 200 MeV linac and halfway around the 8 GeV booster synchrotron, following the path that the protons will take. Wilson and Goldwasser acted as guides. We also met Don Young who was in charge of the Linac Room. It was stated that by October 1 they expect to have the linac in operation and take protons halfway round the booster ring; within a month the tunnel for the main accelerator will be completed. The tour concluded with a bus ride around the inside of the main accelerator ring.

After a buffet luncheon hosted by the NAL, the Dunbars, Syd, Steve and I drove to the Brookfield Zoo where we met Lynne and Bill who are on their way to California. George and Terry Lambert and their children, Paul, Judy and Daniel were also there. We toured the Zoo, after which Steve left for O'Hare Airport with the Lamberts where he caught a plane to Washington. I said goodbye to Lynne and Bill. They are going to stop in DeWitt, Iowa, this evening to see Bill's mother. Syd and I rode back to the Argonne Guest House with the Dunbars. The Flaumenhafts joined us for dinner at the Flame Steak House near LaGrange.

Brookfield Zoo, Brookfield, Illinois; September 12, 1970.
L to R: George, Daniel, Paul, Terry and Judy Lambert, Mrs. Kenneth Dunbar, Lynne and Bill Cobb, Stephen Seaborg.

After dinner the four of us previewed my slides for the talk I will give at the ACS Symposium on Monday.

Sunday, September 13, 1970 - Chicago

Syd Gaarder and I had breakfast with the Flaumenhafts in their apartment.

Steve Lawroski and his son Steve came by and picked me up. We drove to the Evergreen Golf Course (93rd and Western), where we played 18 holes of golf, stopping for a sandwich in the clubhouse between the 9th and 10th holes. We had an interesting talk with Mrs. "Babe" Ahearn, the daughter of the Mrs. Ahearn who owned Evergreen when we played there so often during the war. The course and clubhouse are much the same as they were then. Miss Ahearn and her "partners" own it now and it is for sale for $4.5 million. Steve shot 123, Steve, Jr. 105, and I, 109.

Evergreen Golf Course, Chicago; September 13, 1970.
L to R: Stephen Lawroski and Seaborg.

After the golf Steve drove us back to the Argonne Guest House where I changed clothes and packed my bags. Steve then drove us to the loop where he, his son and I had dinner at Diamond Jim's (formerly Pete's Steak House) on Dearborn Street. Helen and I were fond of eating at Pete's Steak House when we lived in Chicago during the war.

After dinner Steve drove me to the Pick-Congress Hotel where I checked into room 1463.

Monday, September 14, 1970 - Chicago - Washington, D.C.

I had breakfast with Chet Holifield and Ed Bauser, joined later by Commissioner Thompson and Jack Rosen, in the Hotel Coffee Shop. We discussed the serious problems of delays in reactor licensing, the problems with the NPR at Hanford, and the question of cooperation with European countries in the gaseous diffusion process.

I then went to the Golf Room to participate in the American Chemical Society Symposium "25 Years of Peaceful Nuclear Science." After being introduced by Paul Fields I gave my talk, "Another Look at the Past and Future of Transuranium Elements." This was followed by Holifield's talk, "C A M -- Congress, Atoms and Marriages." (His wife's name is Cam.) He spoke on his early efforts to assure civilian control of nuclear energy, the Dixon-Yates affair, his resistance to the sale of the gaseous diffusion plants, the early concern with radiation effects on people, the JCAE safety and security efforts (PAL devices), the LTBT,

the NPT, progress in civilian nuclear power, and the need to remain strong so we can stand up to the U.S.S.R.

Syd and I rode to the airport with Dunbar. Here we met Holifield and Bauser and the four of us flew to Washington National Airport on United Flight No. 634, leaving about 12 noon and arriving about 2:25 p.m. Holifield talked to me about approaches to President Nixon to convince him of the political importance to him of the breeder reactor so as to enlist his financial support. Holifield may enlist the help of John McCone and Lewis Strauss in this.

We arrived at the D.C. Office about 3 p.m.

I called Caspar Weinberger (Deputy Director, OMB) to tell him I had come back to a problem. In trying to meet the OMB specified ceiling of $2.275 billion for our FY 1972 budget, staff found no way of doing it except by excluding the N reactor at Hanford, a possibility given to us by OMB. Knowing that the shutdown of this reactor would involve a rough political situation, I asked Mr. Rubin to get in touch with Mr. Kriegsman and point this out. The word that came back from the White House was that we should not submit a budget that excludes the N reactor. We are now in the position of not being able to keep within the specified ceiling. Weinberger said that he has talked to John Young and Fred Schuldt, and they feel there are other ways that this can be done. He said he would be delighted to have his people sit down with ours to find some way of keeping within the ceiling without shutting down the N reactor, which is by no means a requirement of theirs. I said there would not be time in view of my departure on Wednesday. He then said that our budget need not come in in September and that while I am away the others could proceed. I said I would take it up with our people tomorrow and it might be that I would have to talk to him again before I leave. He said that would be fine. (He later called back and apologetically said that he had been too generous with the time allotted for our budget. He suggested that we submit it $20 million over the ceiling and then it could be worked out during my absence.)

The President today announced his intention to nominate Dwight J. Porter to be Deputy Representative to the IAEA, and his intention to nominate me as U.S. Representative and T. Keith Glennan, Clarence E. Larson, Verne B. Lewis and Dwight J. Porter as Alternative Representatives to the 14th General Conference of the IAEA.

Helen and I went to the farewell reception for Lee and Doris DuBridge given by PSAC in the Washington Room of the Army-Navy Club (Farragut Square). In the receiving line with the DuBridges were Dr. and Mrs. Edward E. David, Jr., and John Baldeschweiler, Vice Chairman of PSAC. A large number of people were there, including the Caspar Weinbergers, the Phil handlers, Pat Moynihan, Agriculture Secretary Clifford Hardin, the Bob Seamans', the Johnny Fosters, Det Bronk, Isidor Rabi, the Lewis Branscombs, and the Herbert Simons (PSAC).

After we went home to dinner I met Bob Prosser, one of Dave's friends at Davis, who has been staying with us since Saturday and is leaving tomorrow. Later I met Sig Linda Jacobson, Carol's and Dave's friend from Davis, who has been staying with us since last Thursday.

Tuesday, September 15, 1970 - Germantown

In my capacity as Chairman of the AEC Combined Federal Campaign, I spoke to the Division Directors at a kick-off meeting held in the auditorium at 9:30 a.m. Del Crowson, as Vice-Chairman, introduced me.

At 11 a.m. I presided over Regulatory Information Meeting 424 (notes attached). We approved the appointment of Charles Thornton as Director, Division of Nuclear Materials Safeguards, and gave Harold Price permission to offer the position of Director, Division of Materials Licensing, to Vance R. Cooper, if he decides he would like to do so. (Vance was a chemistry major classmate of mine at UCLA and a member of my Chemistry Section C-I at the wartime Metallurgical Laboratory.)

This was followed by Information Meeting 1063 (notes attached). We approved the appointment of Dr. William W. Burr, Jr., as the Deputy Director, Division of Biology and Medicine. We discussed further the KMS matter and I spoke strongly for giving KMS every chance to prove their claim of invention and the right to proceed. I suggested that perhaps there should be a panel of outside experts appointed to explore the genesis of the idea that Brueckner claims to have conceived; this would be along the lines that I discussed with Ed David. Staff will investigate this possibility. We also discussed the memo from Kissinger (copy attached) covering the proposed program of international cooperation in the uranium enrichment field and the NSSM 101 (copy attached) from Kissinger setting up a review of security requirements regarding uranium enrichment technology. I asked Commissioner Johnson to serve on the latter review committee representing the AEC.

I had lunch with Commissioner Larson and Julie Rubin.

At 2:30 p.m. I presided over Commission Meeting 2435 (action summary attached). We gave final approval for the letter to George Shultz on the FY 1972 budget. We debated a number of individual items. Commissioner Thompson wanted to shift a good part of the funds from the CIP to the gas centrifuge, and while I agreed with the soundness of such a shift, I decided to go along with the recommendation of the General Manager and the Controller that such a shift would jeopardize the money so that we wouldn't have it for either purpose. We did add, at Commissioner Thompson's suggestion, $800,000 for traineeships in the base budget.

I sent a letter to George Shultz (copy attached) regarding the problem of shortly reaching the limit of our capacity to supply uranium enriching services to cooperating foreign countries.

Wednesday, September 16, 1970 - Washington, D.C. - New York - Paris

Carol and Sig prepared breakfast for me, after which I was picked up at 5:30 a.m. by Henry Hinds and rode to Dulles Airport with Justin Bloom and Abe Friedman. We flew to New York Kennedy Airport on TWA Flight No. 802, leaving late at about 7:30 a.m. and we didn't land in New York until about 10 a.m. due to the weather. Pete and Jane met me at the gate and accompanied me to the other gate where the aircraft for the continuation of TWA Flight No. 802 to Paris was located. They had been waiting since about 8 a.m. hoping to have breakfast with me, but this wasn't possible because of our late arrival.

I boarded the plane with Bloom and Friedman, which left still later, about 10:50 a.m. We arrived at Orly Airport in Paris at about 10:10 p.m. We were met by Joe Lafleur (USAEC Scientific Representative in Paris) and Sam Rousso (Assistant USAEC Representative in Paris) and drove to the Queen Elizabeth Hotel where I met Helen in Room 33.

Helen and Robbie Bloom were met at the airport this morning by Joe and Joan Lafleur, shopped in the Commissary of the U.S. Embassy for perfume, and went for a walk on the Champs Elysee. They had lunch at the Lafleurs after being picked up at the Hotel by Mrs. Rousso. After lunch Mrs. Lafleur and Mrs. Rousso took

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

September 15, 1970

# REGULATORY INFORMATION MEETING 424

11:00 a.m., Tuesday, September 15, 1970, Room A-458, Germantown

1. Mr. Price's September 14 Memorandum re Environmental Statement Shoreham Nuclear Power Station Unit 1

   Approved with an addition. (DRL)

2. Mr. Price's September 14 Memorandum re Environmental Statement Milestone Nuclear Power Station Unit 2

   Approved. (DRL)

3. Report on Status of Wisconsin Electric Power Company and Wisconsin-Michigan Power Company, Point Beach Nuclear Plant Unit No. 2, Docket No. 50-301

   Staff may proceed. (Asst. GC for Lic. & Reg.-AS&LBP)

4. Mr. Price's September 14 Memorandum re Possible Rule Changes and Legislative Changes Relating to Authorization of Low Power Reactor Operation

   Approved. (ADRA)

5. Executive Personnel Appointments

   Approved. (ADRA-PER)

6. Mr. Hennessey's September 14 Memorandum re Response to Letter from Senator Hart regarding Environmental Matters at Issue in the Palisades Proceeding

   Approved. (GC-Rubin)

7. Mr. Price's September 14 Memorandum re Comprehensive Review of Federal Radiation Standards

Approved. (ADRA)

8. SECY-369 - AEC Representation on FRC Working Group

Approved with an addition. (AGMO-ADRA)

9. Commissioners' Meeting with the Advisory Committee on Reactor Safeguards

Deferred to October 1970. (SECY)

10. Commission Consideration of Various Regulatory Items

To be scheduled in early October. (SECY)

11. Practical Value Hearing

To be opened on Thursday, September 17, 1970, and continued. (GC)

12. Mr. Brown's Oral Report on Assistance to Senator Aiken

13. Mr. Harris' September 11 Draft 2 Memorandum re Public Information Procedures at Regulatory Hearings

Scheduled for consideration today. (SECY)

W. B. McCool
Secretary of the Commission

11:50 a. m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Price
Mr. Henderson
Mr. Hennessey
Mr. Rubin
Mr. McCool
Mr. Shapar*
Mr. Mann*
Mr. Buck*
Mr. Hollingsworth*
Mr. Bloch*
Mr. Brown*
Mr. Kull*
Mr. Erlewine*

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UNITED STATES
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COPY NO. 3
September 15, 1970

# INFORMATION MEETING 1063

11:50 a.m., Tuesday, September 15, 1970, Room A-458, Germantown

1. Commissioner Larson's September 9 Memorandum re Invitation to Join GAC Reactors Subcommittee on Forthcoming Visit on October 27, 1970

   Commissioner Larson will attend. (SECY)

2. September 14 Letter from KMS and Mr. Hennessey's September 15 Memorandum re September 9 Meeting with KMS Representatives

   The draft response for the General Counsel's signature will be circulated for the Commissioners' review and staff will review further possible action for consideration by the Commission. The White House and JCAE staff are to be informed. (GC-Rubin)

3. Mr. Kratzer's September 14 Memorandum re Proposed Program of International Cooperation in the Uranium Enrichment Field

   Approved with changes. (AGMIA)

4. September 14 NSSM 101 re Review of Security Requirements Regarding Uranium Enrichment Technology

   Commissioner Johnson will represent the AEC. (AGM-AGMIA-SECY)

5. Executive Personnel Appointment

   Approved. (PER)

6. SECY-362 - S. 3973 - Radiation Health and Safety Act of 1970

Approved. (GC)

7. SECY-360 - Program of Cooperation with Italy

Approved. (AGMMA-Rubin)

8. SECY-373 - IAEA Cooperation in CTR Research

Approved. (AGMIA)

9. SECY-351 - UKAEA Fuel Licensing Agreement with U.S. Firm

Approved. (RDT)

10. Proposed Letter to Walker Cisler, Power Reactor Development Company, re Status of the Enrico Fermi Atomic Power Reactor-1

Deferred. (RDT)

11. SECY-365 - Siting Studies for FBR Demonstration Plant

Noted. (EAGM)

12. SECY-366 - Relations with Mexican Nuclear Commission

Noted. (AGMIA)

13. Pending Contractual Matters Report No. 374

Noted. (PAR)

W. B. McCool
Secretary of the Commission

12:00 N

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Brown
Mr. Hennessey
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. Pender*
Mr. Tesche*
Mr. Gould*
Mr. Marshall*
Mr. Kratzer*
Mr. Quinn*
Mr. McBride*
Mr. Kavanagh*
Mr. Shaw*
Gen. Giller*

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NATIONAL SECURITY COUNCIL
WASHINGTON, D.C. 20506

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September 14, 1970

MEMORANDUM FOR

ACTING CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Proposed Program of International Cooperation in the Uranium Enrichment Field

The President has considered the recommendation of the NSC Under Secretaries Committee, as contained in your memorandum of February 26, 1970 and reaffirmed in your memorandum of April 26, 1970, regarding a program of international cooperation in the uranium enrichment field.

The President has approved, subject to appropriate prior consultations with the Joint Committee on Atomic Energy, exploratory talks with the Commission of the European Communities, the member States of EURATOM, and the United Kingdom on the possibility of the United States assisting in the construction of a multinationally owned and operated gaseous diffusion plant to be located in Western Europe.

Additionally, the President has decided that the United States will be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, particularly Japan, Canada and Australia.

The President has noted and approved in principle the negotiating strategy submitted by the NSC Under Secretaries Committee. He has also noted that the United States would insist that any related enrichment facilities and their products would be subject to meaningful safeguards and adequate security controls, and that the United States would give preference to multilateral control and ownership.

The President has approved the recommendation of the NSC Under Secretaries Committee subject to the following qualifications:

— The United States position should not be presented as a major cooperative program conditioned upon a continuing United States voice and participation in the actual management of any facilities.

— The United States shall be prepared not to hold back any technology in the gaseous diffusion process.

— Regarding any information on the United States gas centrifuge program it should be stated only that there is no authorization to discuss the gas centrifuge program and that the United States Atomic Energy Commission's gas centrifuge program is developmental in nature.

— The United States position on sharing of diffusion technology should not be represented to the Joint Committee on Atomic Energy as a means of impeding foreign gas centrifuge development. This development, especially in Europe, is an ongoing program and would probably not be curtailed by an offer to share diffusion technology unless the economics of the diffusion process were markedly more advantageous.

Noting that the NSC Under Secretaries Committee will report the results of these talks together with further recommendations as soon thereafter as possible, the President has additionally requested interim reports on the consultations with the Joint Committee on Atomic Energy and on the initial discussions with the United Kingdom.

Henry A. Kissinger

cc: The Chairman, Atomic Energy Commission

NATIONAL SECURITY COUNCIL
WASHINGTON, D.C. 20506

National Security Study Memorandum 101

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TO: The Secretary of State
The Secretary of Defense
The Director of Central Intelligence
The Director, National Security Agency
The Director, Federal Bureau of Investigation
The Chairman, Atomic Energy Commission
The Director, Office of Science and Technology

SUBJECT: Review of Security Requirements regarding Uranium Enrichment Technology

The President has directed a review of United States security requirements to determine whether a need continues for the classification of uranium enrichment technologies and, if so, to what extent.

This study should take into consideration the security interests involved in the classification of both the gaseous diffusion process and the gas centrifuge process. The study should also consider the relations of these security interests to the dissemination of these technologies to foreign governmental or non-governmental bodies. Where appropriate, the study should identify and provide the rationale for the classification of any particular elements of uranium enrichment processes which are considered more sensitive than others.

The President has directed that the United States Intelligence Board perform this study. For the purposes of this study, the United States Intelligence Board shall include representatives of the addressees and a representative of the Assistant to the President for National Security Affairs.

The study should be submitted to the NSC Review Group by October 29, 1970.

Henry A. Kissinger

cc: The Director, Arms Control and Disarmament Agency
The Chairman, Joint Chiefs of Staff
The Director, Office of Management and Budget

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

September 16, 1970
Approved REH
Date

R. E. Hollingsworth, General Manager

ACTION SUMMARY OF MEETING 2435, TUESDAY, SEPTEMBER 15, 1970, 2:45 P.M., ROOM A-410, GERMANTOWN, MARYLAND

SECY:LGH

Commission Business

1. Minutes of Meetings 2422, 2423, 2425, 2426 and 2427

   Approved, as revised, subject to comments by Commissioner Ramey. (SECY)

2. SECY-287 - FY 1972 Budget (See also SECY-286, SECY-290, SECY-328, SECY-367 and SECY-374)

   a. Approved, as revised, with the following changes:

      (1) inclusion of an additional $20 million of outlays in the OMB case for operation of the N reactor;

      (2) addition in the Weapons Program budget of $13 million NOA to the OMB case for the AFAP facility, and deletion of an equal amount from Fire Protection & Safety; and

      (3) addition of $800,000 to the NET budget for nuclear engineering study support, with offsetting reductions elsewhere in the Commission's budget to be determined by the GM. The Commission noted designation of the line item for this support will be left to the discretion of staff.

   b. Requested the following revisions in the draft letter to OMB re FY 1972 Budget (SECY-367):

      (1) addition in the Nuclear Rocket Propulsion statement (page 2) of a reference to the Vice Presidential Task Force endorsement of, and Congressional support for, ROVER;

      (2) deletion of "precipitous" from the Nuclear Rocket Propulsion statement; and

      (3) insertion of the following closing statement:
      "We would welcome the opportunity to discuss our programs and budget with you at your convenience."

c. Commissioner Thompson requested the Record reflect his dissent on:

(1) the approved apportionment of FY 1972 funds for the CIP and Gas Centrifuge items; and

(2) the lack of FY 1972 support for the Fermi reactor. Commissioner Thompson noted he would prepare memoranda for the Record elaborating his position.

d. Commissioner Thompson requested a briefing by the Controller on staff's detailed analysis of the OMB budget ceiling.

e. The Commission noted the following items could, at its discretion, be reconsidered:

(1) Gas Cooled Fast Reactor, dependent upon FY 1971 Appropriations actions; and

(2) Fermi reactor support, dependent upon forthcoming user group proposals.

(OC)

3. SECY-262 - 1970 Materials Planning Estimate

Approved. (PA)

4. September 14 Draft of Proposed Response to September 1, 1970, OMB Letter (See also SECY-368)

Approved, subject to comments by individual Commissioners.

The Commission requested the addition of a closing statement similar to Item 2b.(3) above. (AGMMA/OC)

The Commission noted staff would confer, if the need arises, with the Acting Chairman regarding the preparation of background information on the four Safeguards for use by Senator Jackson. (AGMMA)

5. September 11, 1970 Draft Statement re Public Information Procedures at Regulatory Hearings

Discussed. The Commission requested staff review with the Commissioners' Environmental Group and early submission of recommendations.

The Commission noted staff's intention to make a Regulatory staff member available at the Shoreham Hearing to provide information limited solely to Regulatory procedural questions which might arise. The Commission further noted this procedure would apply on an ad hoc basis only to the Shoreham Hearing.

(DR/AGM/GC)

6. Westinghouse Press Release re Standard Safety Analysis Report

Original signed
W. B. McCool

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

UNITED STATES
ATOMIC ENERGY COMMISSION

UNCL. BY DOE
NOV 82

SEP 15 1970

Honorable George P. Shultz
Director
Office of Management and Budget

Dear Mr. Shultz:

Following my visit to Japan earlier this year, I wrote to Mr. Mayo on May 27, 1970, describing the rapidly expanding nuclear power program in Japan, the keen interest of the Japanese in obtaining assurances for the supply of additional enrichment services to meet the needs of that program, and the potential benefits which could accrue to the United States in supplying such needs. In that letter, I noted that it had been necessary to advise the Japanese that we would not be able to make commitments, as they had requested, to supply uranium enrichment services for those power reactors on which they expected to make construction commitments through 1974, since the dates when such reactors would begin operation appeared to extend into a period when our existing uranium enrichment capability was expected to be fully committed.

In this connection, I should observe that in giving international undertakings for the supply of uranium enrichment services under agreements for cooperation, we have taken the position that the separative capability required to meet such commitments must be within the existing, authorized, or otherwise assured capacity of our enrichment facilities. This is to avoid any possibility of overcommitting ourselves to another government, with consequent serious political implications. We did indicate to the Japanese, however, that under present policy applicable at least for the immediate future, we would be able to enter into an amended agreement which would cover the needs of nuclear power plants which Japan plans to place under construction within a forward period of three years.

Subsequently, on the basis of an assessment of the annual growth rate of electric power consumption in Japan for the years 1968-1970, the Japanese have made updated projections of electric power requirements for the period through 1980. The nuclear portion of their plan now calls for the start of construction of 13 reactors through calendar year 1973. This is in contrast to the 11 reactors scheduled to be committed for construction through 1974 as of the time of my visit

earlier this year. The overall Japanese program for nuclear power plants in operation, under construction, or committed for construction through 1973, now includes 26 plants with a total capacity of over 17,000,000 kilowatts.

Following the adoption of this revised plan, officials of the Japanese Government visited AEC to request that the amendment to our Agreement for Cooperation which is currently under negotiation, include provision for these 13 additional reactors through 1998, the terminal date of the Agreement. In accordance with current Commission policy in this regard, the Commission is proceeding to notify the Japanese Government that we are prepared to allocate, in the amendment to our Agreement, for enrichment services necessary to fuel the planned 13 additional reactors.

As you may know, the Commission requested, in both its FY 1970 and 1971 budgets, approval to begin a program of modifications to the existing diffusion plants which would provide, ultimately, about a 50% increase in their capacity. Since these requests were not approved, and without further substantive assurances related thereto, we have felt it only prudent to impose a limit on our contracting and international agreements, determined on the basis of what we can deliver within the capability of the unimproved plants.

We now find that, under this policy, we could very shortly reach the point where requests for new undertakings in agreements for cooperation, together with the requirements of domestic power plants which have been committed for construction, would exceed our existing capability, and thus could not be accepted. We believe that the consequent curtailment in our ability to agree to supply enriching services to cooperating foreign governments for their nuclear power programs would lose for the United States many of the important advantages from which it has benefited under its longstanding international fuel supply policy. These benefits include: (a) the contribution to national security and, in particular, our national policy of seeking to avoid the proliferation of nuclear weapons; (b) the encouragement of strong and mutually beneficial economic ties between ourselves and the user nations; (c) the important economic benefits to the U.S. from this expanded foreign trade; and (d) the significant contributions to helping to redress the U.S. balance-of-payments deficit. Our inability to take a more positive position with respect to the initial Japanese request already is making itself felt. Recently, we were advised by senior Japanese officials that our reluctance to enter into longer term undertakings or to give a strong reassurance of our continuing ability to meet further fuel needs of the rapidly expanding Japanese power program had crystallized influential opinion in Japan on the need to plan to construct an independent uranium enrichment capability at the earliest feasible date.

On economic grounds, we know of no disagreement within the Government or the industry that the proposed cascade improvements represent by far the least expensive approach to providing increased capacity for the foreseeable future. While it is important, again on the basis of economics, that the improvements to the existing plants be accomplished prior to the startup of new plants (projected for about 1980), the issue which faces us at the present moment is not the question of the specific schedule for accomplishing such improvements. Rather, it is whether we can consider that the enriching capability, within which we must limit our forward supply undertakings, includes the increment obtainable from improving and uprating the existing plants.

With the foregoing considerations in mind, we are, therefore, planning to regard our enrichment "capability" as including cascade modifications undertaken on a schedule which would, as a minimum, be consistent with the anticipated growth in requirements for enrichment services. Without this assumption, we believe it will be necessary, within the relatively near future, to curtail our policy of giving long-term fuel supply assurances to cooperating foreign countries--a policy which we feel has made, and can continue to make, important contributions to U.S. foreign policy and economic goals.

I would appreciate your early advice and comments on this matter.

Cordially,

Chairman

them to the Grand Palais to see an exhibit of painting and sculpture by Henri Matisse. Helen and Robbie had a bite to eat for dinner (onion soup and french pastry) at the Le Marignan on the Champs Elysee.

Thursday, September 17, 1970 - Paris

I rode with Lafleur, Bloom and Friedman to the CEA Headquarters (29-33 Rue de la Federation, Paris XV). We attended a luncheon with Robert Hirsch, Andre Giraud (who is to replace Hirsch as CEA Administrator General), Bertrand Goldschmidt and Jean Renou. I talked to Goldschmidt about his three-month stay at the Met Lab in 1942. He thinks he may have started a few days before July 20, but is not sure, and terminated on about October 28 or 29. He recalls that we gave him a black briefcase and a small replica of a pig feeding trough (because he worked in the lab like a pig) at his farewell party. He had a sheet of Met Lab stationary signed by those who contributed to the purchase of his briefcase (probably those present at his farewell party) and said he will send me a copy of this and of a couple of official letters connected with visit assignment to the Met Lab in 1942. He doesn't remember where his farewell party was held. He recalls my complaining that Ted Magel never worked at night. He recalls that my chemistry group (Section C-I) met on Tuesday evening and the laboratory-wide research associates (not limited to group leaders) met on Thursday evening.

After lunch we discussed the French decision to install light water reactors and the USAEC-CEA fast reactor exchange. They commented on their decision of last year that in spite of the technical success of the French gas-graphite reactors, no more of them would be built beyond those now under construction (St. Laurent-2 and Bugey-1). They said that France would now go to light water reactors for their domestic power program, although they were not ready to say whether they would build PWR's or BWR's. The decision to abandon the gas-cooled concept was based on economics.

We also discussed U.S.-French collaboration on fast reactors. We explored the possibilities of making the exchange more useful to us. Friedman noted that lease of enriched fuel for the Rapsodie program was made on the understanding that this was a research project, the results of which were to be made available to us. If they held back information on the basis that it was "commercial" then we couldn't continue to lease and they would have to purchase the fuel. They said they might do that.

The French expressed interest in an arrangement similar to the U.S.-U.K. fast reactor exchange as well as having an opportunity to sell technology to U.S. private industry under arrangements similar to that worked out between the U.K. and Atomics International. As regards the latter, we told them that this was something they were free to negotiate on their own with private industry in the U.S.

We were met by Marc Lefort (Director of the Heavy Ion Laboratory of the Institute of Nuclear Physics, University of Paris, at Orsay) who escorted Bloom, Friedman, Lafleur and me to the Orsay Laboratory in a rented Cadillac. We were met at the entrance to Building 106 (Cyclotron Ions Lourdis) by Professor Georges Bouissieres, Director of the Radiochemistry Division, and by Professor Michel Riou, Director of the Nuclear Physics Division. We were first taken to a meeting room where Lefort explained the design of the linac-cyclotron combination. The ion source operates at 150 KV above ground and injects into a Sloan-Lawrence linac which accelerates heavy ions to 1 MeV/nucleon. A series of bending and focusing magnets and vacuum pipes transports the beam to the cyclotron, located in another room. The ions can be stripped to a higher charge state by graphite foils before being injected into the cyclotron. Krypton ions,

for example, leave the linac at $8^+$ charge state and are further stripped to $21\text{-}23^+$. Krypton ions emerge from the cyclotron at 430 MeV total energy or about 5 MeV/nucleon. Lefort mentioned that Oganessian from Dubna is in residence for a year at Orsay and has brought a supply of $^{86}Kr$ from the U.S.S.R. for use in the cyclotron.

The cyclotron's maximum radius is 85 cm and the largest magnetic field attainable is 15 kilogauss. It cannot accelerate $H^+$ because of the high e/m; the lightest particle that can be accelerated is $^4He^{2+}$.

For making superheavy elements, the krypton beam enters one of two reaction chambers. An electrostatic deflector in the chamber is to be used to separate superheavy ions from the krypton, thus the full beam will not enter the magnetic time-of-flight mass spectrometer which analyzes the mass and energy of the superheavy ions formed. The existing ion source limits the krypton beam to about $10^8$ particles per second, which is not sufficient to give a reasonable yield of superheavy elements. Oganessian will redesign the ion source to increase the final beam intensity by a factor of three to four. Another improvement being made is to build a new platform for the ion sources, the present one being somewhat unsatisfactory in its high voltage insulating properties.

Lefort concluded the briefing by noting that the most probable charge states that have been obtained for krypton are about 2 to 3 less than calculated by Schmelzer at 4-5 MeV/nucleon.

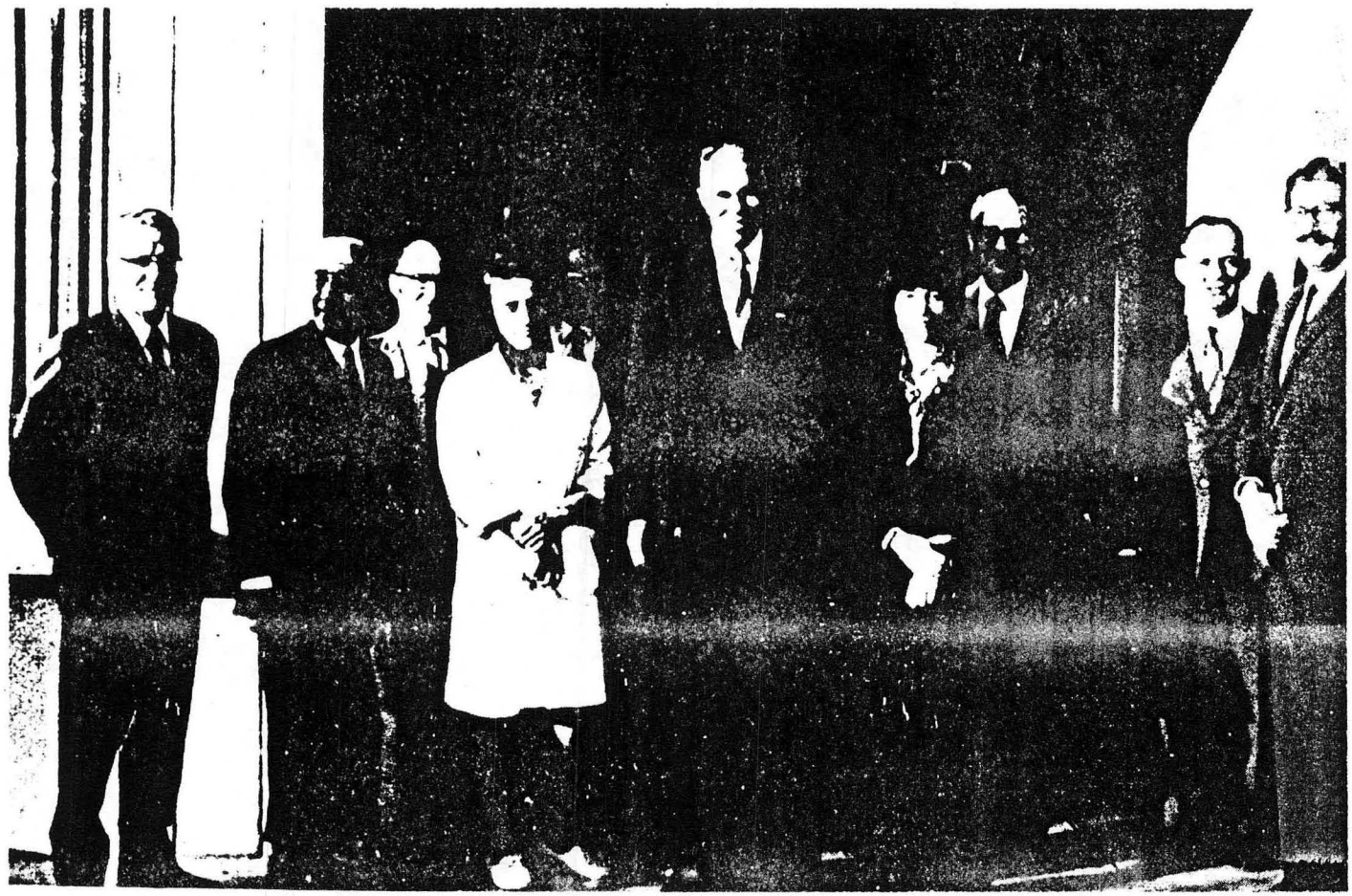
We were then taken on a tour of the cyclotron laboratory, where we first saw the existing ion source and the changes being made to the platform. Dr. C. Bieth, the man in charge of the machine, escorted us through the building. We examined the various bending magnets and other equipment, as well as the cyclotron itself. Since the machine had not been built originally to have a linac injector for heavy ions, it was necessary to construct a hole in the wall of the cyclotron room--chipping out concrete to accommodate the last bending magnet.

We also saw the work being done by Dr. N'Guyen Long Den on the target, a peculiar U-shaped instrument designed to facilitate electrostatic separation of superheavy ions from the krypton beam. We were then shown the interesting carbon foil stripper that is used; it operates like the slide changer in a slide projector and has a capacity of about 20 foils, which can be changed while the cyclotron is under vacuum. Foil degradation has not been a serious problem, however, and a single foil has lasted for weeks.

Next we returned to the conference room where Dr. Francois David briefed us on his research on the measurement of oxidation-reduction potentials of the 4f and 5f elements, using dropping mercury polarography. With the 5f elements, he uses concentrations of $10^{-8}$ to $10^{-12}M$, which are too low for classical techniques, so he uses radioisotopes which are counted in each drop emerging from the mercury electrode. The measurements are made in $LiClO_4$ solution. The technique has been tried on many 4f elements to prove it out and also on $^{228}Ac$, $^{241}Am$, $^{244}Cm$, and $^{252}Cf$. The waves give the potentials for $M^{2+} + 2e^- \rightarrow M$ (Hg) and $M^{3+} \rightarrow M$ (Hg). Some of the values for the III-II reduction potential he has obtained are:

| | |
|---|---|
| Am | -1.5v |
| Cm | -1.5v |
| Cf | -1.4v |
| Ac | -1.6v |
| Sm | -1.5v |
| Eu | -1.7v |

All values are $\pm$0.1v.



Visit to Orsay, Institute of Nuclear Physics (IPN), September 17, 1970

L to R: Georges Bouissières, Michel Riou, Marc Lefort, Hélène Langevin, Roger Mayer, Seaborg, Monique Pages, Anthony Turkevish, Joseph Lafleur and Abraham Friedman

We were then briefed by Madame Monique Pages, who had worked with Burris Cunningham at Berkeley. She is doing work on the chemistry of actinide compounds such as $Li_x NpO_6$ and $Ba_3(NpO_5)_2$, and has been trying to find if $Am^{2+}$ exists in liquid ammonia.

Following the briefings we were served champagne and cookies, at which time we were joined by Tony Turkevich, who is on sabbatical at Orsay from the University of Chicago. During this visit we also met Roger Mayer (Administrator, IPN) and Hélène Langevin.

Lefort mentioned that Yuriy Tsolakovich Oganessian from Dubna is in residence for a year at Orsay and had brought a supply of $^{86}Kr$ from the U.S.S.R. for use in the cyclotron.

Recalling that Ghiorso wants Oganessian to come to Berkeley for a year, I tried to reach Oganessian by telephone. He had left the lab for the day so I asked the lab people to try to reach him with a message that I wanted to talk to him.

We went outside to have movies and slides taken of the group. It later turned out that the movie camera was not working properly, so only slides were obtained.

After the visit at Orsay, Bloom, Friedman, Lafleur and I rode back to the Queen Elizabeth Hotel in the Cadillac.

Here I met Helen in our room. She had had lunch at the Bertrand Goldschmidts, 11 Blvd. Flandrin, 6th floor, where Iz and Lee Perlman were also present. Bert Goldschmidt joined them after leaving the Hirsch-Giraud luncheon early. After lunch Helen and Robbie, Joan Lafleur and Ada Rousso visited the Louvre. After returning to the hotel, Helen and Robbie took a cab to and went up the Eiffel Tower, then walked back to the hotel.

Helen and I prepared for dinner. We rode to the U.S. Ambassador's residence with the Lafleurs with Friedman and the Blooms following in another car. Here I co-hosted a dinner with Minister-Counselor Perry H. Culley (American Chargé d'Affaires). Present, in addition to Mr. and Mrs. Culley, were Francois-Xavier Ortoli (Minister for Industrial Development and Scientific Research) and Mme Ortoli, Pierre Aigrain (Delegate General for Scientific Research and Technology) and Madame Aigrain, Bertrand Goldschmidt (Director External Relations and Programs, Commissariat à l'Energie Atomique) and Madame Goldschmidt, Jean Couture (Secretary General for Energy), Pierre Huet (President ATEN, Association Technique pour l'Energie Nucléaire) and Madame Huet, Madame Bernard Lacost (Office of Directorate for External Relations and Programs, Commissariat à l'Energie Atomique), Mrs. Harry Parker (wife of the Assistant Manager, Technical Operations, USAEC Richland Operations Office), Mrs. George Lohse (wife of the Director of Waste Management, Idaho Nuclear Corporation); from the U.S. Embassy Mr. and Mrs. Edgar L. Piret (Counselor for Scientific Affairs), Mr. and Mrs. Joseph D. Lafleur and Mr. Samuel Rousso.

Before dinner I called Iz Perlman at his hotel and greeted and said goodbye to him--he and Lee are driving south through France (to Marseille) tomorrow in their newly purchased Peugeot en route to Israel.

At dinner I sat between Mrs. Culley and Mrs. Ortoli. After dinner, Culley and I extended a word of welcome to our guests. I recalled Goldschmidt's stay at the Met Lab in 1942, including his witnessing of the historic events of August 20 (first view of a plutonium compound) and September 10 (first weighing of a compound of plutonium), Helen's and my visit to Paris in 1951, my visit to Orsay today and Grenoble tomorrow, the long and fruitful cooperation of the U.S. and

France in the peaceful uses of nuclear energy through good days and bad; I ended with a toast expressing the hope for such continued cooperation. Ortoli responded with some friendly remarks.

After the dinner we rode back to our hotel. Helen and I took about an hour's walk on the Champs Elysee and other areas. When we returned to our hotel, we learned that Oganessian had dropped by during our walk. He called me in our room about 15 minutes later.

I extended to Oganessian the invitation of Ghiorso to come to Berkeley and work with him. He said he would like to but he has a year's contract to work at Orsay which he just started 10 days ago--he would like to come to Berkeley starting in September 1971. He expressed doubt that they would be able to do very much with the Orsay heavy ion cyclotron due to the lack of beam intensity. He told me about a number of experiments attempted and planned for the transuranium elements at the Dubna cyclotron. They attempted to produce element 125 by bombarding Am-243 with Zn-66, looking for spontaneous fission, but found nothing, setting an upper limit for the formation cross-section of $10^{-29}$ $cm^2$. He said that he has run very careful excitation functions for the 0.1 second element 104 spontaneous fission activity and on the basis of the shape and peak at 114 MeV has decided that it must be due to mass no. 260 formed by a 4n reaction (Pu-242 + Ne-22). He thinks Ghiorso is failing to find this due to the small yield, i.e., it is below Ghiorso's threshold of detection.

He also finds a 5 second spontaneous fission activity corresponding to the shape and peak energy of a 5n reaction and at one-tenth the expected yield, hence corresponding to 104-259 with a 10 percent spontaneous fission branching ratio (based on yield and assumed identity with Ghiorso's 3 second alpha emitting 104-259). I pointed out that a 50 second SF half-life for 104-259 and a 0.1 second SF half-life for 104-260 correspond to an odd neutron hindrance ratio of only 500 which seems too small. He said that he has given this a lot of thought and concluded that this is consistent with the modified SF systematics in the region beyond 102. He said the Viola and Seaborg systematics work fairly well up to 102 but require some modification for both alpha and spontaneous fission decay beyond 102, (e.g. the 2 second SF activity of element 105), but the Ghiorso SF systematics (which predict a $10^{-6}$ second SF half-life for 104-260) are not at all applicable in this region.

Oganessian then told me about the Dubna plans to produce elements 106 and 107. For 106 they plan to use Si-28 and Si-30, which they already have at an intensity of one microampere, to bombard U-238. On the basis of observed yields, he expects a decrease of a factor of 20 from the yield of element 105 (Am-243 + Ne-22) which corresponds to a cross section of $2 \times 10^{-33}$ $cm^2$. Hence he expects for 106 a cross section of $10^{-34}$ $cm^2$. However, in order to get a detectable amount of 106, defined as one SF count per hour (they routinely make 100 hour bombardments) they need 5 microamperes of Si ions so they are attempting to increase this ion beam. They haven't found anything yet but they apparently haven't tried much yet pending the attainment of a larger beam. For element 107 they apparently have in mind something like U-238 + P-31. He didn't elaborate on the expected yield here, but apparently he expects something close to $10^{-34}$ $cm^2$. Perhaps he thinks the yields go in pairs, i.e., $2 \times 10^{-33}$ $cm^2$ for 104 and 105, and $10^{-34}$ $cm^2$ for 106 and 107. He said that according to the modified (i.e. beyond element 102) systematics of Viola and Seaborg, he expects the half-lives of the anticipated 106-261 and 107-263 to be about one second with about 50 percent branching between SF and alpha decay. He may have been somewhat confused here as to the actual mass numbers expected because, in connection with element 107, he first said they were planning on using Mg ions, and it wasn't until I pointed out that this wouldn't do it

(produce element 107) with U-238 that he corrected himself and said he meant to say P-31 ions.

Oganessian said that in the case of element 106 they were using volatile silicon compounds in the ion source such as the chloride or fluoride. Apparently these experiments are to be carried out soon by the Flerov group in Oganessian's absence. I suggested that he send all of the information that he had given me to Ghiorso and he said he would do so immediately. He said he would write Ghiorso a letter tomorrow morning (that would be Friday, September 18). He added that he would be free to do this now that he is in Paris. He expressed great admiration for Ghiorso and said he would be honored to work in his exciting and imaginative laboratory. He told me that Flerov expects to shut down to start the cyclotron modifications in February 1971 and they expect this to take one to one and a half years.

Friday, September 18, 1970 - Paris - Grenoble

Our group, including Lafleur, rode to Orly Airport in the two Embassy cars, and then flew to Grenoble on Air Inter Flight No. 541, leaving at about 9 a.m. and arriving at about 10:30 a.m. We were met by Gerard Mitault of the External Relations Department of the Centre d'Etudes Nucléaires de Grenoble (CENG), who rode with Justin and me on the somewhat lengthy trip from the airport to the outskirts of Grenoble. The others followed in two cars, with the women being taken directly to their activities. On the way we drove through a valley with the Vercors Mountains on our right (south) and the Chartreuse Mountains on our left (north). The Chartreuse Mountains in particular are striking, with bare rock cliffs rising almost vertically.

We were taken directly to the Max von Lauë-Langevin Institute, where we were met by Professor Heinz Maier-Leibnitz, the Director of the Institute and his deputy, B. Jacrot. They first took us on a tour of the High Flux Reactor being built for the Institute. The reactor is similar in nature to the HFBR at Brookhaven, and is about 50 percent completed. It is housed in a huge containment shell 60 meters in diameter and 40 meters high. Most of the reactor is above grade, and one unusual feature that we saw was an elevated, concrete shielded canal for transferring spent fuel elements. On emerging from the reactor building we had pictures taken.

We then went to another building where we were briefed by Maier-Leibnitz, Jacrot, Jacquemin (Chief of Service and Operating Team) and Droulers (Chief of Operation), who described the reactor and the administrative set-up.

Double containment shells house the reactor, with an overpressure being maintained between the shells. If the core should rupture, the containment can be maintained gas-tight for about one day.

The core is similar in design to the HFBR core, except that there is no flux trap. It is about 39 cm in outside diameter and 20 cm in inside diameter, and about 80 cm high, with curved fuel plates. Maximum flux of about $1.5 \times 10^{15}$ is obtained at a distance of about 25 cm from the outside of the core, in the heavy water coolant. Heavy water flows down through the core and then up around the core, acting as the reflector. The inventory of heavy water is 45 tons. Light water surrounds the reflector region. The velocity of heavy water through the core is 15m/sec at a pressure of 14 atm in and 4 atm out. The linear power density is 500 kw/cm.

Total cost of the reactor proper will be 240 million francs; an additional 48 million francs will be spent on equipment and 40 million on the support

activities of the Institute during construction. Annual operating costs are estimated to be 53 million francs. The French and German governments are dividing the costs equally, and there will be equal numbers of staff from each country. Approximately equal construction spending in the two countries is being attempted.

The principal difference between the reactor and the HFBR is that it will have a hot source of neutrons (0.5 Å) and a cold source (liquid helium). The hot source will be a graphite block raised to 2000° K by 10 KW of nuclear heating. Compared to the HFBR, about twice the beam tube irradiation area will be available. About one-half the height of the core is taken up by beam tubes. Three rabbits will be installed: one near the core, one in the heavy water, and one in the light water. The neutron flux in the cold source will be about 50 times the thermal flux.

NUKEM and SERCA are each fabricating half of the cores, which will last about 42 days in the reactor. The cores will probably be reprocessed at Eurochemic.

Principal attention in maintaining the integrity of the heavy water has been given to leaks from the heavy water tank into the building. No one seems to be too worried about leakage into the light water.

Tritium formed in the heavy water will be removed by isotopic exchange with deuterium gas, until about 50 percent tritium in deuterium is reached. The gas will then be liquified and fractionated to remove the tritium. An equilibrium tritium concentration in heavy water of 3 Ci/liter is expected.

The project was originally formed under OECD auspices, but in 1963 was converted to a Franco-German project, receiving approval from both governments in 1967. The Institute, a civil "Society," is owned as follows: CEA, 25 percent; CNRS (Grenoble), 25 percent; Gfk (Karlsruhe), 50 percent. The agreement stipulates that other countries can "buy into" the Institute, but this would be a laborious process. Outside scientific cooperation is encouraged. There will be no selling of irradiation space.

Annual operating costs are estimated as follows:

| | Personnel | Materials | Total |
|---|---|---|---|
| Reactor | 3.3 | 16.7 | 20 million Francs |
| Technical services | 2.4 | 2.6 | 5 |
| Administration | 1.5 | 2.5 | 4 |
| Scientific | | | 29 |
| | | | 58 million Francs |

From 70 to 80 people are required to run the reactor. An estimated 100 to 200 scientists will be in residence, of which about 70 percent will be from outside the Institute.

Maier-Leibnitz is director of the Institute (he will remain there only until the reactor is completed) but he does not direct the construction. A Scientific Council will decide which experiments are to be conducted, and a Steering Committee made up of representatives of the two countries decides all policy issues. The Institute is separate and distinct from the Grenoble Centre, with which it has formal contractual relationships.

Upon conclusion of the briefing, we were driven to the CEA Guest House, located in the hills above Grenoble, (I rode with Justin and Professor Maier-Leibnitz), where a luncheon was given for our party by Maier-Leibnitz and Professor Louis

Néel (Director of CENG). Others present were Jacrot, Francois Rosillon (Reactors-CENG), Blin (Metallurgy-CENG), Cordelle (Electronics-CENG), Mitault, and Donvez (External Relations-CENG).

Following lunch, we were driven back to the city of Grenoble to the CENG, where I gave a talk "Recent Developments in Transuranium Research." We were then taken on a tour of some of the facilities there by the CENG personnel who had been at lunch. We saw the 30 MW SILOE reactor in operation. It is of the swimming pool type, very modern and very crowded with experiments. It looked like an excellent facility. The power rating had been increased by a factor of three by use of a novel convection flow arrangement for the cooling water. Thus the pool is remarkably small in size for a reactor of this power.

We were next shown a variety of equipment by R. Allemand that has been designed for materials testing in reactors and which is offered for sale by CEA: a high temperature (700° C) resonant cavity device for measuring length and diameter changes of specimens undergoing neutron irradiation, a very high temperature (2000° C) heating capsule, and a neutron diffractometer which gives a scan in 15 minutes. Here we met E. Roudaut, J. Jacobe, and P. Convert.

We then left the SILOE reactor building and visited another laboratory building where photographic processes were being developed for making microelectronic circuits. Following this, we were given a short briefing by Cordelle on the mechanisms used by CENG to perform work, both nuclear and non-nuclear, for French private industry.

Since two hours remained before our dinner engagement, I asked Mitault that we be driven to some place in the mountains where we could go for a hike. The word "hike" was unfamiliar to him and it took some negotiation in French and English before we were able to explain what we wanted. Then we were driven to the hills near the Guest House and we set off on a hike over a trail that circled around and ultimately came back to where we had left the car. Mitault, Friedman, Lafleur and I made the entire hike; Justin dropped out after a while and returned to the car by a paved road. We were then driven back to the Guest House.

When I returned to the Guest House, I met Helen in our room (no. 1). She had spent the day as follows: She and Robbie were escorted by Mrs. Lambert, a secretary of the Deputy Administrator of Grenoble Center, to the Musée Dauphinois, which was housed in an old monastery and fortress. This is a museum of archeology and ethnology of the Grenoble region. It is newly opened as a museum. It is interesting and contains some interesting fossils and minerals. They then drove out in the mountains to a restaurant Colombié where they had a marvelous lunch of frogs' legs and chicken (Colombié). From there they were driven on up the mountain to the Monasterre de la Grande-Chartreuse. There is a museum showing the way of life of the monks of that monastery--the Order of San Bruno. The monks take oaths of both silence and solitude. They then walked on up the mountain to the monastery gate, bought some postcards and walked down. The mountains there are very high with rocky surfaces rising sheer from meadows. They then were driven back to Grenoble through the old and then the new city and then to the Center Guest House (which some refer to as the Castle).

Helen and I prepared for dinner. We were driven in our Center car, the Blooms in another, to the nearby home of the Maier-Leibnitz. Here we had dinner with the Maier-Leibnitzes. It was prepared by Professor Maier-Leibnitz who has a hobby of cooking. The meal included soup with dumplings and Guinea hen, both very good. We had an evening of interesting and amusing conversation. Mrs. Maier-Leibnitz is very lively as is he. He drove us back to the Guest House.

Saturday, September 19, 1970 - Grenoble - Geneva

The Blooms, Friedman, Lafleur, Helen and I had breakfast together in the Guest House. We then said goodbye to Lafleur who is returning to Paris.

We then started, at about 9 a.m., on our automobile ride to Chamonix. Helen and I rode with Mitault and a driver in a Renault 16, followed by the Blooms and Friedman in a station wagon. We rode northeast on the highway to Chambery. We passed near the area where the Winter Olympic Games were held in 1968. We followed the Isere River for a part of the way. We drove generally north to Annecy on Lac D'Annecy, then around the north end of Lac D'Annecy by the Castle of Monthon and then generally east toward Chamonix.

When we arrived at Chamonix at 1 p.m., we rode Le Telepherique up to the 6,000 ft. level where we had lunch at Pavilion de Planpraz. After lunch we hiked to the top of one of the nearby peaks. We met a medical student, Nick Rosenblum, who was hiking in this area preparatory to starting medical school in southern France. He did his undergraduate work at Baldwin-Wallace College and his Master's Degree in chemistry at Middlebury College and his home is in New Jersey.

Above Chamoix, France; September 19, 1970.
L to R: Glenn and Helen Seaborg.

We rode Le Telepherique back down to Chamonix and started toward Geneva at a little before 4 p.m.

We arrived at the Hotel DuRhone in Geneva and Helen and I checked into Room 339. Helen and I, the Blooms and Friedman then went for a walk in the old city of Geneva, across the Rhine River. We located the birthplace of Rousseau in Rue Grand. We had dinner (i.e., Friedman and I, the others had only soup) at the restaurant La Berline (Cafe Glacier) on Rue du Vieux College. After this we walked further in the same district, then returned across the river back to our hotel.

Sunday, September 20, 1970 - Geneva - Frankfurt - Karlsruhe - Black Forest

Helen and I had breakfast in our room. I talked to Dr. H. David Bruner and George Spiegal in the lobby about the impending meeting of UNSCEAR (United Nations Scientific Committee on the Effects of Atomic Radiation) in Geneva.

Helen and I rode to the airport in a U.S. Embassy car with our escort officer, Edward Gaumond (whom we saw for the first time) followed by the Blooms and Friedman in another Embassy car. Our plane was somewhat late (probably due to the search procedures). We all had to go through metal detection apparatus--Justin, Abe and I didn't pass the test and so had to be searched. The plane left at about 12 noon, about an hour late, and arrived in Frankfurt at about 1 p.m.

We were met by Thomas Bleha, our control officer from the U.S. Consulate in Frankfurt and by Professor Otto Haxel, of Heidelberg University and who is spending the next half year or so as scientific director of the Karlsruhe Research Center. Helen and I rode in a Research Center car with Haxel and driver to the Park Hotel in Karlsruhe, followed by the others (Woesler, the Blooms, and Friedman) in two other Research Center cars. Helen and I checked into room 402 in the Park Hotel. I met Woesler (head of international activities and protocol for Karlsruhe Nuclear Research Center) and Mr. and Mrs. Clyde McClelland (Scientific Attaché, U.S. Embassy, Bonn) in the hotel lobby. Helen and I had a bite to eat with the Blooms in the hotel restaurant. We met Glenn Bradley (Senior USAEC Scientific Representative, Brussels) in the lobby, just in from Brussels.

We left at about 3:45 p.m. in three Research Center cars, Helen and I and Professor and Mrs. Haxel in the first car, followed by the Blooms, Friedman, Bradley and Woesler in the other cars, for the ride to the Black Forest so that we could take a hike at my request. We rode through Baden-Baden and on into the Forest to an elevation of about 750 meters at the village of Herrenwies. Here we took a trail up a mountain side (or large hill) to a height of about 1000 meters, hiking about 1-1/2 miles. All except Mrs. Bloom and Mrs. Haxel hiked to the top--they hiked part way. We then hiked back down to our starting point and rode in the cars to nearby Varnhalt, arriving at 7 p.m.. There we had dinner in the restaurant Gasthaus Zum Adler. After dinner we rode back to the Park Hotel in Karlsruhe in the same cars.

Monday, September 21, 1970 - Karlsruhe - Frankfurt - Vienna

Helen and I had breakfast in our room. Bloom, Friedman and I rode to the Karlsruhe Center in a Center car.

On our arrival, we were met by Haxel, McClelland, and Woesler at the European Institute for Transuranium Elements. We were introduced to Roland Lindner, Henry Mattys and Werner Muller, who described their work on chemical separation of transuranium elements. They have a supply of 6 grams of $^{243}Am$ and 5 grams of $^{244}Cm$ which they received from ORNL and are using extraction chromatography to separate and purify the two isotopes. The manipulator-controlled hot cells employed for this purpose were used previously to separate $^{242}Cm$, which was made into a heat source for a nuclear battery. Part of the americium and curium is being converted into oxides for physical property studies. Another part will be irradiated to form heavier nuclides. Bromate oxidation is used to oxidize americium to a higher oxidation state for the separations process. I was told that an arrangement had been made with the AEC to receive one microgram of $^{252}Cf$ but that the Institute would like to increase this amount to 5 or 10 micrograms. I said I would look into the possibility on my return to the U.S. I was also told that the movie that had been made by the German company of the Berkeley work on element 104 (in which I appeared giving a lecture) had been shown on the German "Third Program" (educational TV) and that Zvara had been shown also describing his work on 104.

We were then driven to the Hot Chemistry Building, where we were met by Ochsenfeld, Franz Baumgartner (the Director of the Institute for Hot Chemistry, whom I saw at the ACS meeting in San Francisco in April of 1968), and Institute scientists Günter Koch, Hochlein, and Blum. Relatively large scale processing equipment was shown to us for recovering $^{238}Pu$ from 200 grams of irradiated $^{237}Np$. This equipment will also be used to recover heavy transuranium elements from high level waste streams which are generated at the German reprocessing plants. Walton Rodgers of NFS has been one of the U.S. experts who helped with the design of the equipment. Solvent extraction flowsheets are being developed also for processing fast breeder reactor fuels containing high concentrations of plutonium.

In another laboratory containing many glove boxes for alpha activity, we saw where research is being conducted on preparing new compounds of transuranium elements, such as cyclopentadienyls.

Another laboratory contained process development equipment which is being operated in support of a small scale fuel reprocessing plant being built outside of Karlsruhe. One piece of equipment was a small centrifugal extractor which can handle a feed rate of 600 liters/hour. Another interesting set-up was a continuous ion exchange column in which the resin is made to flow countercurrent to the eluant. It is hoped that such an arrangement can be used for tail-end plutonium purification, although the bugs have not been ironed out yet.

We drove next to the main administration building of the Center, where I was to give my lecture. Here I met Bob Penneman, Alexander Van Dyken, and Don Ferguson from the United States. I was introduced first by Haxel, representing the Minister of Science, and then by Dr. Pierre Recht, Director of Radiation Protection for Euratom and head of the Seminar on Radiation Protection Problems Relating to the Transuranium Elements. Einar Saeland, the Director General of the ENEA, was also at the head table. I then spoke for about one hour on "Recent Developments in Transuranium Research," covering the U.S. and U.S.S.R. claims to the discovery of elements 104 and 105, accelerators being designed or built to make superheavy elements, methods of forming the superheavy elements, and predicted chemical properties and electronic structures of the superheavy elements, using about 40 slides. As the introduction to my talk, I read my Met Lab memo of January 5, 1944, in which I predicted that plutonium would be a severe hazard if ingested.

Following the lecture, I was interviewed, at 11:55 a.m., by Brunner of Radio Stuttgart (South Germany Broadcasting System). Questions were on practical applications of transuranium elements, prospects for superheavy elements and the role of magic numbers (I mentioned the contributions of O. Haxel, J. H. D. Jenson and H. E. Suess at the University of Heidelberg 20 years ago), the role of heavy ions (I mentioned the Unilac accelerator planned for Darmstadt), the possibility of superheavy elements in nature, my estimate of when superheavy elements will be synthesized (possibly 3 or 4 years).

After picture taking on the steps of the Administration Building, we went to lunch at Heinrich Hertz Haus (the Faculty Club of the University of Karlsruhe). Among those present, in addition to our group, were Dr. McClelland, Professor Haxel, Dr. Rudolf Greifeld (Managing Director), Professor Dr. H. Böhm (member of the Scientific Council), Professor Dr. Franz Baumgärtner (Director of the Hot Chemistry Institute), Professor Dr. E. W. Becker (Director of the Institute of Nuclear Engineering), Professor Dr. Walter Seelmann-Eggebert (Director of the Institute of Radio-Chemistry), Professor Karl Wirtz (Director of the Institute of Nuclear Reactors), Dr. Giulio Guazzugli-Marini (Director General of the Euratom Joint Research Center ), Dr. Pierre Recht (Director of the Health

Protection Directorate), Professor Roland Lindner (Director of the Transuranium Institute), Mr. Hampe (Health Protection Directorate), Einer Saeland (Director General), I. G. K. Williams (Deputy Director General, ENEA), Dr. Emil Wallauschek (Chief of ENEA's Division of Health, Safety and Radioactive Wastes Management), and Dr. N. Nowlan (Division of Health, Safety and Radioactive Wastes Management). I sat between Saeland and Böhm, Helen between Greifeld and Recht. Saeland made some welcoming remarks with mention of my talk and the similarity of one slide figure to a cathedral.

Helen had gone shopping in the morning. At about 10 a.m. Helen and Robbie were picked up by the translator for the Karlsruhe Center and taken to the Karlsruhe Castle where they were met by Mrs. Haxel. They were shown the exhibit by a curator, Gabor Kits, of Gothic Art (1450-1530) of the upper Rhine. This was an exhibit collected from all over the western world consisting mainly of sculpture and gold work. They then said goodbye to Mrs. Haxel and went to Heinrich Hirtz Haus to join us for the lunch. After lunch we said goodbye to all and the Blooms, Friedman, Helen and I then rode in one Center car, the Blooms in another, to the Frankfurt Airport. The plane was late in arriving and the search for weapons procedure made it much later in departing. We left Frankfurt at about 6:10 p.m., an hour and a half late, and arrived in Vienna, about 7:10 p.m., an hour and 20 minutes late. Commissioner Larson and John A. Griffin (State Department) joined us on the flight from Frankfurt.

We were met by Kurt Fink, Jack Vanderryn, and Bill Yeomans. Helen and I, Friedman and Yeomans rode with our regular Vienna driver, Franz Burgeth, directly to the Italian Embassy (27 Rennweg) to attend the Italian reception. We met Carlo Salvetti and the other Italian hosts. I talked to Vikram Sarabhai about the problem that has developed concerning the IAEA Conference President and the Chairman of the Board of Governors. Sarabhai is a candidate for the Presidency and another Indian, V. C. Trivedi, is a candidate for the chairmanship, but both posts shouldn't be filled by one country. Iskrat Usmani is running for chairman and he is generally thought to be a poor bet for this post particularly at this crucial time. I tried to convince Sarabhai to drop out of the race for the Presidency to assure election of Trivedi to the chairmanship but he said that the Indian foreign office wouldn't stand for such an action. He said that he thought it would be all right to elect Indians to both posts, as was done with Japanese at the time of the 1965 IAEA General Conference in Tokyo. Roberto Ducci of Italy joined the discussion and tried to help me convince Sarabhai. I saw many other delegates including Hervasio Carvalho of Brazil.

Helen and I, Friedman and Larson rode to the Intercontinental Hotel where Helen and I checked into suite 1237-41. Justin and Robbie joined us as we were having a snack, and Justin placed a call through the Embassy to Julie Rubin in Germantown. I talked to Julie about getting Tommy Thompson to serve as speaker at a plasma physics conference dinner in Washington, being arranged by Dr. Fowler of the Lawrence Livermore Laboratory (which I had originally been invited to do).

Tuesday, September 22, 1970 - Vienna

Helen and I had breakfast in our suite. I then rode to our U.S. Mission Headquarters (14 Schmidgasse) with Justin and Abe, where I met Marie Janineck for the first time since our arrival in Vienna. I rode with Ambassador T. Keith Glennan (new U.S. Representative to the IAEA) and Commissioner Larson to call on U.S. Ambassador to Austria John Humes. We discussed the problem of the IAEA Conference presidency and chairmanship of the Board, the impending fight over

Article VI (the Soviet Union is supporting the Pakistan and opposing the Italian resolution), and a number of general matters. Humes invited Helen and me and Larson to the Embassy residence for a drink with him and Mrs. Humes this afternoon at 5:45 p.m. The three of us then returned to the Mission Headquarters.

A meeting of almost the entire U.S. delegation and mission was held, only Dwight Porter and George Czuczka being absent. Those present included Ambassador T. Keith Glennan; Commissioner Clarence E. Larson; Dr. Isidor I. Rabi; Verne B. Lewis, Donovan Q. Zook, John A. Griffin, Robert Kent of the State Department; Edward P. Noziglia, David A. Sousa, Jack Vanderryn of our Mission to the IAEA; William L. Yeomans (USAEC), and Thomas L. Lauer (U.S. Embassy in Vienna). Lewis, Larson, Glennan, and I were sworn in as the official delegates. We discussed the major problems facing the conference, including the possible Usmani candidacy for the Presidency of the Conference or chairmanship of the Board of Governors, the revision to Article VI of the IAEA Statutes (we learned that Igor Morokhov, U.S.S.R. Member of the Board of Governors, had told Glennan that the U.S.S.R. will support the Pakistan plan for revision of Article VI), the safeguards budget and the date for the next meeting of the Safeguards Committee (the U.S.S.R. does not want a delay; the U.S. will accept a delay until October 13), and the assignment of a Marine guard in civilian clothes to the Hofburg to hold classified material.

After the meeting I read papers in my office (including some from the package that Yeomans delivered to me from Washington last night), and then went to the Director General's lunch in the Governor's Lounge of the IAEA Headquarters. The format was changed this year to a buffet lunch and a much larger group was present. I talked to Morokhov about the dates for the U.S. visit of Andronik Petrosyants (October or November) and my return visit to the Soviet Union (date indefinite), the date for the next U.S.-U.S.S.R. Plowshare meeting (he wants an early date), the approaching assignment of five UCLA scientists to work at Serpukhov, the problem of the Conference presidency and Board chairmanship, the Flerov-Ghiorso controversy over the discovery of elements 104 and 105 (he said they should be brought together in a hotel room somewhere). I sat at a table with Sarabhai, Goldschmidt, John Hall (of the IAEA), Glennan and Jose Otero (of Spain). After the lunch Eklund spoke a few words of welcome and words of praise for Sir Philip Baxter's service as Chairman of the Board of Governors, and Baxter responded.

During the morning, Helen and Robbie visited Roman ruins at the Hoher Market and the Clock Museum at Schulhof. Helen had a bite to eat in our suite for lunch.

I went back to the hotel and picked up Helen and Robbie to go to the opening session of the 14th General Conference of the IAEA in the Festsaal of the New Hofburg. I met the Vice Chancellor of Austria, Rudolph Hauser, in the main visitors' box. Helen sat in the box with Robbie, Dwight Porter, Mrs. Glennan and Mrs. Rabi. Svasti Srisukh, of Thailand, presented me with a gift of a blue necktie.

The outgoing President, Bechir Torki of Tunisia, opened the Conference and called for the election of the President. (A call by Glennan to Usmani late this morning had elicited the information that he didn't want to run for the Presidency. Donald B. Sole of South Africa had suggested to Glennan that Usmani be elected President of next year's General Conference in lieu of a West European whose turn it would be.) Sarabhai was elected Conference President by acclamation. His inaugural address included a good word for NPT Safeguards and a plea for the beneficial role that nuclear centers can play in fostering understanding among nations. Sarabhai then proceeded to the election of other officers, election and appointment of committees, etc.

14th General Conference of the IAEA, opening session, Vienna; September 22, 1970. L to R: V. B. Lewis, Seaborg, C. Larson, T. K. Glennan, J. M. Hill (UK).

Sarabhai then introduced Director General Eklund who gave his annual opening address. He spoke about the progress and needed progress on the IAEA NPT Safeguards, the forthcoming 4th Conference on the Peaceful Uses of Nuclear Energy in Geneva, the problem of financing IAEA Safeguards, the problem of IAEA providing Plowshare services under NPT, the difficulties of providing nuclear power in small developing countries (total of only 20,000-25,000 MW by 1980), increasing use of nuclear techniques in industry, agriculture and medicine in developing countries, problems of IAEA budget and salary of personnel, his hopes that there would be reports on new methods of enriching uranium at this Conference, the concern over effects of nuclear power on the environment, the USAEC-IAEA Conference on Environmental Effects of Nuclear Power held in August and my suggestion made on that occasion that the IAEA become a central repository for data on nuclear power effluents, the emergence of the International Nuclear Information System as a reality.

Following Eklund's talk, a UN representative extended the greetings of the Secretary General of the UN. His remarks included statements about the environmental crisis and the positive role of nuclear power.

After the afternoon session Franz drove Helen and me out to the Hermanskugel area where we planned to take a hike as we did last year but we got there too late.

We then rode to the Ambassador's residence (Weidlichgasse) where we had a drink with Ambassador and Mrs. Humes, their son Curt and daughter-in-law Susan. Commissioner Larson joined us after a few minutes. From there we went to the reception given by the Japanese delegation in the Governor's Lounge and then to the reception given by the German delegation in the German Embassy (3 Metternichgasse). At the former I talked to Andrei K. Krasin (Byelorussian

Soviet Socialist Republic) who had read my speech on fast breeders (given in Madrid in January of this year), liked it very much, and wished I would send him copies of my speeches. At the latter Helen and I talked to Mr. and Mrs. Jan Neumann (Chairman, Czechoslovakian AEC) and Dr. Zdenek Stuckly (Czech AEC), and they invited us to visit Czechoslovakia during our trip to Vienna next year.

Helen and I returned to the hotel, had supper in our suite, and then took a walk along Karntnergasse.

Wednesday, September 23, 1970 - Vienna

Helen and I had breakfast in our suite. I then rode to the Hofburg, with Helen and Robbie accompanying me as far as St. Stephen's church on the way. They visited the church and then did some shopping and returned to the hotel, from which they went to the Hall residence to attend a luncheon given by Mrs. Hall.

I proceeded to the Hofburg. I talked to Henry Seligman who, as a consultant to Eklund, is recommending an IAEA fund (perhaps made up of a 3-5 percent tax on member countries' fusion research budgets) to be used to finance the construction of prototype fusion reactors in the main countries where fusion research is going on; this would make it possible to avoid the type of duplication that is taking place around the world with fast breeders.

I attended the session in the Festsaal. I was the first speaker and gave my prepared remarks. I gave particular attention to certain aspects of Agency safeguards administration pursuant to the NPT. I emphasized two key principles: the principle of independent verification by the Agency, and the principle that the AGency should make full use of national systems of control in carrying out safeguards. On financing, I expressed our view that safeguards costs should continue to be funded under the Agency's Regular Budget, but recognized that various factors had to be taken into account in determining the degree of participation of each member in meeting these costs. With respect to revision of Article VI of the Statute, I emphasized the US position as co-sponsor of the Italian plan and stated my earnest hope that the necessary two-thirds membership support would be forthcoming.

After me, A. J. A. Roux, representative of South Africa, spoke--he mentioned their new uranium enrichment process, did not disclose its nature, said their proposed pilot plant is a substantial undertaking, that they will share their technology through bilateral agreements for cooperation provided their process is not used for military purposes.

Abe Friedman and I then went out in the foyer area and talked to Dr. Ephraim Friedman of Chile. He is worried due to the change in government and its effect on the U.S. supplied (through the IAEA) enriched uranium fuel for their research reactor and on his personal future. We assured him about our supply commitment and said we would help him, unofficially, to find a position in the U.S. if this should be his wish.

Shortly before noon, Rabi, Bloom and I rode to the International Press Center (Vienna XIX, Gunoldstrasse 14) for our delegation press conference. Rabi, Larson, George Czuczka (Mission Press Officer), the Center's interpreter and I sat at the front table. The press representatives consisted of the following: Dr. Ricco Labhardt (Neue Zuercher Zeitung), Frederick Opper (Radio Free Europe), Washietl (Die Presse), Charles Mitchelmore (Womens Wear Daily), Hermine Froehlich (Belgischer Rundfunk), Roland Prinz (Associated Press), Arlene Stern (Voice of America), Sang-Dhul Ro (Korean Embassy), Nino Lo Bello (Herald

Tribune), Karl Graber (Stuttgarter Zeitung), Jolanthe Zaludowa (Agence France Press), Sobczak (Deutsche Presse Agentur), D. C. Parr (Reuters), Harald Brainin (Austrian Press Agency, APA), Dr. Lucian Meysels (Die Wochenpresse), Paul Fritz (Neue Zeit, Graz), and Horowitz (Photographer, International Press Center, IPZ). Bloom, Friedman, and Sousa were also present. I answered all the questions except one on food irradiation which I directed to Larson. More than 20 penetrating questions were asked, the most difficult being to list the nine most advanced countries to be included in the IAEA Board of Governors under the Italian Plan. Other questions concerned the use of the Danube for cooling nuclear power plants, status of the SALT talks, use of nuclear power for recycling waste and powering automobiles, the IAEA budget for staff salaries and safeguards, breeder reactors, nuclear status of several countries, Plowshare, and membership of East Germany in the IAEA.

Following the press conference, I was interviewed in a tape recording by Arlene Stern of Voice of America. Mrs. Stern is the wife of Paul M. Bergman, the U.S. Embassy Labor Attaché. She asked questions concerning the status of the NPT, international observation of peaceful nuclear explosions, benefits and hazards of Plowshare, and the need by developing countries for technical assistance.

I then rode to the Sacher Hotel to attend the luncheon given by the South African delegation. Abe came along for the ride back to town. Among those present were Roux (South Africa), S. Frank (South African Ambassador to Austria), Donald B. Sole (South Africa), John Hill (United Kingdom), Sarabhai (India), Baxter (Australia), Robert Hirsch (France), Israel Dostrowsky (Israel), Otero (Spain), Erkki Laurila (Finland), Hervasio Carvalho (Brazil), Eklund, and Trivedi (India). I sat between Sole and Trivedi. I talked to Roux and Sole about their new uranium enrichment process but elicited no information--Roux said they found themselves in an embarrassing situation.

After lunch I walked to the Hofburg with Eklund. He said he agreed with the idea of a IAEA nuclear center in Bangkok, the holding of IAEA symposia in Africa, the use of IAEA as a data repository in connection with radioactive effluents from civilian nuclear power plants.

I heard Bo Aler of Sweden, the first speaker in the afternoon session, then the representative of Mexico, who invited the IAEA to hold its 1972 General Conference in Mexico City. He was followed by the representative of Germany. I then heard Morokhov of the Soviet Union, who noted the importance of NPT, the interest of the Soviet Union in the peaceful uses of nuclear explosions, the advent of the important International Nuclear Information System (INIS), and the recommendation for a coordinating council for fusion research. He deplored the 10 percent increase in budget (Should have been held to 8 or 9 percent), viewed with satisfaction the operation of their 70 Bev Accelerator, the success of Tokomak, the success of their Beloyarsk and Novovoronezh reactors. He mentioned three Soviet underground nuclear explosions to increase the production of oil from exhausted sources without radioactive contamination, a 30 KT, 2500-meter underground explosion which quenched a gas fire, a 100 KT underground nuclear explosion to create a storage space for gas. He said that information on all of these events, which occurred during the 100th year after Lenin's birth, will be made available to the IAEA. He announced an increase in the Soviet Union's contribution to the IAEA voluntary fund from 150,000 to 250,000 rubles, plus a number of fellowships. He described the many bilateral agreements for cooperation that the Soviet Union has concluded. He emphasized the importance of IAEA's preparing for its NPT Safeguards function. With respect to revision of Article VI, he said geographical balance should not be upset and attention should be paid to the historical background of the creation of the IAEA, said he agreed to expanding Latin American participation, and recommended the proposa

put forward by Socialist countries, which allows no privileged positions. He said the proposal put forward by Italy and other countries was not a satisfactory solution, but he can support the Pakistan proposal. He called for a compromise "which wouldn't have a unilateral character," emphasized the need for due consideration of all factors--without this there could be a breakdown of the Agency at this particularly critical time. He mentioned lack of representation in IAEA of the People'e Republic of China and East Germany, and particularly deplored the latter's exclusion.

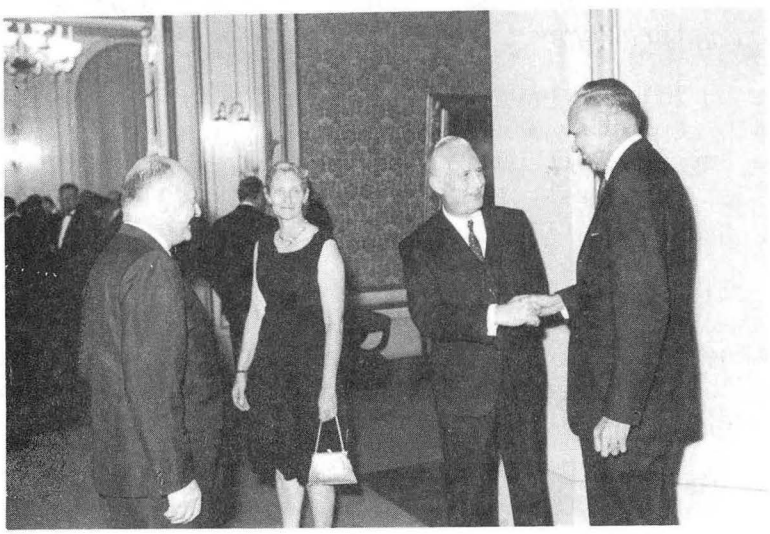
I returned to the hotel, had a bite to eat and changed clothes for the evening reception of the Western Hemisphere countries. Helen and I rode to Palais Auersperg, where I stood in the reception line with representatives of Argentina (Oscar A. Quihillalt), Brazil (Carvalho), Canada (N. F. H. Berlis), Uruguay (Alfonso C. Frangella), and Venezuela (Joaquin Lubkowitz).

Western Hemisphere Reception, Vienna; September 23, 1970.
L to R: O. A. Quihillalt, H. G. de Carvalho, Seaborg, A. C. Frangella, J. Lubkowitz.

Western Hemisphere Reception, Vienna, September 23, 1970.
L to R: P. J. Kelly, J. M. Hill, P. Papadimitropoulos (going through receiving line).

Western Hemisphere Reception, Vienna; September 23, 1970.
L to R: B. Anghel, Emilian Rodean, Ioan Ursu. (Receiving line is identified in previous picture).

Helen and I then went to the French reception, following which we went for a walk on Kärntnerstrasse.



Reception of the French Delegation, Vienna; September 23, 1970.
L to R: Robert Hirsch, Mrs. Seaborg, A. Giraud, Seaborg.

Thursday, September 24, 1970 - Vienna

Helen and I had breakfast in our suite. We then joined the Blooms and rode to the Spanische Reitschule to see the Lipizzaner Stallions (trained horses whose tradition originated in the 16th century in Lipizza, Italy) perform in their regular weekday practice sessions.

After this Justin and I went to the Hofburg to attend the morning session of the IAEA. Helen and Robbie went to have lunch with Naomi Goldschmidt in her hotel, and to join Mrs. Giraud for coffee in the hotel garden after lunch. Then Helen and Robbie went shopping.

I heard Hirsch of France deliver his prepared talk; he included a discussion of the environmental advantages of nuclear energy, the advances in fusion research,

problems with the IAEA budget, a plea for "light" IAEA NPT Safeguard activities supported by a separate budget financed by those countries who are safeguarded (with only modest voluntary safeguarding in nuclear weapons countries), the problem of expansion of the Board of Governors where France supports the Italian resolution (even though it considers 34 somewhat too large a number).

I next had a conference over a cup of tea in the nearby dining room with Abe, Justin, Ioan Ursu (Chairman, Romanian State Committee for Nuclear Energy), Emilian Rodean (Vice Chairman), and Valentim Ionescu (Director, Department of International Relations). Professor Ursu explained the recent Romanian decision to postpone construction of both the heavy water natural uranium nuclear power plant and the heavy water production plant. Negotiations for purchase of the heavy water plant had been carried out by the Romanian State Committee of Nuclear Energy with the U.S. Lummus Corporation, as well as with a West German firm.

The Romanian decision to postpone its heavy water reactor program for approximately two years was based on (a) serious economic consequences of the spring floods, (b) higher than anticipated price of the heavy water plant, and (c) inability to make satisfactory credit arrangements.

The Romanian State Committee research laboratories are using the period of postponement to carry out further research on the natural uranium reactor concept. They are also working on a laboratory scale heavy water pilot plant based on the dual temperature hydrogen sulphide exchange method.

The Romanians would also like to have their people use this time to receive technical training with Lummus. In response to my query, Ursu said he was assured this would be agreeable to Lummus. I noted the implications of the U.S. Atomic Energy Act (relative to assistance in nuclear material production) that needed to be considered in connection with any trainees to be assigned to Lummus. (The Atomic Energy Act states that "it shall be unlawful for any person to directly or indirectly engage in the production of any special nuclear material outside of the United States" except under an agreement for cooperation or upon authorization by the USAEC. While heavy water is not itself a special nuclear material, its use in a reactor results in the production of special nuclear material; therefore supplying training to aliens in connection with a foreign heavy water plant project may be regarded as engaging "indirectly" in the production of such material outside of the U.S.)

When questioned about the Soviet nuclear power plant sale to Romania, Ursu said that they had signed an agreement in March for the purchase of an enriched uranium nuclear power plant from the U.S.S.R. He said this agreement was made before the floods and, furthermore, they had fewer problems in regard to payment terms with the U.S.S.R. He said Romania has agreed to purchase only one unit of 440 MW. Ursu stated that there was no connection between the postponement of the purchase of the heavy water reactor and the agreement to purchase a Soviet enriched uranium reactor.

Ursu noted that the two-year term of the USAEC-Romanian State Committee Memorandum of Cooperation on the Peaceful Uses of Atomic Energy ends at the end of FY 1970, and said that Romania was very anxious to renew it for an additional two-year period. Ursu remarked unofficially that he understood that President Nicolae Ceausescu may come to the U.S. later this year and he hoped we would come to an agreement on renewal by that time.

I talked to Bert Goldschmidt and he promised to send me a written account of his recollections of Met Lab days. (He recalls that he and Perlman worked on one

quarter of the large neutron bombarded sample in the summer of 1942 and it was this sample that had the container break, due to Truman Kohman's arrangement of the lead bricks, leading to its absorption in a Sunday edition of the Chicago Tribune in order to recover the plutonium. He also recalls that during his February 1943 visit to the Met Lab, I gave him four micrograms of plutonium-239 and some fission product activity.)

I had a short talk with Wolf Hafele, Director of the Institute for Applied Physics at Karlsruhe, about the progress of research work on Safeguards. He was out of town when I visited Karlsruhe on Sunday and Monday.

I went to the luncheon given by the U.K. delegation at the Palais Pallavicini (Josefsplatz 5). It was a rather large lunch, some five or six tables, and I sat at a table with Hill (the host), Sarabhai, Eklund, Baxter, Hirsch, Usmani, Otero and Carvalho. There was a good deal of talk about the serious nature of the Soviet Union's opposition to the Italian plan (Co-sponsored by the U.S.) for the expansion of the Board of Governors. Glennan told me about his talk with Morokhov, which emphasized their serious objections and the consequent threat to the future of the IAEA. Because of this, I rode with Glennan after lunch to the U.S. Mission Headquarters where we placed a phone call to Sam DePalma in the State Department in Washington, D.C. He wasn't available so I talked to Ward Allen. He said the consensus in Washington is that we try to bring the Soviets together with the Italians and Germans to see if they can agreed on some course of action--if this is not possible, we should vote against postponement and for the Italian plan. I emphasized the serious nature of Morokhov's concern, saying this is more serious than the 1961 fight over Eklund, a point that was emphasized by Sarabhai in a luncheon conversation with Glennan and me.

I went to the Hofburg where the meeting of the Administrative and Legal Committee was getting underway and passed the information from my phone conversation with Allen on to Glennan and other members of our Mission. Apparently the Soviets had already been in direct communication with the Italians and Germans at the Hofburg (we had seen Ducci talking to Morokhov and Arkadiev at lunch as well).

I then rode back to the hotel and met Helen in our suite. I changed shoes and Helen her clothes. We rode out to the area behind the American International School and from there we hiked up a trail to the top of a hill to the restaurant Houserl am Roan. We then hiked down another trail to our car and returned to the hotel to get ready for the evening. Just as we started down the road, we met Franz's wife, Helod, who works in the area.

We changed our shoes and Helen changed her clothes and went to the Chinese reception at the Governor's Lounge at IAEA Headquarters. From there we went to the Soviet reception at the U.S.S.R. Mission (Vienna IV, Wohllegengasse 4). Felix Malu (Congo) told me that he hopes the U.S. will furnish through the IAEA the fuel for their new 1000 KW reactor. I told him to get his request in soon. After we returned to the Intercontinental Hotel Helen and I went dinner dancing in the Rhapsodie Room.

Friday, September 25, 1970 - Vienna

Helen and I had breakfast in our suite. I then rode with Justin to our Mission Headquarters. Here I checked outgoing messages and read various papers, etc. I then rode with Justin to the Hofburg. I talked to Eklund, Sarabhai, Hall, etc., as they were waiting to greet President Ceausescu of Romania. I then went to the Festsaal where I spoke to the representative of Mexico to the IAEA. I also

talked to Carlo Salvetti and extended to him the regret of Craig Hosmer that he couldn't attend the Italian Reception on Monday night.

President Ceausescu arrived at the Hofburg at about 10:05 a.m. and after greetings by Eklund, Sarabhai, etc., at the entrance was escorted by them to Sarabhai's office for a talk. President Ceausescu entered the Festsaal at 10:30 a.m. and was introduced by Sarabhai. Ceausescu spoke on the importance of the peaceful uses of nuclear energy, the importance of the IAEA, the urgent need for the nuclear weapons states to destroy their nuclear weapons. President Ceausescu recognized both the constructive and destructive roles which atomic energy could play and the basic mission of the agency to encourage and facilitate the former. To this end, he cited the agency's responsibility to organize a safeguards system under the NPT, in order that all States might have free access to the full utilization of nuclear energy for peaceful purposes, and the agency's work in supporting the efforts of those Member States to overcome their backwardness in nuclear energy. He stated Romania's interest in developing collaboration and cooperation with all States and in intensifying its participation in activities and exchanges that take place within the framework of the agency.

Sir John Hill of U.K. was the next speaker to the General Conference. He spoke of the importance of the revision of Article VI, the need for wider adherence to the NPT, the importance of working out IAEA NPT safeguards; he concluded with tributes for Dr. Joachim Pretsch of West Germany and Dr. Harry Smyth of the U.S., outgoing representatives to the IAEA. I next heard the speeches of the representative of Jamaica and Trivedi of India, who decried the impending "staggering" costs of IAEA safeguards and said these costs should be distributed equitably.

Morokhov came by and presented me with two books autographed by Petrosyants--one on peaceful uses of nuclear explosives ("Atomic Explosions for Peaceful Purposes"), and the other on atomic energy in general ("The Inexhaustible Atom"). He pointed out a picture of me, with Petrosyants, Alexandrov, himself and others, taken during my visit to the Kurchatov Institute in May 1963.

I later saw Morokhov in the hall, and presented him with autographed copies (one for him, one for Petrosyants) of my booklet, "Peaceful Uses of Nuclear Energy." He said he had now heard from Petrosyants and believed that the date for Petrosyants' visit to the U.S. could be set soon. I mentioned August, 1971 as a possible time for my return visit, possibly in connection with my talk to the meetings in Moscow (the international conferences on Organometallic Chemistry and on the History of Science).

I went back into the Festsaal and heard Usmani's talk. He emphasized the value of rotational inspection of facilities, decried the impending passage of the Italian revision of Article VI because of the inevitable antagonizing of the Soviet Union and suggested the Pakistan plan as a compromise.

I then went to a filming with Sarabhai and Hill. Sir John, Sarabhai, and I were recorded ov video tape in an informal group discussion. First, I mentioned the transmission of power by laser beams reflected from satellites, since this idea had attracted much attention when I proposed it at the UN conference on environmental effects of nuclear power. Sir John noted that nuclear plants offer the best hope of getting optimum, clean supplies of electricity and asked me if 100-200 MW plants could be economical. I replied that they would have to be competitive with other energy sources and this would depend on location. Sarabhai brought up the matter of Nuplexes as a means of expanding the economy of developing nations. I suggested that the plains of the Georges be examined

for a Nuplex site and that the power generated be used in part to pump water from underground for agricultural purposes. I pointed out that a full-size Nuplex would generate 10,000 MW, compared to pilot projects of 1,500-2,000 MW. Sir John was pessimistic about how long it would be before a Nuplex could be built.

I next had a talk with Usmani. After hearing his various arguments for his candidacy for the Board chairmanship, I told him frankly that the U.S. was going to keep its commitment and support Trivedi. I said we might support him in a future year for the General Conference presidency. He suggested he might be interested in succeeding Eklund as Director General of the IAEA. Sarabhai joined us for part of the discussion, which then turned to the Article VI question. I said that the U.S. was going to press for a vote at this Conference and would vote for the Italian plan. I said that the Soviet Union had been too late in coming up with its plan, and Sarabhai agreed with me. Usmani talked of withdrawing the Pakistan plan and of withdrawing as a candidate for Board Chairman, but I doubt that he will take either of these actions.

I rode to the Spanish Embassy (34 Argentinier Strasse) to attend the luncheon given by the Spanish delegation. Among those present were Otero and Spanish Ambassador Joaquin Buxo-Dulce (hosts), Baxter, Hill, Carvalho, and Salvetti. I sat between Otero and Salvetti. Otero said Spain would like cooperative arrangements with U.S. firms like Westinghouse on a fuel manufacturing plant in Spain, on fast breeders, etc. I mentioned to Hill the possibility of giving a talk on the transuranium elements at the U.K.'s Dounreay Experimental Reactor Establishment, during my planned visit there after the IAEA General Conference; he would like me to do this.

After lunch I rode back to the Hofburg, listened to a couple of talks in the Festsaal, saw the videotape of our earlier taping today (with Hill and Sarabhai) shown in the foyer to the Festsaal, then returned to the Hotel to meet Helen in our room.

Helen and Robbie had spent the day together. They went shopping in the underground area at the Opera Ring, then walked all the way to Mariahilfer Strasse and the Schonbrun Palace where Helen explored the grounds and Robbie explored the inside (Helen has seen the inside on a previous visit). They took a street car back to town, had a bite of lunch in a little place on the Opera Ring, did some more shopping and returned to the hotel just a moment before I arrived.

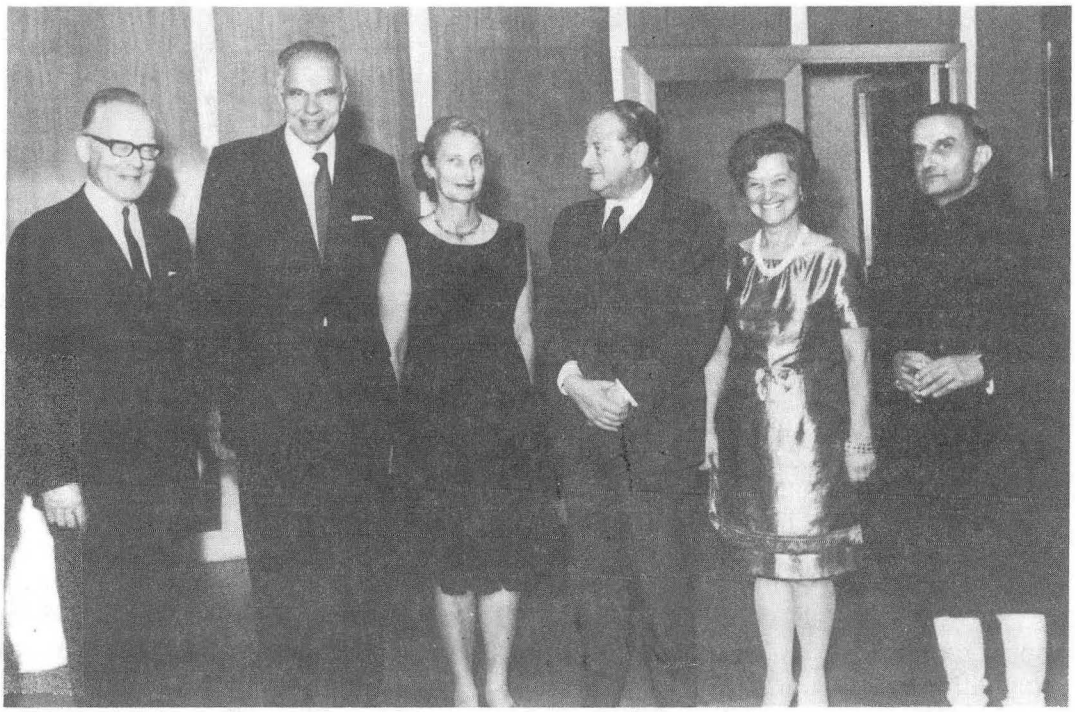
Helen and I changed clothes, had a quick dinner in our suite and went to the Governors Lounge at the IAEA Headquarters to attend the reception given by the Director General and the Conference President. (See pictures next page.) Here we met Austrian Chancellor Bruno Kreisky, with whom I conversed in Swedish (he has a Sedish wife and has spent seven years in Sweden) and his aide Kurt Berger (a former Controller of the IAEA). The delegate from Saudi Arabia, Fadil Hairi Al-Kabbani, and a member of his delegation went out of their way to assure me that they are not pro-Soviet like other Arab states but are pro-U.S. and would support us on our Article VI resolution and on any other matter upon which we might request their support.

After the reception, which we left quite late (about 9:45 p.m) Helen and I took a short walk along Karntnergasse and then walked back to our hotel.

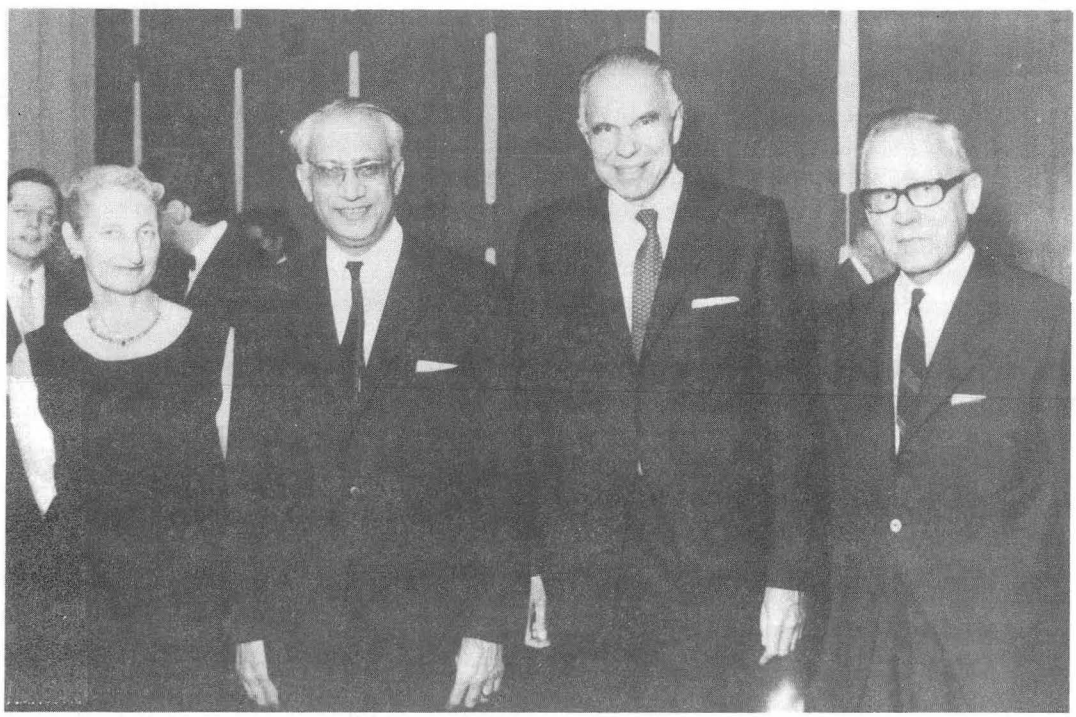
Saturday, September 26, 1970 - Vienna - London



Helen and I had breakfast in our suite. I spent some time reading AEC mail and papers from the package which I had received on Monday. Curt Fink came by and



Reception of the Director General and the President of the Conference, Vienna; September 25, 1970.
L to R: S. Eklund, Seaborg, Mrs. Seaborg, B. Kreisky, Mrs. Eklund, V. A. Sarabhai.



Reception of the Director General and the President of the Conference, Vienna; September 25, 1970.
L to R: Mrs. Seaborg, V. C. Trivedi, Seaborg, S. Eklund.

Helen and Robbie bought some enamel-covered copper dishes from him. We checked out of the hotel and Helen and I and Abe Friedman rode with Franz to the airport followed by the Blooms and Kurt FInk in another car. I learned later that the vote on Article VI on the following Monday was satisfactory; the Italian amendment was approved by a vote of 54 in favor, 9 against (the Soviet bloc), and 13 abstentions. At the meeting of the Board of Governors the following day, India's Ambassador Trivedi was elected unanimously to the chairmanship. (Much to everyone's relief, Dr. Usmani of Pakistan withdrew his candidacy.)

We met Sir John Hill, who has succeeded Sir William Penney as Chairman of the UKAEA, at the airport and he flew to London in the same plane as us--the Blooms, Abe Friedman, Helen and I--on Austrian Airlines Flight No. 451, leaving Vienna at about 12:20 p.m. and arriving in London (Heathrow Airport) at about 2:40 p.m. We were met by William Rice (USAEC Scientific Representative in London). After going through a rather archaic passport control procedure, we proceeded to claim our luggage; we found that one of the Blooms' pieces was missing.

Helen and I and Abe rode in an Embassy hired car to the Britannia Hotel (Grosvenor Square) while Justin and Robbie remained behind with Rice to try to find the missing luggage. We had trouble getting into our room, which was not ready, even though it was 4 p.m. As Abe put it, "Britannia waived the rules," so the rooms were not vacated by the posted time. Helen and I took a walk and went shopping in Selfridges, a large department store (the largest in London) on Oxford Street. We then returned to the Britannia Hotel where we had been checked into Room 196. As we were leaving the hotel, we met Mr. and Mrs. Harry Finger, who were on a trip to Europe and the Soviet Union to visit housing projects.

We then rode with Friedman to the Columbia Club (95 Lancaster Gate). The car returned to bring the Blooms to the Club. Here the USAEC (represented by Rice) and Ambassador and Mrs. Walter Annenberg hosted a reception. Others present, in addition to our party, were Mr. and Mrs. Trevor Griffiths (Chief Inspector, Nuclear Installations Inspectorate) and MR. W. S. Gronow (Deputy Chief Inspector, Nuclear Installations Inspectorate) from the Ministry of Technology; Sir John and Lady Hill, Sir Charles and Lady Cunningham (Deputy Chairman), Air Chief Marshal Sir Denis and Lady Barnett (Member for Weapons), Mr. David E. H. Peirson (Secretary), Dr. and Mrs. Andrew Sinclair McLean (Director, Health and Safety Branch) and Mr. and Mrs. J. A. Nicol (Commercial Policy) from the UK Atomic Energy Authority; Dr. and Mrs. Francis Harry Panton (Assistant Chief Scientific Adviser--Nuclear) from the Ministry of Defense; and U.S. Minister Stanley Cleveland and Mr. and Mrs. Stephen H. Rogers, from the American Embassy. Ambassador Annenberg invited me to play golf with him on his Palm Springs golf course sometime, such as during his visit home next April.

After the reception Helen and I rode with Sir Charles and Lady Cunningham (the others following in other cars) to the Vaudeville Theater (Strand, W. C. 2) where a group of us saw the play "Lady Frederick," starring Margaret Lockwood and Tony Britton. Others in attendance were Sir Denis and Lady Barnett, Peirson, Mr. and Mrs. Nicol, the Blooms, the Rices and Dr. Friedman. It was a very charming play.

Helen and I rode back to the Britannia Hotel with the Cunninghams.

Sunday, September 27, 1970 - London - Glasgow - Dounreay

Helen and I had breakfast in the hotel restaurant. We then began a long walking tour. We walked down Baker Street (passing No. 221, the residence of Sherlock Holmes) on to Regents' Park. We walked through Queen Mary's Gardens, a very

impressive view of flowers. We then walked on to the South Gate of the London Zoo and entered the Zoo. We saw a pair of Chinese leopard cubs, Anna the new baby elephant, a baby black rhinoceros, the panda, the excellent collection of primates, etc. We watched them bathe the elephants, a comical scene of give and take with the water. We looked at and bought some books in the Zoo Shop.

We then had a sandwich lunch at a refreshment stand just outside of the Zoo, after which we continued our walk. We walked along Tottenham Court Road and New Oxford Street and across to the Old Curiosity Shoppe (of Charles Dickens fame). Here I took a picture of Helen and we bought a number of items including a key ring with small knife, a Sheffield silver spoon, a metal shoe horn and a metal bell. We then walked back along a route including New Oxford Street to the Britannia Hotel.

In front of Old Curiosity Shoppe, London; September 27, 1970.
Helen Seaborg.

We left immediately from the hotel to go to Heathrow Airport, Helen and I in one car, the Blooms and Rice in another car. At the airport we met Sir John and Lady Hill, and their children Andrew and Victoria, and Peter D. Dawson, private secretary to Hill. We all went into the BEA lounge and had some refreshments. Helen and I, Sir John, Dawson, the Blooms and Friedman then caught BEA Flight No. 5046, leaving at about 4:10 p.m. and arriving at Glasgow (Abbotsinch Airport) at about 5:30 p.m. On the way we had a very good view of the Windscale nuclear power station site on the western shore of northern England and the Chapelcross nuclear power site a few miles inland in southern Scotland. The weather was beautiful, affording an excellent view of England and Scotland on the way.

At Glasgow Airport our party boarded a chartered DeHaviland Herron (4 engine, 12-seater) furnished by The Nuclear Power Group, Inc. (Our pilot was named Tyers). We flew north with a slight easterly component, passing over the town of Inverness. We arrived at the Dounreay Airport exactly on schedule at 7 p.m., just as the sun was setting, a spectacular sight. We had an exceptional view of the Dounreay reactor site against the backdrop of the setting sun. We took pictures and movies to try and capture the scene. We were met by George

Malcolm. Helen and I rode with Sir John and the others followed to the Royal Hotel in Thurso (a town of about 10,000 people) about ten miles away. We saw a number of rather large, flagstone houses on the way. We checked into Room 92.

Our party had an excellent dinner in the hotel dining room, followed by serving of coffee and tea in one of the parlors, where we spent the remainder of the evening in conversation.

Monday, September 28, 1970 - Dounreay

Helen and I had breakfast with our travelling party in the hotel dining room.

Friedman and I rode with Sir John to the Dounreay site, followed by Bloom, Rice and Dawson in another car. (Helen and Robbie remained at the hotel to be picked up a few minutes later for a tour of the Caithness countryside.) On the way, I raised with Sir John the question of the U.S. assigning a Fast Reactor Fuel Engineer to Dounreay for one or two years to work on LMFBR fuel cladding and fuel irradiation.

We were met by Clifford W. Blumfield (Assistant Director, Dounreay Experimental Reactor Establishment--DERE) and George Henry Kinchin (Chief Scientists, DERE). We went to a conference room where Blumfield and Hill briefed us. I gave a pen to Blumfield as I signed the guest register.

We learned first that the wife of the Dounreay director, Peter Mummery, was ill, and Mummery couldn't return to Dounreay as scheduled. Dounreay is the U.K.'s principal fast reactor establishment, although fast reactor physics work is performed at Winfrith. Two projects at Dounreay which are of special interest are the Super-NaOH experiment (to study liquid sodium-water reactions that might result from leaks in steam generators) and the Prototype Fast Reactor (PFR) being built on the site. The existing Dounreay Fast Reactor (DFR) operates on enriched uranium, but the PFR will operate on plutonium oxide fuel, which will be fabricated at Windscale and reprocessed in the small reprocessing plant at Dounreay (mostly for convenience). The Dounreay site is involved with the operational aspects of fast reactors and with fuel development. For example, investigations are made on methods for detecting small leaks in steam generators, fuel pins, etc.

The fire (which occurred at the DFR not long before) was due to a NaK leak in a 1" pipe weld, through a hole about 1/32" in diameter. The hole is believed due to an occlusion of tungsten which ultimately leached out, the tungsten having come from a welding electrode. Attempts were made to put out the sodium fire by blowing salt with a carbon dioxide gun, but the leak was too high above the floor to permit a crust to form. A vermiculite blanket was, therefore, built up and then the application of salt put out the fire. About 2 gallons of NaK leaked from the pipe.

Delays in construction of the PFR were announced publicly by the UKAEA about a year ago, but the British press (Daily Telegraph) decided only recently to make a big story out of the delays.

We then drove to the DRF building, where we met Fred Barclay, the DFR Manager, and John Kirk, the Deputy Manager, who explained the construction and operation of the reactor. The reactor began operation in 1959 and has been used more recently to irradiate mixed Pu-U oxide to 7.5 percent burnup (75,000 MWD/t) of heavy atoms. At first, three-pin bundles were used, but now an initial exposure is obtained with 77-pin bundles which are then dismantled and the irradiation carried further in three-pin bundles; if desired, the exposure can be carried

out until the pins fail. The flux in the large test bundle is $2.5 \times 10^{15}$. I asked about UK interest in the Gas Cooled Fast Breeder Reactor (GCFBR) and Blumfield answered that it was a good alternative to the LMFBR, but would push gas technology to the limit. I also asked if there were any problem with public acceptance of fast reactors and was told that there was none in the United Kingdom. The AEA believes that fast reactors are the safest kind, and hopes to begin construction of a 1300 MW commercial LMFBR in 1974. LMFBR fuel reprocessing will probably be done in Europe, but some capacity exists at Dounreay and Windscale. In the future, high level waste will be stored for 10 years to permit the short-lived activity to decay and it will then be solidified. A good exchange of information on waste management is maintained with Hanford.

The DFR has been used to irradiate over 800 oxide pins and 100 carbide pins to more than 5 percent burnup. A temperature limit of 650 degrees C is placed on the walls of oxide pins, although in some cases the temperature has been allowed to rise to 710 degrees C deliberately. In mixed oxide fuel, the plutonium content is 25 percent. Power density achieved is 205 watts/gram. Their studies indicate that in these fuels close to 100 percent of the fission product gases are released from the fuel matrix.

We then visited the DFR itself and stood on top of the reactor. The reactor was closed down between cycles. The reactor operates at 60 MWt (15MWe) on a 55-day cycle equivalent to 1.5 percent burnup. One-third of the core is then replaced.

Our next stop was the facility where sodium fires are created intentionally. Alan Bray and John Humphries described the equipment. Up to 300 pounds of water can be injected into molten sodium, which circulates through a loop simulating a steam generator. The reaction proceeds smoothly, but huge quantities of sodium oxide dust are given off which are trapped in a cyclone separator. A similar system will be used in the PFR as a safety precaution in the event water leaks into the sodium. The experimental facility has full-sized equipment, but the sodium inventory is limited to 2.5 tons.

We returned to the central administration building where I gave a lecture on the transuranium elements to the Dounreay staff which was essentially the same as the one I gave at Karlsruhe. I was introduced by Blumfield, and Sir John Hill offered some concluding remarks.

We then went to the Director's conference room where we were served lunch. In addition to Rice, Friedman, Bloom, and me, those in attendance were G. D. Wilson, K. W. Matthews, Alfred D. Evans, Jack S. Broadley, Sir John Hill, Kinchin, and Dawson.

Following lunch we were taken to the PFR construction site, where we were met by Donald Smith and John G. Walford, the station manager. Evans briefed us on some of the reactor details. It will produce 250 MWe at 41.5 percent thermal efficiency. It will have an inventory of 1000 tons of sodium. Three pairs of intermediate heat exchangers will transfer heat from the pot-type reactor to a secondary sodium system. Three pumps will circulate the primary sodium through the core; the sodium inlet temperature will be 400 degrees C and the outlet 600 degrees C. One-sixth of the core will be discharged six times per year. One-sixth of the core is equal to 12 fuel subassemblies. The core discharge will be scheduled over weekends. The sodium pool of the reactor has storage space for 20 fuel assemblies. Cooling time in the pool will be 30 days. The reactor is designed so that spent fuel can be removed while the reactor is running. Construction of the reactor is to be completed by January 1, 1972, and full power is to be achieved by January 1, 1973.

At this time John Davis, head of construction for the PFR, from The Nuclear Power Group, joined us and took us on a tour of the reactor. I learned that its basic construction cost is 34 million pounds ($82 million).

The entire reactor and turbine equipment are located in one large building and there is no secondary containment. We could see the reactor tank being assembled far above its final elevation. Upon completion it will be lowered by jacks into place. Adjacent to the reactor vessel is a large room where the head of the reactor and all the pumps and heat exchangers attached to it will be assembled for testing. Problems in fabricating the head have delayed construction by about a year, and it is not yet on the site. Part of the lost time will be recovered. Outside of the main building we saw the channels that have been built to bring cooling water from the sea and to return the hot water to the sea. A smaller building already houses the sodium inventory in tanks. In the main building, large rotating screens have been constructed to remove sand, fish, etc., from the sea water.

Dounreay photographers took pictures during our tour of the PFR.

Upon returning to the administration building of the reactor, we resumed our discussions with the staff. When the reactor piping system is completed, it will be tested with water at 60-70 degrees C to stimulate sodium. Many properties of water at this temperature are very close to those of sodium except heat capacity. The use of water for testing will entail taking elaborate precautions for drying the system before introduction of sodium. An exceptionally long commissioning program, lasting about one year, will be followed to insure the reliability and safety of the reactor.

The design of the reactor and ancillary equipment has been optimized for extension to a 1000 MWe size. The fuel elements and core, for example, can be scaled up.

The largest turboalternator that is being manufactured for the CEGB is rated at 660 MEW; therefore, future plants will be built at this power level or twice this figure.

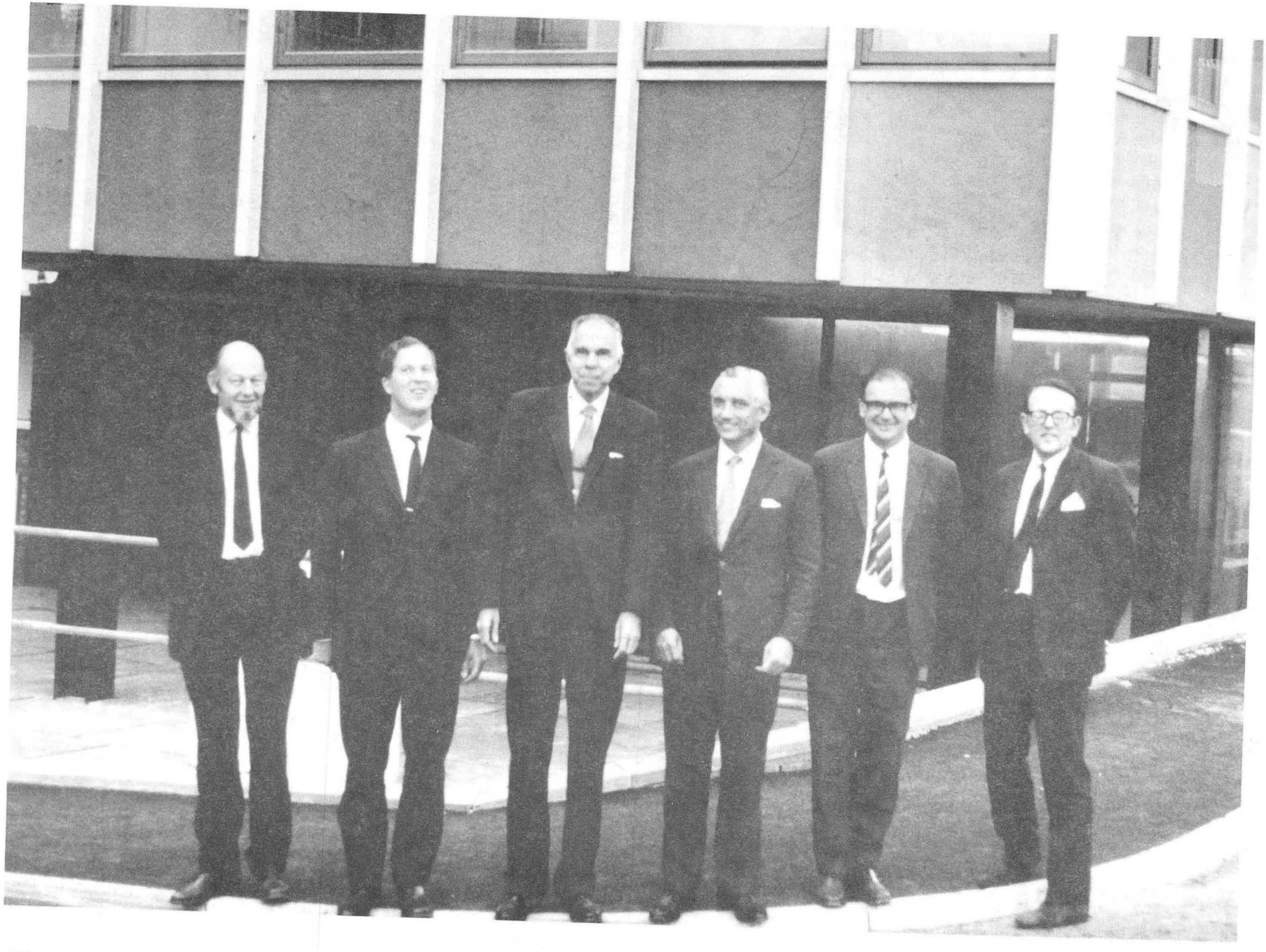
The PFR is expected to cost about 5 percent more than a water or gas cooled reactor of the same size, but it will have much lower fuel costs. We were not given a power cost in mills/kwh when we asked, apparently on the basis that this is not critical in the British power economy.

Other features of the PFR include asymmetric placement of the blanket elements around the core and the most elementary kind of core meltdown protection--a thick stainless steel "catcher."

Sir John was asked to described the business arrangements for building the PFR. He said tht the UKAEA started out to construct the reactor but it had too many groups who tried to determine the design. Therefore, the UKAEA merged its design groups with The Nuclear Power Group (TNPG), a combine of several manufacturers and constructors. The AEA now has two members on the board of TNPG. The reactor is being built on a cost-type contract with UKAEA, and many former UKAEA staff members, such as Davies, now work for TNPG.

We found that plans for building a commercial LMFBR are still uncertain, with no site having been picked yet and with no firm schedule. It was said that a public hearing will probably be held prior to beginning construction.

Tea, sandwiches, and cookies were served at this time, because of the long airplane flight still ahead of us.



Visit by Seaborg to Dounreay, September 28, 1970
L to R: G. H. Kinchin, C. W. Blumfield, Seaborg, Sir John Hill, A. D. Evans and P. D. Dawson

At the end of tea we exchanged gifts. Sir John gave me a Dounreay necktie, glass paper weight, slides and brochures. I gave him a special AEC keyring (with uranium), paper weight and autographed copy of "Peaceful Uses of Nuclear Energy." Others who received gifts were Dawson (keyring), Blumfield (paper weight), Kinchin (paper weight), Evans (keyring), and Davies (keyring).

Helen and Robbie and their guides for the days activities, Mrs. Kinchin and Mrs. Pearson, met us as we were finishing our tea and refreshments in the Exhibition Room of the Prototype Fast Reactor central building. They had ended their tour with a visit to the Caithness Glass Works at Wick where Helen bought a number of glass items, after their lunch at the Portland Arius Hotel in Lybster.

We went outside the building, took some pictures and movies, then all rode by cars to the airstrip. Here we took some more movies, and said goodbye, then our travelling group boarded the plane (the same one that brought us to Dounreay yesterday). The plane left at about 4:30 p.m. and flew south, and a little westerly, to the Silloth Airport (about 40 miles north of Windscale) where we arrived at about 6:35 p.m. The weather was cloudy with poor visibility all the way in sharp contrast to yesterday's flight.

Helen and I rode in a car with Sir John, and the Blooms, Rice, Friedman, and Dawson followed in other cars to the Bower House Inn and Hotel in the foothills some ten miles inland from Windscale in the village of Eskdale where we arrived a few minutes after 8 p.m. We checked into Room 15.

On the way inland we drove on a road near the route of an old Roman road that went from Ravenglass on the ocean to an old Roman fort (of which the remains can still be seen) and beyond.

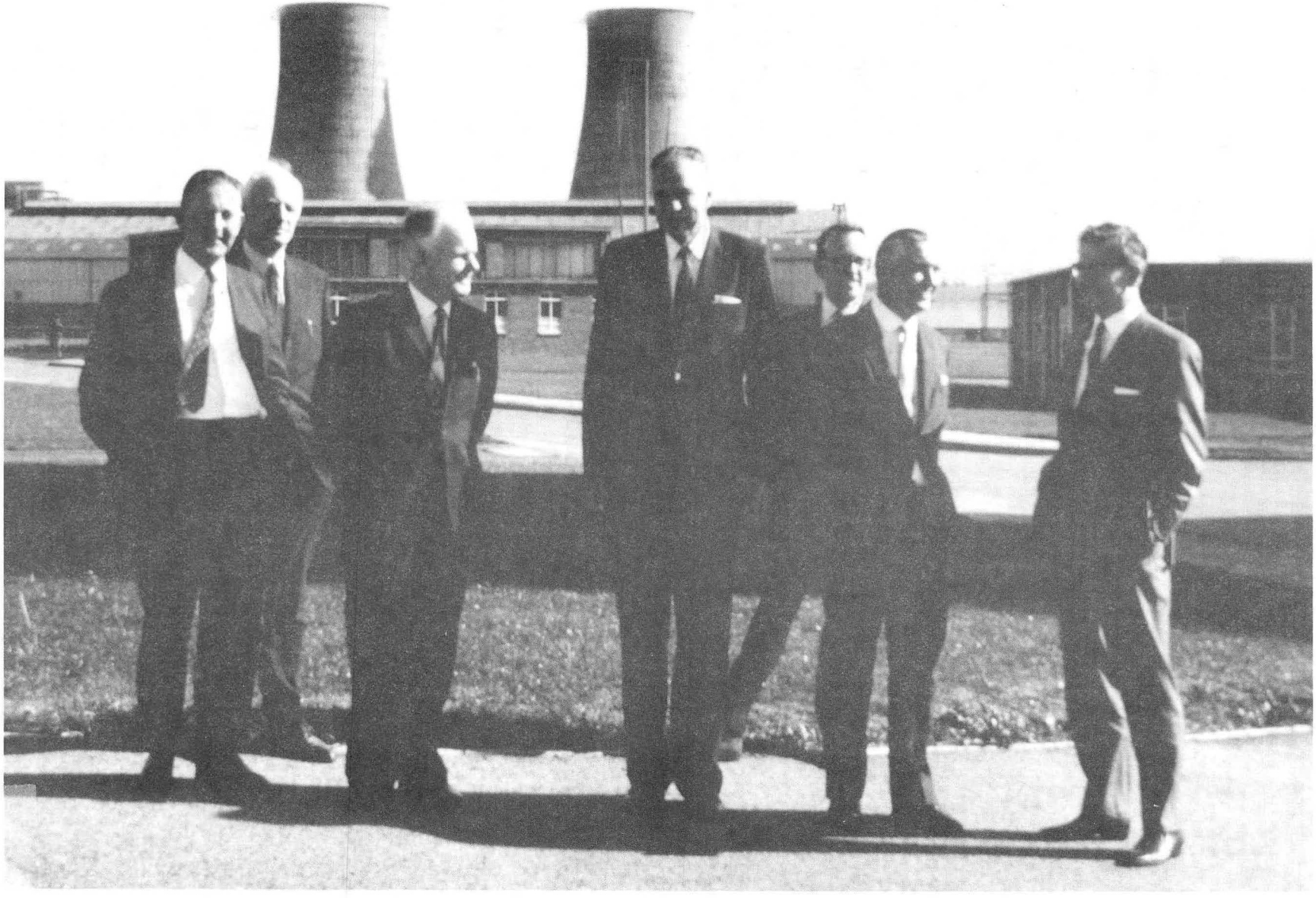
Our group had dinner in the Inn with our hosts Mr. and Mrs. Gordon Rushworth Howells (General Manager of Windscale, Chapelcross, and Calder Works, UKAEA), Mr. and Mrs. Thomas Garfield Hughes (Supervisor, Chemical Plants, Windscale), Mr. and Mrs. George Eric Buckley (Superintendent Reactors, Windscale), Mr. and Mrs. Tom Tuohy Director Production Group, UKAEA, Risley), Norman Laurence Franklin (Member for Production, UKAEA). The Bower House Inn dates originally from about 1600. (I met Howells in October 1949, during my visit to the Risley and Springfields Plants of the UKAEA, and my visit to Chester, at the time that I also met Charles Turner and a Scotsman named Bill Lawson.)

Tuesday, September 29, 1970 - Windscale - Hunterston

Our group, with Dr. Franklin, who had also spent the night at Bower House, had breakfast in the hotel dining room. (I took a short walk before breakfast to view the picturesque countryside.)

I rode with Sir John, followed by Bloom, Friedman, Rice, Dawson and Franklin in other cars to the site of the Windscale Works. We were met by Howells and started the visit by a briefing session in his office. Windscale is on the site of the former Windscale farm or estate, on the west coast of Cumberland. Coffee was served and pictures were taken by the Works photographer then and later during a tour of the site.

The Windscale site was selected because the sea could be used for discharge of low level wastes, land was available (the site was a wartime TNT factory), and there was a good supply of fresh water for cooling. However, gas-cooled



Visit by Seaborg to Windscale, September 29, 1970

reactors were ultimately built. Windscale was originally intended to be only a plutonium production site and two production reactors were built and operated until 1957. During this period the four Calder Hall reactors were built and began operating in 1956. Four more power reactors are operating at Chapelcross. All eight reactors are dual purpose - primarily for power, incidentally for plutonium. The on-load factor for the reactors averages 92-94%. Fewer than 100 people per reactor are required for operational purposes. All eight reactors are of the Mark I Magnox type (natural uranium, carbon dioxide closed cycle cooling, graphite moderated), and are rated at 50 MWe each. They have a thermal efficiency of only 20%.

Also at the Windscale site is the Prototype Advanced Gas-Cooled Reactor (PAGR), a 35 MWe test bed for advanced gas-cooled reactors. It has operated on an 80% load factor.

All commercial fuel reprocessing is done at Windscale. It has sufficient capacity to meet the country's needs until at least 1980, and maybe until 2000. A total of 4000 people are employed at the site, which consists of only 600 acres.

The UKAEA safeguards offer to the IAEA would include the Windscale reprocessing plant except for the time when it would be handling defense material.

Shipments of spent fuel are received from overseas at the port of Whitehaven and then taken by truck to Windscale. The plant can handle about 2000 tons of spent fuel of the Magnox type per year. Foreign Magnox fuel comes from Japan and Italy. Oxide fuels are received from Germany, Sweden, Japan, and Spain.

(During our briefing Sir John Hill left the room to answer an urgent telephone call and he returned to announce that Dr. Hans Kronberger, UKAEA Member for Reactor Development, had died in London this morning.)

Hughes then took us on a tour of the reprocessing plant. The first step was an outdoor storage pond for spent fuel. One layer stored fuel amounts to 2000 tons, and it is possible to store two layers. (The Magnox fuel jackets slowly react with water, liberating hydrogen bubbles which float to the surface.) Fuel elements from the pool are loaded into a basket and transferred under water into the decanning building. The alloy jackets are split from the uranium metal fuel by a mechanical apparatus in a hot cell, and the jackets (swarf) are collected in buckets and stored in another building for five years before being disposed of a low level waste. The uranium rods are loaded into shielded casks for transport to the main reprocessing building. Here they are unloaded into a continuous dissolver - an unusual piece of equipment in that it is non-maintainable. If it fails, it will be abandoned. The same holds true for the first extraction step. A new, unused dissolver is available, and we were able to crawl around it. The dissolver holds 5-8 tons of fuel.

The $NO_2$ evolved in the dissolution step is converted back to $HNO_3$ in a tower above the dissolver. The fuel is cooled for at least 100 days prior to dissolution to minimize iodine releases. The dissolver solution has a uranium concentration of 300 grams per liter. The first dissolver has operated since 1964 without failure.

In the control room, 400 sensitive process points are monitored and recorded. Criticality control is by concentration limits, with plutonium concentrations measured by alpha counting, specfic gravity, or neutron counting.

We then saw the mixer-settler area and a glove box area where plutonium is handled. No plutonium was visible.

We then walked to the plutonium fuel fabrication plant where we were met by Mr. Davidson, the manager. Photographs were taken on the steps of the building. It is here that the mixed Pu-U oxide fuel for the PFR will be fabricated. Each fuel assembly will consist of 321 pins loaded with annular pellets about 3/16" in diameter. The pellets are sintered at 1550°C after debonding at 800°C. The bonding agent used in the pelletizing process is called Granco. (Breeder pellets are made at Springfields and brought to Windscale for loading into the pins.)

We inspected the entire box line of the fabrication plant and found it to be extremely well engineered and immaculate. The plant was said to cost $5 million and to have sufficient capacity to fuel a full-size fast breeder. Its capacity can be doubled if necessary without adding to the building.

We then visited the Prototype Advanced Gas-Cooled reactor (PAGR), where we were met by Buckley. We could stand on the reactor loading floor while the reactor was in operation, where we observed leads and tubing going through ports into the top of the reactor for various experiments, including analysis of fission gases released to the $CO_2$ coolant. We also saw the turbine hall adjacent to the reactor containment shell. This kind of reactor operates with slightly enriched fuel rods inserted in graphite moderator segments; the fuel has much better performance characteristics (25,000 MWD/t) than the Magnox fuel. The active core is 15 feet across and the total core is 21 feet across. The fuel seqments are very long (50 feet) and require the use of a tall refueling machine. The reactor is rated at 100 MWt but has operated at a maximum power of 126 MWt. The turbine produces a maximum of 38.8 MWe. The outlet temperature of the gas coolant is 480°C and the inlet temperature is 260°C.

Following the visit to the reactor, we went to lunch at the "factory" commissary, where a private dining room on the second floor was set up for our use. In addition to Howells, Franklin, Buckley, Hughes, Dawson, and Sir John, we were joined by another Mrs. Howells (no relation), George D. Ireland, and Fancis J. Woodman.

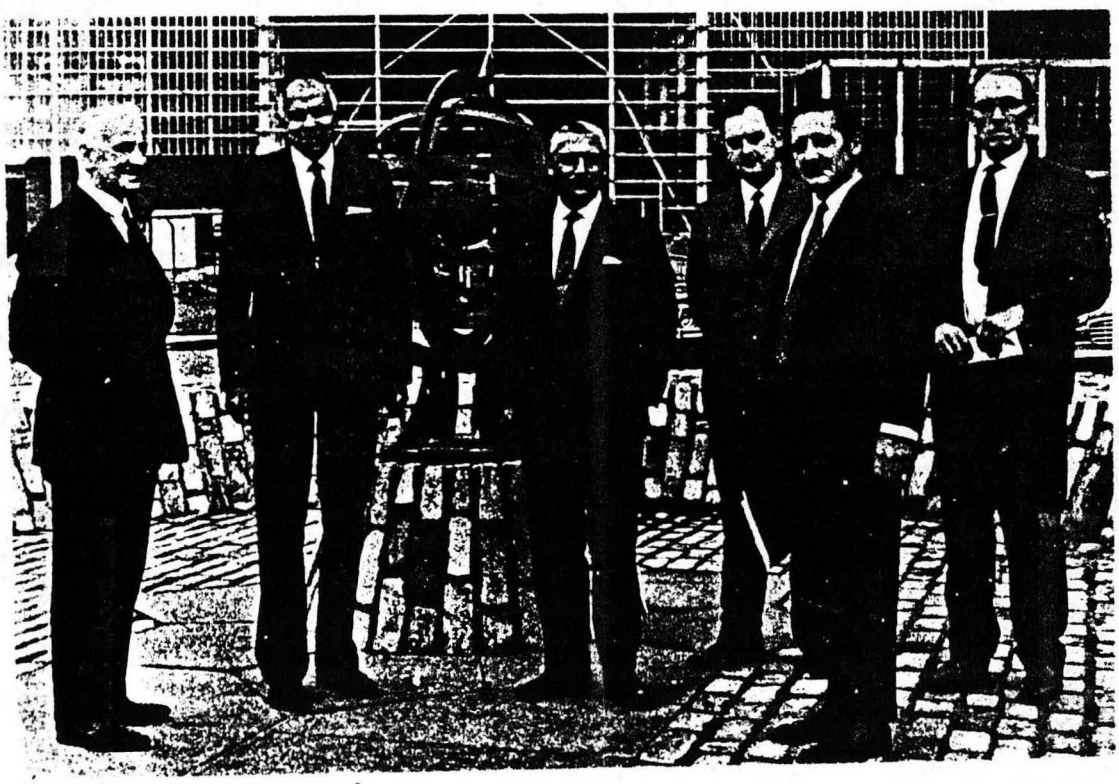
As we were about to enter our cars, I presented AEC keyrings to Hughes and Buckley, a paper weight to Howells, and an autographed copy of "Peaceful Uses of Nuclear Energy" to Franklin. Movies and slides were taken with the Windscale plant in the background.

I rode with Sir John, with Bloom, Friedman, Rice and Dawson following in other cars to Sullith Airport where we arrived at 3 p.m. We were airborne immediately, in the same chartered plane as before, and flew to Prestwick Airport on the west coast of southern Scotland, where we arrived at about 3:50 p.m. We were met by Alan Christianson, Deputy Chairman of the South of Scotland Electric Board. I rode with Christianson and Sir John, followed by the others in other cars, to the Hunterston Nuclear Power Station, arriving at about 4:40 p.m. This is on the site of the former Hunterston Estate. The Hunterston Station photographers took a picture of Sir John and me with Christianson, F. L. Tombs (Director of Engineering, SSEB), G. A. Mears (Power Station Manager), and A. F. Pexton (Project Manager, B Station), before the other cars arrived.

When we had all arrived, we assembled in a conference rom for a short standup

Windscale Works, September 29, 1970

L to R: T. G. Hughes, N. L. Franklin, J. L. Bloom, Seaborg, Bill Rice, Sir John Hill, P. D. Dawson, A. Friedman and G. R. Howells



Hunterston Nuclear Power Station, September 29, 1970

L to R: Alan Christianson, Seaborg, Sir John Hill, A. F. Pexton, F. L. Tombs, and G. A. Mears

briefing, with the help of diagrams, during which tea and refreshments were served. We then toured the Hunterston B reactors, under construction. The two B reactors are of AGR design, both housed under the same roof and serviced by common equipment such as a spent fuel canal, gentry crane, and fuel loading machine. Each reactor-turbine combination will produce 625 MWe net, about 35 MWe additional being required to drive the gas circulators and other equipment. The building, which is almost completely finished, looks to be of the order of 200 feet tall, and is of modern, esthetically pleasing construction, with glass panels at the upper level primarily for decorative purposes. Only a few hundred feet away are the two Hunterston A Magnox reactors (150 MWe each) in separate buildings covered with glass and also very pleasing.

The pre-stressed concrete pressure vessel of one of the B reactors had been completed, and the other was being cast. We crawled into the gas space between the reactor vessel and the concrete pressure vessel, where the steam boilers and gas circulators are located. We also climbed and rode the elevator to the upper levels of the building where the deaerator will be located and had a magnificent view of the site.

It is interesting to note that the size of these reactors is limited by the size of the turbogenerators available. The systems will operate at an efficiency of greater than 41%.

Moving to another building nearby, we saw large steam generators in storage, awaiting installation.

Following the tour we assembled again for a quick cup of tea and refreshments, went outside and took some pictures and movies. I then rode with Christianson and Sir John, followed by the others in our travelling group and Tombs, to Abbotsinch Airport in Glasgow departing the Hunterson Station at about 6:30 p.m. and arriving at the airport at about 7:30 p.m. We passed the Holy Loch and had a good view across the Loch (Lake) of the U.S. submarine base. (Holy Loch becomes the Firth (Mouth) of Clyde (river) further inland, and we drove along this also as we proceeded toward Glasgow.)

Meanwhile Helen and Robbie, who had been picked up by Mrs. Tuohy and Mrs. Howells at 9:30 a.m., were enjoying a motor tour of the "Hill and Lake Country" of Scotland. Helen later told me about their tour. The countryside was punctuated by huge stands of reddish bronze bracken (fern), by miles of mortarless stone walls, and Hardwicks, the local variety of sheep.

Their trip through Cumberland county included a drive around Wastwater Lake whose blueness was accentuated by the brilliant sunshine of the day, unusual for this area at this time of year. All of the water for this area comes from Wastwater Lake. Mrs. Tuohy pointed out the "screez" or loose rock and stones "pouring" down like a river through the Green Gale Mountains. These mountain heights called "Scafell," are extremely challenging to climbers. In the graveyard of the tiny church at Wastwater Lake, there were numerous graves of hikers who were killed on the Gasforth Fell.

Their drive continued past Loweswater Lake which boasted The Grange, a fine hotel. The area abounded with tourist accommodations and lake followed upon lake with such names as Crummock Water, Lake Buttermere (the only lake which appeared green instead of blue).

Honister Pass provided a panoramic view of unsurpassed beauty. The water here

flowed milky white due to the pollution from the slate quarry at the top of the pass. Also at the top was a popular youth hostel. Starting down the other side of the pass was the village of Rothesaye, just before Keswick. Here began some modest stands of trees, mostly silver birches, where heretofore, in the Highlands, the land had been practically treeless. Along the roadside was a marker for a fallen hiker. It had been an area of great appeal to Hugh Walpole who wrote "The Harris Chronicle" about it.

Armathwaite Hall on Bassenthwaite Lake is an impressive inn where the party had lunch. Forty years before, this had been a baronial residence. Upon its conversion to an inn in 1930, Hugh Walpole had been solicited for a testimonial. His letter, mainly endorsing the place, hangs on the wall.

The southerly course brought a total change in the character of the land, with gently rolling hills replacing the harsh beauty of the northern highlands. The towns now have such names as Norwall, Carlisle, and soon the Chapel Cross Atomic Energy installation towers came into view. Gretna (of marriage fame) and the Solway Firth marked the border of Scotland and England.

The route now headed back for Scotland and Glasgow with a stop at the town of Dumfried, the birthplace of Robert Burns, a tour of his home, the mausoleum where he is buried, and a stop for tea at the Cairndale Hotel. Leaving the city of Annan, there was a sign which read "Haste Ye Back."

At the airport we joined Helen and Robbie; our travelling group boarded BEA flight No. 5063, which left Glasgow at about 8:10 p.m. and arrived in London at about 9:10 p.m. The package of mail, which had not arrived as scheduled last Saturday, arrived during our visit to northern England and Scotland, but the third package of mail, due today, had not arrived.

We rode in Embassy cars to the Britannia Hotel where Helen and I checked into Room 168.

Wednesday, September 30, 1970 - London - Washington, D.C.

Helen and I had breakfast in our room. I then joined Bloom and Friedman and we walked around Grosvenor Square to the U.S. Embassy.

We made a brief stop at Bill Rice's office to see if mail had arrived (it had not) and then went to the office of the Minister for Economic and Commercial Affairs, Stanley M. Cleveland, since Ambassador Annenberg had not yet arrived. We had a short meeting with Cleveland and Stephen H. Roger, in which I was questioned about the short-term future of nuclear power and how long a period of time nuclear power will be based on the present generation of reactors. I replied that nuclear power cannot help in alleviating near-term shortages of electricity, since reactors are built on fixed schedules taking as much as five years. I mentioned that Sir John Hill had told me that no more coal burning power plants will be built in the United Kingdom. I also stated that the present generation of nuclear plants will serve almost indefinitely, sharing the electric load with breeders.

At this time, Deputy Chief of Mission Joseph N. Freene, Jr., asked us to come into his office. I gave him and Cleveland copies of my book, "Peaceful Uses of Nuclear Energy," and was requested to send a supply of the books for Rice for use by the Embassy staff and for distribution to U.K. officials.

We then discussed the selling of U.S. reactors abroad and the problem of supplying enriched uranium to them. I was asked about the classification of U.S. enrichment technology and the possibility of making it available to other countries, and I explained the reticence of the JCAE in releasing the information and the White House observations concerning transfer of the technology. Cleveland asked that he be given some advance notice of when the plan for transfer is to go into effect.

On other matters, I was told that Bill Rice knows his business and works well with the Embassy staff.

I was told that Sir Solly Zuckerman still plays a central role in nuclear policy making in the U.K. Government. However, problems of communication exist between the UKAEA and the political policy makers of the Government.

It was now time for my press conference, which was arranged by Dunn and Hammond of the Embassy staff and Bill Miller of USIA. The press representatives attending were David Fishlock (Financial Times), Bryan Silcock (Sunday Times), Roger Vielvoye (Times Business News), Pierce Wright (Times), Robert Chapman (Sunday Express), Anthony Michaelis (Daily Telegraph), K. Weisskopf (Applied Atomics, Reuters), Anthony Tucker (Guardian), Ronald Bedford (Daily Mirror), and Angela Croome (freelance). Bloom and Friedman were in the room with me.

I was asked first about my reaction to the death of Hans Kronberger (I had read in the morning paper that he had committed suicide), and I read the letter of condolence that I had signed earlier in the morning addressed to Sir John Hill. I was then asked to give my impressions of my visit to the U.K. nuclear energy sites. I said that my impressions were generally favorable. Questioned about the PFR at Dounreay, I responded that it is a sound project. When asked if there could be a fire of the magnitude of that at Rocky Flats at the Windscale plutonium fuel fabrication plant, I explained that it was impossible, since no metallic plutonium is handled. In response to other questions I said that the AGR was a good reactor for the U.K. in comparison to light water reactors in the U.S., but that there may be difficulties in exporting it; that the U.S. reactor development program is not static but that there has been some slowdown, even though there will be 150 million kilowatts installed capacity in the U.S. by 1980; that nuclear power is the cleanest source of power; that we are making good progress in solidifying wastes and are preparing the first Federal repository in a salt mine in Lyons, Kansas; that thermal pollution will be relieved by high efficiency reactors such as the AGR, HTGR, and fast breeder; that we had not discussed the gas centrifuge during our visit to the United Kingdom.

I also gave a lengthy explanation of how the cost of separative work is affected by additions to our gaseous diffusion capacity and answered other questions about the feasibility of small nuclear power plants, desalination, fusion, cooperation with the U.S.S.R. in Plowshare, European progress on the pacemaker, and prospects for nuclear powered ships.

I gave an autographed copy of ""Peaceful Uses of Nuclear Energy" for Mrs. Lee Annenberg to Bob Scott (Ambassador Annenberg's Professional Assistant).

I met Ambassador Annenberg as we were leaving the Embassy and as he was entering which gave us a chance to say our farewell personally. He again invited me to Winfield House on a future visit and to play golf with him in April at his Palm Springs golf course.

Bloom, Friedman, Rice and I rode to the London Airport (Heathrow) together where we said goodbye to Rice. After some delay caused by searching passengers' hand luggage for metallic objects (as a result of the recent hijacking activities), and other delays, we took off about an hour late at about 2 p.m. I read AEC papers from the package that finally arrived from Washington during our visit in Northern England and Scotland. The package that was due to meet us on Tuesday had not yet arrived. We arrived at Dulles Airport at about 6 p.m., an hour and 40 minutes late.

Helen and Robbie flew from London (Heathrow) Airport to Dulles on a 747, Pan American Flight No. 107, leaving at about 12:45 p.m. and arriving at Dulles Airport at about 5:30 p.m., about a half hour before Bloom, Friedman and me.

Thursday, October 1, 1970 - D.C.

At 10 a.m. I attended a hearing before the House Appropriations Committee Subcommittee on Public Works on the AEC FY 1971 supplemental to cover Fire, Safety and Adequacy of Operating Conditions Projects. I gave my prepared testimony. We are asking for $25.5 million to permit the start of architect-engineering work and critical procurements and contracting for those projects deemed to be most urgent in our weapons productions facilities. The questions were mainly along the lines of why we had waited so long to take care of this problem and why we had to wait until there was a major fire like that at Rocky Flats before taking remedial actions. We answered these questions to the satisfaction of the committee members. Committee members present were George Andrews (Alabama), Joe L. Evins (Tennessee), Edward P. Boland (Massachusetts), John J. Rhodes (Arizona) and Glenn R. Davis (Wisconsin).

I had lunch with Julie Rubin, Justin Bloom, Stan Schneider, Sid Gaarder and George Sakalosky to discuss the status of affairs in the Chairman's Office, as they have developed during my recent European trip.

I was visited by Ted Sherburne and Dorothy Schriver who came in to discuss the Philip Boffey article, which appeared in the September 18 issue of Science (Vol. 169), its subject and its origins. We agreed that this certainly has a detrimental effect on fund raising activities for Science Service. We also discussed the forthcoming meeting of the AAAS Board of Directors and agreed that we might contact some of them in advance of the meeting scheduled for October 17 and 18, which I am going to attend. We also decided that we would have a meeting of the Board of Trustees of Science Service immediately following the AAAS Board meeting.

At 4 p.m. I met with Glenn E. Schweitzer (Director of Science and Technology, Technical Assistance Bureau, AID) and Herman Chinn of the State Department. Also present were Myron Krazer, Allan Dalton and Justin Bloom. Schweitzer is going to Africa next week and wants to follow up on some of the means and methods for scientific cooperation uncovered during the visit of my group to Africa.

Jerry Tape called me. He said Ed Brunenkant was with him and they were discussing the possibility of Tape's taking Bill Webster's place as Senior Technical Advisor to the Geneva Conference. (Bill resigned because of ill health.) He said he could do it although not on the present schedule. Ed and Bill had planned to visit the laboratories in this connection but Jerry wondered if he could not do some of it by telephone; Brunenkant feels it could be handled in this manner. I said I thought it would be all right. He asked if White House approval would be necessary and if it bothered me that he was on the Defense Science Board (DSB). I said I hadn't thought about the White House. He asked if this would give the other Commissioners a problem and I said I didn't think so especially if it was mentioned to them first. We left it that Brunenkant would see if the schedules could be met to satisfy the needs, and I would take responsibility of checking him out to see if he is acceptable. He said the earliest he could get involved would be a week from today.

The following listed correspondence (copies attached) was received in my absence:

A memorandum from the NSC Under Secretaries Committee (USC) of September 17, 1970 and a memorandum of September 14, 1970 from Henry Kissinger advising that the President has approved the Committee's recommendation regarding international cooperation in the uranium enrichment field and that a working group would be appointed to implement the negotiating strategy;

UNCL. BY DOE
NOV 86

UNDER SECRETARY OF STATE
FOR POLITICAL AFFAIRS

WASHINGTON

NSC UNDER SECRETARIES COMMITTEE

September 17, 1970

NSC-U/DM 27B

TO: The Deputy Secretary of Defense
The Assistant to the President for National Security Affairs
The Director of Central Intelligence
The Chairman of the Joint Chiefs of Staff
The Chairman, Atomic Energy Commission
The Director, Arms Control and Disarmament Agency
The Science Advisor to the President
The Assistant Director, Office of Management and Budget, Mr. James Schlesinger

SUBJECT: Proposed Program in International Cooperation in the Uranium Enrichment Field

The President has approved the Committee's recommendation regarding international cooperation in the uranium enrichment field, as indicated in the attached memorandum from Henry Kissinger.

I have asked Herman Pollack, Director, Bureau of International Scientific and Technological Affairs, Department of State, to chair a USC working group which will be responsible for implementing the negotiating strategy approved by the President.

Mr. Pollack will provide the Committee with timely reports of his group's activities in order that we may keep the President fully informed.

U. Alexis Johnson
Acting Chairman

Attachment:
As stated.

NATIONAL SECURITY COUNCIL
WASHINGTON, D.C. 20506

September 14, 1970

MEMORANDUM FOR

UNCL. BY DOE
NOV 86

ACTING CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Proposed Program of International Cooperation in the Uranium Enrichment Field

The President has considered the recommendation of the NSC Under Secretaries Committee, as contained in your memorandum of February 26, 1970 and reaffirmed in your memorandum of April 26, 1970, regarding a program of international cooperation in the uranium enrichment field.

The President has approved, subject to appropriate prior consultations with the Joint Committee on Atomic Energy, exploratory talks with the Commission of the European Communities, the member States of EURATOM, and the United Kingdom on the possibility of the United States assisting in the construction of a multinationally owned and operated gaseous diffusion plant to be located in Western Europe.

Additionally, the President has decided that the United States will be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, particularly Japan, Canada and Australia.

The President has noted and approved in principle the negotiating strategy submitted by the NSC Under Secretaries Committee. He has also noted that the United States would insist that any related enrichment facilities and their products would be subject to meaningful safeguards and adequate security controls, and that the United States would give preference to multilateral control and ownership.

The President has approved the recommendation of the NSC Under Secretaries Committee subject to the following qualifications:

— The United States position should not be presented as a major cooperative program conditioned upon a continuing United States voice and participation in the actual management of any facilities.

— The United States shall be prepared not to hold back any technology in the gaseous diffusion process.

- Regarding any information on the United States gas centrifuge program, it should be stated only that there is no authorization to discuss the gas centrifuge program and that the United States Atomic Energy Commission's gas centrifuge program is developmental in nature.

- The United States position on sharing of diffusion technology should not be represented to the Joint Committee on Atomic Energy as a means of impeding foreign gas centrifuge development. This development, especially in Europe, is an ongoing program and would probably not be curtailed by an offer to share diffusion technology unless the economics of the diffusion process were markedly more advantageous.

Noting that the NSC Under Secretaries Committee will report the results of these talks together with further recommendations as soon thereafter as possible, the President has additionally requested interim reports on the consultations with the Joint Committee on Atomic Energy and on the initial discussions with the United Kingdom.

Henry A. Kissinger

cc: The Chairman, Atomic Energy Commission

A memorandum of September 24 from Herman Pollack advising that he has been asked to chair the NSC sub-group responsible for implementing the negotiating strategy for international cooperation in the uranium enrichment field and that the sub-group will include a representative from the AEC;

A letter of September 25, 1970 from Chet Holifield saying that the JCAE should be informed before the Administration presents any specific proposal to any foreign official in connection with our sharing the gaseous diffusion technology with foreign countries;

The biweekly status report of September 22, 1970 to the White House that was prepared in my absence.

Eric, Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Steve returned today to school at Davis, travelling by plane. Last Wednesday (September 23) Carol and Sig went back to Davis by automobile, driving a car for a party who wanted their car in California. On Monday (September 28) David started back for Davis by train.

Friday, October 2, 1970 - Germantown

Dwight Ink (Assistant Director, OMB) called me about an article in the New York Times this morning (copy attached) concerning a bill passed by the House yesterday that would restrict the authority of the new Environmental Protection Agency to set radiation standards. He said that it has stirred up some concern over there at OMB because they have been fearful that a situation would develop wherein this would be subject to strong criticism. He said the reporter (E. W. Kenworthy) called him to talk about the membership of the NCRP which, he said, gets a significant part of their funds from the Federal Government, especially the AEC. Dwight said he wanted to alert me that this kind of discussion is going on; he said anything that can be said with respect to the breadth of character and diversity of membership of this group would be useful so people won't get the notion that it is an in-house group. I said I wouldn't call the NCRP largely supported by the AEC. He said he didn't think so either and it might be something I would want to look into. He said there will probably be a fight on the Senate side. I said Muskie is against it but not particularly with the good of the Administration in mind. He said OMB would have to take some kind of formal position. They have agreed in principle with the objectives of that section of the bill but have not reached agreement on the detailed language. He said they will want to stress the point that it was never fully worked out and will want to play down the objectives of that section. He is anxious to do everything he can to keep this from heating up into a major issue. I said I didn't think the reporter had talked to anyone over here. Ink said he had refused to comment on the bill but when Kenworthy said it would completely undercut the President's reorganization plan and shift responsibility to the NCRP and NAS, he told him that the legal authority would remain with EPA. He said he thought Holifield's language went too far.

At 10 a.m. I presided over Information Meeting 1064 (notes attached), interrupted at 10:15 a.m. by Regulatory Information Meeting 425 (notes attached). We agreed to accept the proposal to join the National Association of Regulatory Utility Commissioners (NARUC), as suggested in a letter from George Bloom of the NARUC Executives Committee (copy without enclosure attached). We approved the reappointment of W. R. Stratton to the ACRS. We discussed the proposal of AVCO, a company we just learned about, for separating uranium isotopes by an optical method involving laser beams and decided we should keep

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NOV 86

DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF INTERNATIONAL SCIENTIFIC
AND TECHNOLOGICAL AFFAIRS

SEP 24 1970

MEMORANDUM

TO: The Chairman, Atomic Energy Commission
The Director, Arms Control & Disarmament Agency
The Assistant Director, Office of Management and Budget, Mr. James Schlesinger
The Science Advisor to the President
The Assistant to the President for National Security Affairs
The Assistant Secretary, Bureau of European Affairs
The Director, Bureau of Politico-Military Affairs
The Assistant Secretary, Congressional Relations

FROM: Herman Pollack, Director, Bureau of International Scientific and Technological Affairs

REF: NSC-U/DM - 27-B

SUBJECT: Proposed Program in International Cooperation in the Uranium Enrichment Field

The Acting Chairman for the NSC Under Secretaries Committee has asked me to chair a USC sub-group responsible for implementing the negotiating strategy approved by the President regarding international cooperation in the uranium enrichment field and has also asked that this sub-group include a representative from your organization.

I am planning a meeting of this sub-group for Wednesday, September 30, at 2:30 p.m., in the SCI Conference Room, Room 7831, New State.

Would you please have your designated representative call Robert Loftness (ext. 22432), whom I have asked to assist me in the performance of my duties as Chairman of the sub-group, regarding attendance at this meeting.

I feel the plans for implementing the negotiating strategy should be made as expeditiously as possible and I strongly urge attendance at the meeting on September 30.

CHET HOLIFIELD, CALIF., CHAIRMAN
MELVIN PRICE, ILL.
WAYNE N. ASPINALL, COLO
JOHN YOUNG, TEX.
ED EDMONDSON, OKLA.
CRAIG HOSMER, CALIF.
WILLIAM M. MC CULLOCH, OHIO
CATHERINE MAY, WASH.
EDWARD J. BAUSER, EXECUTIVE DIRECTOR

JOHN O. PASTORE, R.I., VICE CHAIRMAN
RICHARD B. RUSSELL, GA.
CLINTON P. ANDERSON, N. MEX.
ALBERT GORE, TENN.
HENRY M. JACKSON, WASH.
GEORGE D. AIKEN, VT.
WALLACE F. BENNETT, UTAH
CARL T. CURTIS, NEBR.
NORRIS COTTON, N.H.

# Congress of the United States

## JOINT COMMITTEE ON ATOMIC ENERGY

WASHINGTON, D.C. 20510

September 25, 1970

UNCL. BY DOE
NOV 86

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Dr. Seaborg:

I am enclosing a copy of the transcript of the executive meeting of September 16, 1970, at which Commissioner Johnson and Mr. Zook of the State Department presented testimony in connection with the Executive Department's consideration of the merits of a proposal that the United States sell its highly classified gaseous diffusion technology to selected foreign countries or international consortia.

The testimony presented principally by AEC witnesses showed clearly that this matter is in the formative stages. No specific proposal was presented to the Joint Committee. During the exchange between members and witnesses, it was quite obvious that many questions remained unanswered and that there are issues at hand which could significantly affect our national security--in terms of economic disadvantages and possible foreign relations pitfalls.

Because of the ambiguities involved in the suggestion that we sell this highly classified information and material abroad--a technology where we have an unquestioned technological lead--and because there has been no concrete proposal advanced for discussion with foreign entities, I want to be sure that the Executive Department presents its specific proposal of action to the Joint Committee before it is presented to any foreign official.

As I pointed out during the testimony, I do not believe it would be proper that we undertake such a significant step without

thoroughly investigating the advantages and disadvantages. I also indicated that the Committee did not wish to embarrass the President as might unfortunately be the case if the Joint Committee should find itself presented with some sort of tentative agreement which was not palatable to it but which had been discussed extensively with foreign officials.

Because of the significance of this issue, I suggest you send a copy of the transcript to Dr. Henry Kissinger.

I would also appreciate it if you would provide the Committee with whatever information is available to the AEC regarding the AVCO plan for uranium enrichment. This matter was briefly discussed at the September 16, 1970, hearing.

Sincerely yours,

Chet Holifield
Chairman

Enclosure
Transcript 9/16/70 hearing
(3 copies)

UNCL. BY DOE
NOV 86

AEC BIWEEKLY STATUS REPORT FOR SEPTEMBER 22, 1970

1. The Vermont State Government is considering the adoption of standards for regulating radioactive discharges by nuclear power plants that would be substantially more stringent than those required by AEC. Also in Vermont, conservation groups are opposing a request by the Vermont Nuclear Power Corporation to issue bonds for its Vermont Yankee plant now being constructed. In hearings before the State Public Service Board, some opponents have already intervened in an effort to obtain a commitment for a "zero-release" plant before certification is granted for a bond issue, and others are expected to intervene later to request stringent standards as a bond-issue requirement. Drs. Gofman and Tamplin, persistent critics of nuclear power plant safety criteria, appeared at the hearings to support the opponents.

2. Water quality standards have been proposed for the Ohio River that would affect AEC's uranium enrichment plant located on the Ohio River near Paducah, Kentucky, and possibly other AEC installations in the Ohio River Valley. Standards proposed by the Ohio River Valley Water Sanitation Commission would require that all waste discharged directly into the Ohio River meet the drinking water standards of the Public Health Service. The proposal would also apply very restrictive limits to radioactive materials. Such standards might also have significant implications for other AEC plants in the Ohio River Valley, because the eight states that are members of the Commission have previously adopted its standards for other streams.

3. AEC has issued a license for limited operation of the controversial Monticello Nuclear Generating Plant in Minnesota. The license authorizes only fuel loading and start-up testing. Proceedings on the full power license by the Atomic Safety and Licensing Board are continuing.

4. The strike at AEC's weapons plant at Rocky Flats, Colorado, ended on September 7, when an agreement was reached between the union and the operating contractor that extends to March 1973. The strike at the Nevada Test Site is still in effect.

5. Numerous activities of the press continue to focus public attention on atomic energy. The CBS-TV special "How Peaceful the Atom," scheduled for September 22, is expected to be very unfavorable toward nuclear energy. A series of seven articles on nuclear power and the environment is scheduled to begin this week in the Philadelphia Inquirer. A Scripps-Howard reporter is interviewing people in government and industry in connection with an article about the interest of industry in using peaceful nuclear explosions to stimulate the production of natural gas. National Geographic Magazine plans an article on pollution in its December issue, which may include some discussion of radioactive waste disposal. It also plans to publish a book on the environment. AEC has helped National Geographic on the nuclear energy portions of both manuscripts. The Christian Science Monitor's Washington bureau is working on a three-part series about nuclear power and the AEC, which is expected to discuss and analyze some of the adverse criticism of AEC. Newsweek and Readers Digest are also preparing major articles on nuclear energy.

6. AEC will soon announce the beginning of exploratory work on a possible radioactive waste disposal site at its Savannah River Plant near Aiken, South Carolina. The announcement will discuss drilling and initial design work to help determine the feasibility of burying the waste in bedrock deep underground.

NEW YORK TIMES 10/2/70

DC FILE

# *Radiation Standards Bill Seen As Yielding Federal Authority*

By E. W. KENWORTHY
Special to The New York Times

WASHINGTON, Oct. 1—The House passed yesterday a bill that would restrict the authority of the new Environmental Protection Agency to set radiation protection standards. Opposition to the bill was forming in the Senate today.

Critics fear that the measure would give the standard-setting authority to private scientific organizations that have close relationships with the Atomic Energy Commission.

This fear, the critics believe, is substantiated by an internal memorandum of the Federal Radiation Council, a Cabinet-level group. The memorandum says of the bill's section on radiation standards:

"This section can be considered as equivalent to removing responsibility for basic radiation protection from the Government and placing it clearly in the hands of the N.C.R.P."

The latter is the National Council on Radiation Protection and Measurement, a private organization.

The memorandum says furthur, "The F.R.C. finds no substantive basis for objecting to enactment of H.R. 18679."

House Resolution 18679 is the bill pasesd by the House. It contains several amendments to the Atomic Energy Act.

### Functions of New Agency

The Environmental Protection Agency was proposed by President Nixon two months ago under his authority to reorganize Federal agencies.

It would absorb the water pollution control functions of the Interior Department; the air pollution control functions of the Department of Health, Education and Welfare; Pesticide and fungicide regulation now under the Department of Agriculture; and the Division of Radiation Standards of the Atomic Energy Commission.

It would also absorb the functions of the Federal Radiation Council, which now sets radiation protection standards after consultation with scientific groups. The council would be abolished.

Without majority objection by either house—and none is in prospect—the reorganization plan becomes effective Saturday.

Many scientists and environmentalists have argued for a vast reduction in the amount of radiation exposure that is considered permissible for the general population. They have been hoping that the new agency will order a reduction.

On the other hand there has been much opposition to stricter standards from within the Atomic Energy Commission, on the ground that the present standards are stringent enough to protect public health and safety.

Representatives Chet Holifield, Democrat of California, chairman of the Joint Committee on Atomic Energy, and Craig Hosmer, Republican of California, a committee member, have strongly opposed tighter standards. They were the chief sponsors of the bill passed yesterday. The vote was 345 to 0.

An identical bill has been offered in the Senate by John O. Pastore, Democrat of Rhode Island, vice chairman of the joint committee. It has not yet been scheduled for floor action, and before it comes up, its opponents, led by Senator Edmund S. Muskie, Democrat of Maine, hope to collect enough votes to kill the section on radiation standards.

There was speculation on Capitol Hill that the White House had decided not to oppose the standards provision in order to save the new agency. Mr. Holifield, the second-ranking Democrat on the House Government Operations Committee, is in effect its operating chairman because of the age of the chairman, William L. Dawson, who has been in Congress for 28 years. Had Mr. Holifield opposed the reorganization plan, the House might have rejected it.

Under the bill passed yesterday, the Environmental Protection Agency would contract with the National Council on Radiation Protection and Measurements for a "comprehensive and continuing review of basic radiation protection standards," and with the National Academy of Sciences for a continuing review of "biological effects of radiation on man and the ecology."

The controversial part of the bill states that reports from tthe two organizations "shall be promptly published" by the Environmental Protection Agency; that their recommendations "shall be carefully considered by any Government agency having authority to establish such standards," and that the E.P.A. must submit its determination respecting the recommendations to the joint committee.

In a telephone interview today, Dwight A. Ink, assistant director of the Office of Management and Budget, said that the authority to set standards would remain with the E.P.A.

While this can be read into the language of the bill, the report on the bill, which explains the committee's intent, states:

"The bill would substitute the scientific efforts of these eminent bodies [the two scientific organizations] for the functions presently required of the Federal Radiation Council."

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GLENN T. SEABORG
Chr USAEC, 1961-72
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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

COPY NO. 3
October 2, 1970

INFORMATION MEETING 1064

10:00 a.m., Friday, October 2, 1970, Room A-458, Germantown

1. Executive Session

* * * *

10:15 a.m.

11:00 a.m.

2. Reappointment of ACRS Member (See Secretary's September 24 Memorandum)

   Approved. (SECY)

3. September 25 Letter from Assemblyman Briggs re Invitation for AEC to Testify at Meeting of Joint Committee on Atomic Development and Space

   Staff will prepare response indicating Commissioners' schedules will not permit participation but that Commissioner Thompson would be able to participate on another date; if October 13 date cannot be changed appropriate staff will represent the Commission. (AGM-ADRA)

4. Agenda for the Weeks of October 5, 12, 19 and 26

   Approved as revised. (SECY)

5. Secretary's September 29 Memorandum re AEC Citation Ceremony Plan and Guest List - Dr. Jane Hall

   Approved. (SECY)

6. September 22 Letter from Frank Young, WINB, re Request to Meet Informally with Commission during AIF/ANS Meeting in November

   To be scheduled. (SECY)

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7. September 25 Letter from Detlev Bronk, Rockefeller University re Funding Problems - Nuclear Science Center

Staff will discuss with Dr. Bronk and prepare an appropriate reply. (DTI)

8. Mr. Kratzer's Oral Report on Status of Foreign Gaseous Diffusion Technology Cooperation

9. September 18 Letter from Senator Aiken re September 22 Speech in Las Vegas

Commissioner Johnson will prepare an appropriate response and discuss with Senator Aiken. (O'Donnell)

10. Oral Report on NSSM 101

Mr. Brown is circulating a draft for review by individual Commissioners, revision as necessary and consideration by the Commission October 14. (AGM/SECY)

11. Oral Report on Industry Participation in Uranium Enrichment

SECY-443 - Industry Participation in Uranium Enrichment being circulated today for consideration by the Commission October 12. (SECY)

12. N Reactor Incident. (Oral)

Draft press release requested; staff to watch public information aspects carefully. (PI)

13. SECY-405 - Underground Test Program Data for a Portion of EMERY II

[redacted] approved; withdrawal of PAJARITO noted. (DMA)

14. SECY-424 - Status of ADAGIO

Approved, subject to further review with Commissioner Thompson. (DMA)

15. SECY-432 - National Academy of Engineering: Study of Power Plant Siting (See also SECY-390)

Approved as revised. (RDT)

16. SECY-386 - Laboratory Administration

Deferred. (SECY)

17. SECY-441 - Brookhaven Land

Staff will obtain BNL endorsement for proposed course of action, discuss with Commissioner Kingsley and prepare appropriate response to his letter. (AGMO)

18. SECY-425 - [illegible] Safeguards Provisions Relating to the Exemption of Plutonium

Approved. (SMM)

19. SECY-421 - Proposed Export of U.K. Computers to Serpukhov

Approved. (DIA)

20. SECY-420 - Lease for Second Core of the "Otto Hahn"

Approved. (DIA)

21. SECY-418 - Declassification of Intelligence Information on Nuclear Tests

Approved. (C)

12:35 p.m.

W. B. McCool
Secretary of the Commission

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey | Mr. Hennessey | General Manager |
| Commissioner Johnson | Mr. Rubin | General Counsel |
| Commissioner Thompson | Mr. Griffin | Secretary |
| | Mr. Bloch* | |
| | Mr. Brown* | |
| | Mr. Kull* | |
| | Mr. Abbadessa* | |
| | Mr. Hobbs* | |
| | Mr. Peterson** | |
| | Gen. Giller** | |
| | Mr. F. Johnson** | |
| | Mr. Derry** | |
| | Mr. McDaniel** | |
| | Mr. English** | |
| | Mr. Erlewine** | |
| | Mr. DiNunno** | |
| | Gen. Crowson** | |
| | Mr. Kratzer** | |
| | Mr. Sommer** | |
| | Mr. Marshall** | |
| | Mr. Quinn** | |
| | Mr. Flaherty** | |

* Partial Attendance
** Attendance by Topic(s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

3

October 2, 1970

REGULATORY MEETING 425

10:15 a.m., Friday, October 2, 1970, Room-458, Germantown

1. September 24, 1970 Letter From William Webster to Chairman Resigning As Sr. Technical Advisor for the Geneva Conference

   The Commission approved the appointment of Dr. Gerald Tape to succeed Mr. Webster. (DTI-DIA)

2. Mr. Price's Oral Report on Withdrawal of Intervenor from Point Beach Case (Docket 52-66)

   The Commission noted Mr. Price planned to issue the license upon formal notification of withdrawal of Intervenor, probably October 5. (ADRA)

3. Mr. Price's Oral Report on Strike of Tri State Trucking Company

   The Commission noted a staff paper on the transportation of Pu in various forms would be circulated next week and requested adequate review time before formal consideration. The Commission also requested a re-examination of procedures relating to Pu in the Buy-back Program. (ADRA-SECY)

4. Mr. Price's September 9 Memorandum re Issuance of Export License for Special Nuclear Material (Pu to West Germany)

   Approved. (ADRA)

5. September 24 Letter from Messrs. Holifield and Hosmer re Licensing of Nuclear Power Plants

   The Commission requested a definitive reply for consideration at a special meeting for discussion of the role of the Hearing in the licensing process to be scheduled at an early date. (ADRA-SECY)

6. Mr. Price's September 22 Memorandum re Proposal of the National Association of Regulatory Utility Commissioners (NARUC) That the AEC Apply for Membership in the Association (See also Mr. Price's September 30 Memorandum same subject)

   The Commission approved AEC Membership and designated Commissioner Ramey the AEC Representative. (ADRA-Fremling)

7. Notice Requirement Under Amendment to 182c - Problem in Pending Construction Permit Proceedings (Oral)

The Commission approved the General Counsel's proposed alternative of early publication of notice of proposed issuance on Millstone with re-publication the next 4 consecutive weeks, the same publication procedure to be followed with Shoreham, Diablo and future cases. (CGC-ADRA)

8. SECY-R 56 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

Discussed. (ADRA)

W. B. McCool
Secretary of the Commission

11:00 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hennessey | Commissioners |
| Commissioner Ramey | Mr. Rubin | Dir/Regulation |
| Commissioner Johnson | Mr. Griffin | General Manager |
| Commissioner Thompson | Mr. Price | General Counsel |
| | Mr. Henderson | Secretary |
| | Mr. Beck | |
| | Mr. Shapar | |
| | Mr. Buck | |
| | Mr. Hobbs | |

FRANCIS PEARSON, *President*
Washington Utilities and Transportation Commission
Insurance Building
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GEORGE I. BLOOM, *First Vice President*
Pennsylvania Public Utility Commission
P.O. Box 3265
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FRANCIS RIORDAN, *Second Vice President*
New Hampshire Public Utilities Commission
26 Pleasant Street
Concord, New Hampshire 03301

3327 Interstate Commerce Commission Building
P.O. Box 684, Washington, D. C. 20044

Telephone 202-628-7326

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NOV 86

PAUL RODGERS
*General Counsel*
*Administrative Director*

EVERETTE KREEGER
*Assistant General Counsel*
*Secretary-Treasurer*

August 26, 1970

The Honorable Glenn T. Seaborg, Chairman
Atomic Energy Commission
Mail Station B412
Washington, D.C. 20545

Dear Dr. Seaborg:

The work of the Atomic Energy Commission increasingly affects the regulatory functions of our member Federal and State agencies in the electric utility field. Accordingly, I believe it would be very beneficial for your Commission to become a member of the National Association of Regulatory Utility Commissioners (NARUC).

The Association was founded in 1889 for the primary purpose of serving the public interest by seeking to improve the quality and effectiveness of government regulation. Its members have largely shaped the profile and substance of public regulation in America as we know it today.

The Association is presently composed of the Civil Aeronautics Board, the Department of Transportation, the Federal Communications Commission, the Federal Power Commission, the Interstate Commerce Commission, the Securities and Exchange Commission, fifty-five State agencies drawn from every State, and five agencies drawn from Canada, the District of Columbia, Jamaica, Puerto Rico and the Virgin Islands.

The Association keeps its members apprised of current developments of regulatory interest by furnishing the Blue Bulletin Service to the key personnel of each member agency and by special mailings of material. As a member, such personnel of your agency would receive the Bulletin regularly. A representative copy of the Bulletin is enclosed.

The Association and its affiliates, through the holding of national and regional conventions and committee meetings, seek to improve cooperation among the members and to intensify regulatory expertise.

The Association maintains a staff in Washington, D.C., which is available for your use at any time.

The purposes and functions of the Association are further depicted by the Proceedings of our last Annual Convention held in Denver, Colorado, October 6-9, 1969. An edition of these Proceedings is being forwarded to you under separate cover. Our Constitution is set forth in this edition at pages 722-733.

The membership of your Commission in our Association would not involve the payment of annual dues or the assumption of any other financial obligations.

In order for your Commission to become a member, the Association would have to amend its Constitution. However, this may be easily done at our Eighty-second Annual Convention which will be held in Las Vegas, Nevada, November 16-19, 1970.

With your permission, I shall be pleased to sponsor an appropriate amendment to the Constitution at this Convention.

I believe you and your colleagues will find membership in the Association rewarding. I look forward to your active participation and to the pleasure of meeting you and working with you in the years to come.

Sincerely yours,

George I. Bloom
First Vice President
Chairman, Executive Committee

GIB/ct

encls.

cc: Hon. Francis Pearson, NARUC President
Hon. Francis J. Riordan, NARUC Second Vice President

in touch with this. We learned that the N reactor had a serious failure, including the malfunction of a control rod, which raises further questions as to the future of this reactor. We approved negotiating with the National Academy of Engineering concerning their undertaking a survey of nuclear power plant siting. We tentatively approved the dropping of the 2 MT ADAGIO shot, scheduled for the Central Nevada Supplemental Test Site during the third quarter of FY 1971, on the basis of the Laboratory's recommendation that this shot is no longer needed; we will reconsider this at a later meeting, but it looks like this is the direction we will take.

I had lunch with Stan Schneider to discuss plans for writing my journal for Doubleday.

Dick Hewlett dropped in to tell me that Professor Roger Hahn of the History Department of the University of California, Berkeley, has offered him the position vacated by Hunter Dupree. He is not inclined to accept but may investigate further.

At 2:15 p.m. I presided over Information Meeting 1065 (notes attached). We discussed the problem of Dr. Moshe Lubin's (University of Rochester) research on the application of lasers to control nuclear fusion reactions. Here is another case where staff and Commissioner Ramey are inclined to try to prevent this. I am looking for a solution whereby this work can be continued on an unclassified basis. We discussed the KMS case further and approved a letter that Hennessey will send to Keeve Siegal warning him of the serious financial, security and legal problems involved in their work on laser fusion.

At 3:40 p.m. I presided over Regulatory Commission Meeting 288 (action summary attached). We discussed the possible need for legislation to clarify the Commission's regulatory authority with respect to the National Environmental Policy Act of 1969. It was concluded, with reluctant concurrence on my part, that no further legislative authority is required. (Attached are copies of letters from Connecticut Senator Abe Ribicoff and Minnesota Congressman Joseph Karth which relate to this point.)

At 4:35 p.m. I presided over Commission Meeting 2436 (action summary attached)

I sent a letter to Henry Kissinger (copy attached) forwarding a copy of Holifield's letter of September 25 (copy attached on October 1) concerning cooperation with Western Europe in the Gaseous diffusion technology and advising that AEC and State are now preparing an outline of specific plans for the JCAE. Kissinger sent a memorandum to the NSC Under Secretaries Committee (copy attached on October 1) approving exploratory talks on a multi-nationally owned and operated gaseous diffusion plant in Western Europe.

I sent a letter to California Congressman Paul N. McCloskey (copy attached) commenting on his suggestion that I undertake the preparation of a comprehensive National Energy Policy for the U.S. during the next decade.

Suki and I hiked in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on the White Horse Trail to Cross Trails 3 and 4, past the police headquarters, and back to our starting point.

Saturday, October 3, 1970 - D.C.

I worked in the office until 12:45 p.m. and then had lunch with Justin Bloom at the World Buttery.

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
October 2, 1970

INFORMATION MEETING 1065

2:15 p.m., Friday, October 2, 1970, Room A-410, Germantown

1. SECY-408 - Proposed Laser Research at University of Rochester

   Discussed; to be rescheduled with list of review panel nominees. (C-SECY)

2. Press Release On Hanford Radioactivity Material Release October 1

   Noted. (PI)

3. SECY-440 - Reply to KMS Letter

   Approved as revised. (OGC)

4. SECY-438 - Comments on S.4310: Alleviating Shortage of Coal and Electrical Energy

   Approved. (OGC)

5. SECY-391 - UNC Request for Exception to Contract - October 1, 1970 Letter to Mr. Faulkner
   and
   SECY-295 - UNC Request for Exception to Contract
   Mr. William P. Bush (UNC)

   Approved, subject to Commissioners Ramey and Johnson's Meeting with UNC Representatives next week. (RM/Fremling/O'Donnell)

6. SECY-417 - Proposed Federal Register Notice on Leasing

   Noted. (RM)

7. SECY-433 - Washington Post Science Writer Request for Information

   Noted. (PI)

8. SECY-431 - Thermal Effects Research Facility at SR

   Noted. (B&M)

9. SECY-419 - NAS/NRC U.S. National Committee on Rock Mechanics

Noted with suggestion staff confer with NAS on a possible alternate approach to the Study of The Panel on Earthquake Modification. (R)

10. SECY-412 - CTR: Modification of the ORMAK I Device

Noted. (R)

11. September 15 Memorandum from Director, Office of Management and Budget, re Procedures for Preparing the 1972 Budget

Noted for possible discussion at Meeting with Mr. Schultz October 13. (OC)

12. Pending Contractual Matters Report Number 376

Noted. (PAR)

W. B. McCool
Secretary of the Commission

3:40 p.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Griffin | Commissioners |
| Commissioner Ramey | Mr. Hollingsworth | General Manager |
| Commissioner Johnson | Mr. Bloch | General Counsel |
| Commissioner Thompson | Mr. Kull | Secretary |
| | Mr. Rubin | |
| | Mr. Hobbs | |
| | Mr. Hennessey | |
| | Mr. Brown | |
| | Mr. Abbadessa | |
| | Mr. Pender* | |
| | Mr. Marshall* | |
| | Mr. Hirsch* | |
| | Mr. Gould* | |
| | Mr. McDaniel* | |
| | Mr. Quinn* | |
| | Mr. Faulkner* | |
| | Mrs. Norry* | |
| | Mr. Harris* | |
| | Mr. Fouchard* | |

* Attendance by Topic(s)

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NOV. 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 5, 1970
Approved HLP
Date

H. L. Price, Director of Regulation

ACTION SUMMARY OF REGULATORY MEETING 288, FRIDAY, OCTOBER 2, 1970, 3:40 P.M., ROOM A-410, GERMANTOWN, MARYLAND

ommission Business

1. Minutes of Regulatory Meetings 286 & 287

   Approved.. (SECY)

2. SECY-R 18 - Requiring Proof of Financial Responsibility of Materials Licenses

   Approved, as revised.

   The Commission requested staff check references to "all" contamination incidents in the draft letter to TVA.

   The Commission noted the states would retain the option to require their materials licensees to carry nuclear liability insurance.

   (SLR)

3. SECY-R 52 - Amendments to 10 CFR Parts 20 & 50: Control of Releases of Radioactivity to the Environment (See also SECY-R 53)

   Discussed. To be rescheduled. (SECY)

   Commissioner Thompson requested staff reconsider the requirements of pathway exposure studies (page 22, para. (iii)). (RPS)

4. SECY-R 56 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

   To be rescheduled. (SECY).

5. SECY-R 57 - Proposed Legislation to Clarify Commission Regulatory Authority with Respect to the National Environmental Policy Act of 1969

   The Commission approved notifying the Council on Environmental Quality that AEC sees no need at this time for additional legislation to bring its authority and policies into conformity with the intent, purposes, and procedures of NEPA. (ADRA/OGC)

6. SECY-R 59 - AEC Responsibility for Thermal Pollution: Proposed Response to NYT Editorial of September 30, 1970

Approved, with revisions, for Commissioner Ramey's signature.

The Commission requested the letter to Mr. Oakes indicate AEC's authority to enforce the standards set under the Water Quality Improvement Act.

(PI)

F. T. Hobbs for

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

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RUSSELL B. LONG, LA., CHAIRMAN
CLINTON P. ANDERSON, N. MEX. JOHN J. WILLIAMS, DEL.
ALBERT GORE, TENN. WALLACE F. BENNETT, UTAH
HERMAN E. TALMADGE, GA. CARL T. CURTIS, NEBR.
EUGENE J. MC CARTHY, MINN. JACK MILLER, IOWA
VANCE HARTKE, IND. LEN B. JORDAN, IDAHO
ABRAHAM RIBICOFF, CONN. CLIFFORD P. HANSEN, WYO.
HARRY F. BYRD, JR., VA.

TOM VAIL, CHIEF COUNSEL

United States Senate
COMMITTEE ON FINANCE
WASHINGTON, D.C. 20510

September 28, 1970

Mr. Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Seaborg:

I have been deeply concerned for some time now over the need to have coordinated and appropriate development of Long Island Sound to assure that the present environmental deterioration will be halted.

The Atomic Energy Commission now has before it an application of the Long Island Lighting Company to build a nuclear power plant at Shoreham, Long Island on the north shore of the Sound. The nearest population center is Stratford, Connecticut, 18 miles across Long Island Sound. Given the circulation of water in the Sound whereby there is a high degree of interchange, we in Connecticut are concerned about the possibility that any adverse effects caused by heated effluent released in Long Island would reach the Connecticut shores.

Our concern is heightened by the planned location of a number of nuclear power plants on the shores of the Sound. Connecticut must be fully protected from any potential adverse ecological consequences of this entire development.

I am, therefore, concerned with the Atomic Energy Commission's position expressed in Commission regulations (35 Federal Register 8595-8597, specifically paragraph 9 and 11 of appendix D), that the licensing and regulatory jurisdiction of the Commission has not been broadened by the enactment of the National Environmental Policy Act of 1969. I am also disturbed by the Commission's view (35 Federal Register 8596 at paragraph

6 of appendix D) that it need not make an independent finding on the water quality aspects of a proposed action so long as one state's certification has been received in accordance with section 21 (b) of the Water Quality Improvement Act (Public Law 91-224, April 3, 1970).

If section 21 (b) of the Water Quality Improvement Act relieves the Atomic Energy Commission of making any independent findings on the direct and indirect effects of water quality, I would appreciate knowing what the AEC's increased responsibilities and obligations are now that the NEPA is in effect. The wording and intent of NEPA clearly shift the burden to the federal agencies to assure that their activities will be in conformity with the policies set forth in the Act.

The AEC's interpretation of section 21 (b) of WQIA is particularly confusing in the case where two or more states are involved. If one state has set a low thermal pollution standard, according to the AEC interpretation, the AEC will have complied with NEPA by merely requiring an applicant to meet that state's standard. This situation exists in the Shoreham proposal before us, where Connecticut's water temperature standards, for example, are more strict than those of New York. The AEC has a national responsibility to make an independent finding, at least insofar as these multi-jurisdictional matters are concerned.

I would appreciate a report on this entire question.

Sincerely,

Abe Ribicoff

JOSEPH E. KARTH
4TH DISTRICT, MINNESOTA

2432 RAYBURN HOUSE OFFICE BUILDING
CAPITOL 5-6631

ROBERT E. HESS
ADMINISTRATIVE ASSISTANT

Congress of the United States
House of Representatives
Washington, D.C. 20515

COMMITTEE ON
SCIENCE AND ASTRONAUTICS
CHAIRMAN, SUBCOMMITTEE ON
SPACE SCIENCE AND
APPLICATIONS
SUBCOMMITTEE ON
NASA OVERSIGHT

COMMITTEE ON
MERCHANT MARINE AND
FISHERIES
SUBCOMMITTEE ON
FISHERIES AND WILDLIFE
CONSERVATION
SUBCOMMITTEE ON
OCEANOGRAPHY
SUBCOMMITTEE ON
PANAMA CANAL

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NOV 86

September 30, 1970

Dr. Glenn T. Seaborg
Chairman, Atomic Energy Commission
Washington, D. C. 20545

Dear Dr. Seaborg:

This letter is to express my concern over recent news reports relating the operations of the Commission in the government-wide battle to save the environment.

It would appear to me that the Commission is in direct violation of the National Environmental Policy Act which directs all government agencies to weigh environmental factors in any of their decisions.

By any reasonable reading the AEC seems to be demonstrating a unique arrogance in its refusal to comply with this law and raises the question whether the AEC considers itself above the law of the land.

We are all too familiar with the reluctance of some to comply with pollution control plans, but it seems bitterly ironic that a government agency would refuse compliance.

My specific concern is the Commission's refusal to consider the factor of thermal pollution in the development of Nuclear plants. While the Commission does indicate some concern (albeit insufficient by Minnesota's standards) for radioactive pollutants, it appears to be ignoring the equally dangerous aspect of expelling heated water into the environment.

The Department of Interior has acknowledged that such return to the natural environment is severely damaging.

I believe the National Environmental Policy Act places a responsibility for limited thermal pollution upon the Commission and I urge you to make this an on-going concern in the future.

With best wishes, I am

Sincerely yours,

Joseph E. Karth
Member of Congress

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NOV '86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 5, 1970
Approved REH
Date

R. E. Hollingsworth, General Manager

ACTION SUMMARY OF MEETING 2436, FRIDAY, OCTOBER 2, 1970, 4:35 P.M., ROOM A-410, GERMANTOWN, MARYLAND

SECY: FG

Commission Business

1. SECY-327 - Contract Extension for Operation of Kansas City Plant

   Approved. (DC)

2. Briefing on Hanford Master Plan (See AEC 1143/93)

   The Commission noted staff would similarly brief:

   a. appropriate local, state, and federal groups on the development of certain Hanford areas for a nuclear park under long-term lease arrangements; and

   b. the U.S. Bureau of Sport Fisheries and Wildlife, and the Washington State Department of Game on the use of certain areas of the Hanford site for wildlife management and controlled grazing under revocable arrangements.

   The Commission requested ACRS and the Regulatory staff be briefed on the proposed Hanford development plan.

   (AGMO/ECA)

F. T. Hobbs for

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

UNCL. BY BOE
NOV 86

OCT 2 1970

Honorable Henry A. Kissinger
Assistant to the President
for National Security Affairs
The White House

Dear Henry:

This refers to your memorandum of September 14, 1970 in which you informed the interested agencies that, subject to appropriate prior consultations with the Joint Committee on Atomic Energy, the President had approved the initiation of exploratory talks with Western Europe about possible U.S./European cooperation in the construction of a multi-nationally owned and operated gaseous diffusion plant to be located in Western Europe.

On September 16, 1970, an Executive Hearing on this proposal was held with the Joint Committee. At the request of Chairman Holifield, we have forwarded a copy of the transcript of that hearing to your staff, for your use. Under cover of this letter I am forwarding a copy of a letter dated September 25, 1970 that I have received from Chairman Holifield on this subject.

During the hearings, the Committee expressed a number of reservations about the proposal and asked to be furnished with additional details. Specifically, the AEC and the Department of State were requested to provide the Committee with an outline of their specific plans for holding the proposed exploratory discussions with the West Europeans. The AEC and the State Department are now in the process of preparing such a paper for use in further consultations with the Committee. I understand that a complete report will be submitted to you after these additional consultations are held.

Cordially,

Chairman

Enclosure:
Ltr., Holifield to Seaborg,
9/25/70, w/o encl

UNCL. BY DOE
NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 1970

Honorable Paul N. McCloskey, Jr.
House of Representatives

Dear Mr. McCloskey:

Your suggestion that I undertake the task of preparing a comprehensive National Energy Policy for the United States during the next decade offers a most interesting challenge. It is particularly difficult because the drafting of such a policy requires careful consideration of a huge number of rapidly changing variables that will affect basic assumptions that must be made in projecting the role of energy in the Nation's future.

Drafting a national energy policy for the next decade would require the cooperative action of the most knowledgeable experts armed with the most authoritative data. In my opinion, it would not be possible for any one individual or agency to develop such a policy in view of the large number of complex considerations involved. If the policy is to result in a smooth transition to the decades following, it would be necessary to examine carefully all of the variables related to energy consumption and supply for several decades in the future.

As an aid in establishing policy for the development of nuclear reactors for civilian nuclear power, we have endeavored to project the growth of electric power for as long as 50 years in the future. In making these projections it has been necessary to estimate the availability of uranium ore resources, advances in technology in nuclear energy development, availability and cost of fossil fuels, overall demand for electric energy and many other factors. It is evident that the events that have occurred in the last two years involving the impact of growing environmental concern and actions taken to preserve the quality of the environment have changed the situation so that many of the assumptions made as recently as two years ago must be drastically altered. We have been conducting a continuous effort to refine the process of projecting into the future and are currently engaged in updating the assumptions basic to the projections.

There have been a number of studies conducted in recent years by government agencies, private organizations and individuals that have attempted to forecast energy demands and the means of meeting these demands. Some of these studies have also endeavored to formulate energy policy. A recent study 1/ prepared by the Library of Congress for the Joint Economic Committee lists 19 forecasts analyzed by the Office of Science and Technology as to their adequacy for public policy purposes.

In response to your question as to the time required to draw up a comprehensive National Energy Policy for the next decade, on the basis of previous experience it would probably require at least a year. The time required to complete any study depends upon the availability of necessary information and the priority placed upon completing the study by the participants. A study requested by President Kennedy in February 1963 asking nine heads of Federal departments and agencies to undertake a comprehensive study 2/ of the development and utilization of our total energy resources to aid in determining the most effective allocation of our research and development resources was completed and published in the fall of 1966.

In view of the importance of energy in our national economy, continuing attention has been given within the Government to the development of national energy policy guidelines - as exemplified by the Interdepartmental Energy Study and other activities. This attention has, of course, greatly intensified over the past year with the general recognition of the shortage of electrical energy and the increased public concern about the environmental effects of energy usage.

The Atomic Energy Commission has been deeply involved over the past three years in one such activity: that of alleviating the problems of siting steam-electric power plants. This problem, which involves the responsibility of a number of government agencies, is well on its way to solution through the activities of the Interagency Power Plant Siting Group composed of representatives of the Atomic Energy Commission, the Federal Power Commission, the Department of Interior, the Department of Health, Education and Welfare, the Rural Electrification Administration,

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1/ "The Economy, Energy, and the Environment," A Background Study Prepared by the Legislative Reference Service, Library of Congress for the Joint Economic Committee, 9/1/70.

2/ "Energy R&D and National Progress: Findings & Conclusions," An Interdepartmental Study, U.S. Government Printing Office, 9/66.

the Tennessee Valley Authority and the Energy Policy Staff of the President's Office of Science and Technology. This cooperative study effort has resulted in the publication of the report "Considerations Affecting Steam Power Plant Site Selection" in December 1968, the preparation of a second report "Electric Power and the Environment" which will be available from the Government Printing Office in the immediate future, and the preparation of a legislative package that would accomplish the implementation of many of the conclusions reached by the interagency group during its deliberations. During its deliberations, the Interagency Power Plant Siting Group held extensive discussions with representatives of a broad segment of concerned, responsible individuals in industry, public groups concerned with the protection of the environment, and a broad spectrum of State and local officials.

While I am most complimented by your suggestion that I undertake the task of drafting the comprehensive National Energy Policy for the Nation during the next decade, I believe that a better means for preparing the policy would be to take advantage of the knowledge, experience and background of information developed by the interagency group already in being and continue this activity with its responsibilities expanded to accomplish the task you have outlined.

If I can be of any further assistance to you in regard to this matter please let me know.

Cordially,

Chairman

On my way home I stopped by the Agra Gallery (1721 DeSales Street) at the invitation of Lily Spandorf to view her paintings.

Helen, Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going along the White Horse Trail to Cross Trail 1, back on the Black Horse Trail via Cross Trails 3 and 4, past the police headquarters, and back to our starting point.

Helen and I went to the Swedish Embassy to attend a reception for Crown Prince Carl Gustaf. I had a rather long talk with him about my visit to Sweden last September to participate in the Nobel Symposium. I described my Swedish ancestry and general contacts with Sweden. I told him I would send him a copy of my booklet, "Peaceful Uses of Atomic Energy." We were entertained by the Royal Uppsala University Chorus of Sweden, the Orphei Drangar, which is on a U.S. tour, with Eric Ericson conducting. I also spoke with Karl Öbrink, Managing Director of the Orphei Drangar, the Luther Youngdahls, the Robert F. Woodwards (former Ambassador to Spain), the Bo Jonssons, the Edward Days, Julie Hehns, Karl Gruber (Ambassador from Austria), the Chalmers Robertses, the RIchard Harknesses, and Fred Singer.

I spent the rest of the evening reading AEC papers.

Sunday, October 4, 1970 - Washington - Santa Fe, New Mexico

Eric, Suki and I took a hike in Rock Creek Park. We started at Oregon and nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4 and returned to our starting place.

In the afternoon I watched the Washington Redskins - Philadelphia Eagles game on TV, which Washington won, 33-21.

Julie Rubin and I flew to Albuquerque, New Mexico, leaving Baltimore Friendship Airport about 6 p.m. and arriving about 9:20 p.m. Sam Donnelly met us at the airport as a courtesy. An albuquerque AEC Office driver, Kraft, drove us to Santa Fe. It was a beautiful night. We checked into the La Fonda Hotel, I in room 120.

Monday, October 5, 1970 - Santa Fe

Rubin and I had breakfast in the hotel restaurant, Cantina Y Cantinita. When I returned to my room I received a telephone call from Bob Penneman at Los Alamos. He told me he had seen Fricke during his visit to Germany and learned that the Germans have made new calculations that suggest that the center of the islands of stability are more likely to be at Z=112 and Z=156, with shorter half-lives for the former (approximately 1 year) than had been previously predicted. Penneman said Fricke has new periodic tables in color which they are sending me. The Germans are writing an excellent book on the nuclear and chemical properties of the superheavy elements.

Rubin and I took a walk around Santa Fe's downtown district, including visits to spots that Helen and I visited during our stay here in July, 1943. We located the restaurant Helen and I had eaten in (we stayed at the La Fonda Hotel at that time, too). We visited the oldest house in the U.S. and the neighboring San Miguel Mission.

We then proceeded to Morgan Hall to attend the Fourth International Conference on Plutonium and Other Actinides. (Attached is a list of the registrants.)

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| | |
|---|---|
| Marvin Abraham | ORNL |
| E. A. Aitken | GE-Vallecitos |
| Yumi Akimoto | Mitsubishi Metal Mining Corp., Japan |
| R. P. Allen | Battelle-Northwest |
| J. F. Andrew | LASL |
| A. J. Arko | ANL |
| J. W. Anderson | LASL |
| L. B. Asprey | LASL |
| W. L. Barmore | LRL |
| J. O. Barner | LASL |
| J. E. Battles | ANL |
| A. A. Bauer | Battelle Memorial Institute |
| S. Beitscher | Rocky Flats-Dow Chemical Co. |
| J. H. Bender, Jr. | LASL |
| T. K. Bierlein | WADCO |
| Carl W. Bjorklund | LASL |
| H. Blank | European Inst. for Transuranium Elements, Germ |
| Philip E. Bohaboy | Fast Reactor Cermaic Fuels-Sunnyvale |
| A. M. Boring | LASL |
| David F. Bowersox | LASL |
| Leo Brewer | University of California-Berkeley |
| M. B. Brodsky | ANL |
| S. E. Bronisz | LASL |
| D. C. Bullington | WADCO |
| R. A. Busch | PNL |
| D. Calais | CEA-France |
| G. M. Campbell | LASL |
| S. K. Chan | Cavendish Lab., ENGLAND |
| ~~R. Clark~~ | ~~Dow Chemical Co. Rocky Flats~~ |
| D. G. Clifton | LASL |
| J. C. Clifford | LASL |
| F. W. Clinard, Jr. | LASL |
| M. R. Conner | LASL |
| B. Coqblin | Universite de Paris-Orsay, France |
| E. M. Cramer | LRL |
| D. T. Cromer | LASL |
| S. D. Dahlgren | Battelle-Northwest |
| H. L. Davis | ORNL |
| G. Dean | CEA-France |
| Mrs. D. L. Douglass | LASL |
| J. Doyle | Dow Chemical Co.-Rocky Flats |
| B. D. Dunlap | ANL |
| Frank J. Dunn | LASL |
| Lars Ekbom | Research Inst. of Swedish National Defence-Sweder |
| F. H. Ellinger | LASL |
| R. O. Elliott | LASL |
| W. P. Ellis | LASL |
| M. E. Faiers | UKAEA, AWRE, England |
| J. Fischer | ANL |
| R. B. Fischer | Dow Chemical Co-Rocky Flats |

| | |
|---|---|
| F. Y. Fradin | ANL |
| F. J. Fraikor | Dow Chemical Co-Rocky Flats |
| B. R. T. Frost | ANL |
| W. Fulkerson | ORNL |
| R. L. Gibby | WADCO |
| R. B. Gibney | LASL |
| A. L. Giorgi | LASL |
| A. Goldberg | LRL |
| J. L. Green | LASL |
| D. H. Gurinsky | Brookhaven National Lab. |
| Zeev Hadari | Israel Atomic Energy Commission-Israel |
| D. Harbur | LASL |
| H. G. Hecht | LASL |
| H. J. Hedger | UKAEA, AERE-England |
| H. H. Hill | LASL |
| Yasuo Hirose | Research Lab. of Hitachi, Ltd., Japan |
| Helmut Holleck | Gesellschaft fur Kernforschung-Karlsruhe, Ger |
| C. Holley | LASL |
| L. W. Holm | Research Inst. of Swedish National Defence-Sw |
| G. L. Hopkin | UKAEA, AWRE, England |
| J. A. Horak | University of New Mexico |
| M. D. Houston | Battelle Memorial Institute |
| L. C. Ianniello | USAEC-Washington |
| Naimat Ali Javed | ANL |
| A. T. Jeffs | Atomic Energy of Canada, Ltd.-Canada |
| Karl W. R. Johnson | LASL |
| Kaye A. Johnson | LASL |
| W. M. Jones | LASL |
| G. M. Kalvius | ANL |
| Hiroo Katsuya | Sumitomo Electric Industries-Japan |
| A. E. Kay | UKAEA, AWRE, England |
| C. P. Kempter | LASL |
| R. A. Kent | LASL |
| J. F. Kerrisk | LASL |
| Takeo Kikuchi | Japan Atomic Energy Research Inst.-Japan |
| E. A. Kmetko | LASL |
| Dale Koelling | Northwestern University |
| Masumichi Koizumi | Power Reactor and Nuclear Fuel Development Corp., Japan |
| N. H. Krikorian | LASL |
| Owen L. Kruger | Battelle Memorial Institute |
| Masayoshi Kurihara | Plutonium Fuel Laboratory-Japan Atomic Ener Research Institute, Japan |
| D. J. Lam | ANL |
| C. C. Land | LASL |
| G. H. Lander | ANL |
| Gordon Lassahn | Dow Chemical Co-Rocky Flats |
| F. Lataillade | CEA-France |

| | |
|---|---|
| J. A. Leary | LASL |
| J. A. Lee | UKAEA, AERE, England |
| R. D. Leggett | WADCO |
| W. B. Lewis | LASL |
| J. R. Lindgren | Gulf General Atomic, Inc. |
| L. T. Lloyd | ANL |
| T. R. Loree | LASL |
| W. D. Ludemann | LRL |
| L. B. Lundberg | LASL |
| J. L. Lunsford | LASL |
| W. H. McCarthy | Fast Reactor Ceramic Fuels-Sunnyvale |
| W. R. McDonell | Savannah River Laboratory |
| George Mah | Dow Chemical Co-Rocky Flats |
| G. R. Mallett | Kerr-McGee Corp. |
| Livio Manes | European Institute for Transuranium Elements Karlsruhe, Germany |
| W. J. Maraman | LASL |
| J. F. Marin | CEA-France |
| J. A. C. Marples | UKAEA, AERE, England |
| T. B. Massalski | Mellon Institute of Science |
| G. T. Meaden | Dalhousie University, Canada |
| J. J. Medina | LASL |
| ~~G. E. Metz~~ | ~~LASL~~ |
| M. D. Merz | Battelle-Northwest |
| W. N. Miner | LASL |
| R. L. Moment | Dow Chemical Co.-Rocky Flats |
| J. R. Morgan | LASL |
| W. C. Mosley | Savannah River Laboratory |
| F. M. Mueller | ANL |
| R. N. R. Mulford | LASL |
| R. D. Nelson | Battelle-Northwest |
| * M. V. Nevitt | ANL |
| C. J. M. Northrup, Jr. | Sandia Labs. |
| Dennis R. O'Boyle | ANL |
| F. L. Oetting | Dow Chemical Co.-Rocky Flats |
| Yasutaka Ohsawa | Mitsubishi Atomic Power Industries, Japan |
| C. E. Olsen | LASL |
| W. M. Olson | LASL |
| S. W. Rabideau | LASL |
| A. L. Rafalski | Dow Chemical Co.- Rocky Flats |
| W. J. Ramsey | LRL |
| J. G. Reavis | LASL |
| J. J. Rechtien | ANL |
| J. L. Rhoades | AEC-Richland |
| J. L. Robbins | LRL |
| M. Rosen | Israel Atomic Energy Commission, Nuclear Research Center, Israel |
| S. Rosen | USAEC-Washington |



* A. NUTT LASL

| | |
|---|---|
| T. A. Sandenaw | LASL |
| Shigeru Saito | Atomic Power Development Associates |
| J. Glenn Schnizlein | ANL |
| Klaus Schilgen | Alkem, Alpha-Chemie und Metallurgie, Germany |
| F. W. Schonfeld | LASL |
| W. N. Seery | Dow Chemical Co.-Rocky Flats |
| Dipankar Sengupta | Carnegie-Mellon University |
| Mrs. V. G. Shadden | LASL |
| Paul G. Shewmon | ANL |
| A. E. Smith | Atlantic Richfield Handord Co. |
| T. F. Smith | University of California-La Jolla, Ca. |
| E. C. Snow | LASL |
| W. A. Stark, Jr. | Sandia Labs. |
| Wolfgang Stoll | Alkem, Alpha-Chemie und Metallurgie, Germany |
| ~~V. W. Storhok~~ | ~~Battelle Memorial Institute~~ |
| A. Strasser | United Nuclear Corporation |
| A. C. Switendick | Sandia Labs. |
| R. E. Tate | LASL |
| Guy Tavernier | Belgonucleaire SA, Belgium |
| J. M. Taylor | Battelle-Northwest |
| Victor Tennery | ORNL |
| Kazuji Terada | Dow Chemical Co. - Rocky Flats |
| N. Thompson | Dow Chemical Co.-Rocky Flats |
| M. Tokar, Jr. | LASL |
| Yoshihiro Ueda | ANL |
| E. L. F. Vanden Bemden | Belgonucleaire SA, Belgium |
| D. Vollath | Gesellschaft fur Kernforschung, Karlsruhe, Gerr |
| M. B. Waldron | University of Surrey, England |
| K. L. Walters | LASL |
| J. W. Ward | LASL |
| S. C. Weaver | ORNL |
| A. D. Wheeler | LRL |
| D. C. Williams | Sandia Labs. |
| L. J. Wittenberg | Mound Laboratory |
| J. H. Wood | LASL |
| W. H. Zachariasen | University of Chicago |
| D. Zamir | Israel Atomic Energy Commission, Israel |
| R. E. Zielinski | Mound Laboratory |
| Frank Zurey | Dow Chemical Co.-Rocky Flats |
| R. Pascard | CEA-France |
| W. M. Pardue | Battelle Memorial Institute |
| J. R. Peterson | University of Tennessee |
| P. E. Potter | UKAEA, AERE |
| L. Pribila | Dow Chemical Co.-Rocky Flats |
| C. Prunier | CEA-France |

At 11 a.m., after being introduced by Fred Schonfeld, I gave the opening talk, "The Plutonium Economy of the Future."

Rubin and I had lunch at The Forge (on the corner of Don Gaspar and Alameda) with Schonfeld, Al Florin, Mike Nevitt and Lou Ianniello.

After lunch we returned to Morgan Hall. Robert D. Fowler was chairman of the first session. He told me he would like about 5 grams of Pu-244 for his work. The first talk was given by H. Hunter Hill on "The Early Actinides, the Periodic System's Electron Transition Metal Series," an invited paper. The first contributed paper, "The Preparation and Some Properties of Berkelium Metal" was next given by Joseph R. Peterson. They first prepared berkelium metal on December 31, 1968. The volatility of californium metal is several orders of magnitude greater than that of berkelium metal. It has been very difficult to measure the melting point of berkelium metal; their present best value is 986 degrees C.

The next paper was "Thermal Conductivity in the Actinide Elements" given by J. A. Lee of AERE (England). Next came the paper "Thermal Conductivity of Plutonium at High Temperatures" given by L. J. Wittenberg, then "Review of Low Temperature Specific Heats of the Actinides" given by J. A. Lee, followed by "Heat Capacity Behavior of Pu-242 between 10 degrees and 373 degrees K" by T. A. Sandenaw. T. F. Smith of the University of California, San Diego, led the discussion. He called on Willie Zachariasen, who said he did not believe Hunter Hill's theoretical deductions; he was in characteristic form and reminded me of Met Lab days. During the discussion, J. A. Lee of AERE made a plea to the AEC for some Pu-242; he told me privately that 10 grams as metal would do.

I met with Bob Penneman. He (1) said Fricke will send me color plates showing stability in the Z=112-114 region and Z=156-164 region as well as his color version of the periodic table, (2) invited me again to open the $C^{13}$ meeting at LASL on June 9, 1971, and I regretted, (3) said Don Cromer would like his name mentioned as a possible candidate to serve at the IAEA for a two-year appointment, (4) said he would like to visit the Kurchatov Institute (to which V. N. Kosyakov, whom he saw in Karlsruhe last month, invited him) in a year or so, (5) said the French are expecting to have their effort diminish by one-half over a few years time, in contrast to the Germans who are off and running, and (6) said he may receive a Pu-238 pacemaker cardiogram from Rene Berger of France.

Rubin and I then took a long walk around town. We again visited the oldest house in the U.S.A., built in the 1100-1200 AD era, with some lower walls of the original construction still there. Here I bought a copper bracelet and a nickel turquoise tie clasp.

We then visited the San Miguel Chapel, built in 1610; some of the original adobe steps, etc., are visible. We next walked over some of the nearby dirt roads on the hills that Helen and I walked on in July, 1943.

We went by the Palace of Governors and the Fine Arts Museum but they were not open (on Monday). We walked across town to the new State Capitol, built in 1966.

We returned to the La Fonda Hotel and prepared for dinner. We attended the conference dinner, preceded by a cocktail party, at La Posada Inn. Among those present to whom I talked were Dr. and Mrs. Willie Zachariasen, Dr. and Mrs. William Ramsey, Bill McDonnell, Al Florin, Larry Asprey, Harold and Beverly Agnew and Mr. and Mrs. Mike Nevitt.



After dinner Schonfeld introduced Harold Agnew who made some informal remarks on the need to combat the resistance to nuclear power and invited the group to meet

Seaborg visit to oldest home
in the U.S., October 5, 1970

at Los Alamos next time. He closed by quoting my remarks on population control (mentioning my children) which I gave at the Washington Section, ANS meeting last May.

After the evening program ended Rubin and I took a walk around town, passing by 109 East Palace Street, the Los Alamos Laboratory headquarters during the war. We also walked by the El Patio Restaurant and El Paseo Theater on San Francisco Street, places where Helen and I went during our July, 1943, stay in Santa Fe.

Tuesday, October 6, 1970 - Santa Fe - Los Alamos - Berkeley

Rubin and I had breakfast in the Cantina Y Cantinita. After breakfast we rode with Robert Porton (LASL Public Relations Officer) to Los Alamos. He drove along Old Taos Road (through the area where Rubin and I walked yesterday), past Bishop's Lodge (where I met with Kennedy, Segre, Wahl and Foster York in October, 1945) and El Nido (a favorite dinner spot for Los Alamos people during the war). We drove on to Los Alamos and, since we were early, we drove on to have a look at S site.

We then drove back to the Los Alamos administration building and went to the office of Harold Agnew. Here, Rubin and I met with Agnew. I explained to him the background of the White House concern over his statements on the need to develop and use tactical nuclear weapons and admonished him of the need to be very careful on this and similarly sensitive public statements in the future. He attributed his statements at the closed briefing of Federal officials by the weapons laboratory directors on August 11, 1970, as due to guidance by DMA staff. We discussed the KMS problem and he agreed that they should be allowed to carry on laser research on controlled thermonuclear reactions. He questioned the need for an AEC area office at Los Alsmos, suggesting that money could be saved by eliminating this and letting Albuquerque Operations take over these duties. We also discussed the impending serious problems posed by the additional budget cuts for FY 1972.

We went with Agnew to the Red Room of the Norris E. Bradbury Science hall where the AEC Citation ceremony was to be conducted. I was introduced by Jack Blackwell (Manager, Los Alamos Area Office) following which I made my remarks of presentation of the AEC Citation to Jane Hall and the presentation of the gold medal and scroll. (See picture.) Jane responded very briefly, after which the members of the audience came up to extend their congratulations. A number of pictures were taken by Los Alamos photographers. (Attached is a list of those present.)

Following the ceremony we went to the Agnew home for lunch. Present were the Agnews, Lois Bradbury, Dr. and Mrs. Darol Froman, Mrs. J. C. McKibbin, Theos J. Thompson, Jane and Dave Hall, Julie Rubin and myself.

After lunch Rubin, Thompson and I rode to Albuquerque with Blackwell. We went by way of a scenic route over the old Jemez Springs Road (State Highway 4) in order to see the impressive yellow fall colors of the aspen. We passed the very interesting Valle Grande (large, treeless and covered with faded [fall] grass). Further on we passed San Ysidro Pueblo and Zia Pueblo.

In Albuquerque we were met by Sam Donnelly. Rubin and I said goodbye to Donnelly and Thompson (who was on his way to visit the Chalk River laboratory in Canada) and boarded Continental Airlines Flight No. 91, which left at 4:10 p.m. and arrived in San Francisco about 5:15 p.m.

S E C R E T A R I A T
September 29, 1970

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

GUEST LIST
USAEC CITATION
for
DR. JANE H. HALL

11:00 a.m., October 6, 1970
Red Room, Norris E. Bradbury Hall of Science
Los Alamos Scientific Laboratory
Los Alamos, New Mexico

THE COMMISSION

Chairman Glenn T. Seaborg
Commissioner Theos J. Thompson

MEDALIST

Dr. Jane H. Hall

MEDALIST'S GUESTS

(See Attached List)

GENERAL ADVISORY COMMITTEE

Mr. Melvin Harrison, Scientific Officer

AEC HEADQUARTERS STAFF

Mr. J. H. Rubin, Special Assistant to the Chairman
Dr. F. R. Tesche, Deputy Director, MA /for Gen. Giller

## MEDALIST'S GUESTS

Dr. H. M. Agnew
Dr. R. D. Baker
Dr. N. E. Bradbury
Mrs. C. F. Beckett
Mr. M. L. Brooks
*Dr. C. I. Browne
Dr. R. Canada
Dr. W. H. Chambers
Mr. G. R. Champion
Dr. W. E. Deal
Dr. J. E. Dougherty
Dr. E. H. Eyster
Dr. D. B. Hall
Mr. L. G. Hawkins
Dr. A. Hemmendinger
Mr. L. C. Horpedahl
Dr. L. D. P. King
Dr. R. B. Lazarus
Dr. D. P. MacDougall
Dr. J. C. Mark
Dr. H. T. Motz
Dr. W. E. Ogle
Dr. J. D. Orndoff
Dr. R. E. Person
Mr. R. Reider
Dr. R. E. Schreiber
Dr. R. G. Shreffler
Mr. E. O. Swickard
Dr. R. N. Thorn
Mr. J. J. Wechsler
Mrs. R. A. Wellniz

Mrs. J. C. McKibbin
*Mrs. E. G. McAndrew
Dr. M. F. Roy
Dr. D. K. Froman

## ALBUQUERQUE OPERATIONS OFFICE GUESTS

Gen. H. C. Donnelly, Mgr. ALOO
Mr. H. J. Blackwell, Area Mgr., LAAO

*No Reply as of 9/29/70

Presentation of AEC Citation, Los Alamos, New Mexico; October 6, 1971.
L to R: Commissioner Thompson, Jane H. Hall, Seaborg.

We were met by Eddie White, who drove us to my Lafayette home. Here we met Lynne and Bill, who are staying with the Akols, and the Akols. Rubin went on to the Durant Hotel with White. I took a hike with Lynne and Bill and Leyla Akol (9 years old) up the water tank road and on some trails up the neighboring hills. Then we went back to the Akols and all of us went on to dinner at the Cape Cod House - Mr. and Mrs. Akol, their sons Dan and Kem and daughter Leyla, Lynne, Bill and I. After dinner we went back to our house for awhile, then Lynne and Bill drove me in their Falcon to the Durant Hotel where I spent the night in room 523.

Attached is a copy of the biweekly status report which was sent to the White House in my absence.

Wednesday, October 7, 1970 - Berkeley, California

I had breakfast in the Durant Hotel coffee shop with Rubin and Syd Gaarder. I discussed with Syd his efforts yesterday during which he located some of my Met Lab recruiting correspondence in the Livermore files and some 60-inch cyclotron log material.

We then rode with White to Building 70A of the Radiation Laboratory. I looked over my early files (which had been stored in Livermore) with the help of Doral Buchholz and Syd Gaarder to select material for my Section C-I history project.



I called David Blackwell (a member of the AAAS Board of Directors) to express my interest in seeing the merger of AAAS and Science Service successfully

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# AEC BIWEEKLY STATUS REPORT FOR OCTOBER 6, 1970

1. The 14th General Conference of the International Atomic Energy Agency was concluded on September 28. The possible conflict between India and Pakistan over the election of the President of the Conference and Chairman of the Board of Governors was resolved after considerable corridor debate; both offices were filled by candidates of India. The Agency's Regular Budget for 1971 was approved. Also approved was an amendment, proposed by Italy, for enlarging the Board of Governors from 25 to 34, which the U.S. supported and the USSR lobbied against. After it was approved by a vote of 54 to 9 with 13 abstentions, however, the USSR gracefully accepted this as a fait d'accompli. Two-thirds of the IAEA membership (currently 103 members) must ratify this proposed amendment before it can become effective.

2. As part of its continuing study of the feasibility of storing highly radioactive waste in bedrock caverns excavated beneath its Savannah River Plant, AEC plans to select a site for and design a shaft to penetrate 1500 to 2000 feet below ground. Geologic and hydrologic data obtained thus far indicate that the concept is feasible. Wastes stored would be primarily by-products of weapons materials produced at the plant but would also include by-products of producing materials that have peaceful uses. Bedrock storage would be expected to enable major cost savings and eliminate the need to ship large quantities of solidified wastes from the plant to disposal areas elsewhere. Actual drilling of the shaft and exploratory tunnels to permit inspection of the bedrock would follow, and if the concept continued to appear feasible, excavation of caverns would begin. The bedrock storage concept has been under development for ten years. Although a committee of the National Academy of Sciences in 1966 reported that the safety of the bedrock concept had not been demonstrated, information developed since then has been so encouraging that AEC recently requested the Academy to review the concept and all supporting data. Meanwhile an analysis by a panel of expert consultants concluded the concept has sufficient promise to warrant construction of a shaft and tunnels for exploration. A public announcement of this project has been issued.

3. The CBS-TV special "How Peaceful the Peaceful Atom" has been rescheduled for the evening of November 17, after its time was preempted on September 22. The Commission spoke to CBS President Frank Stanton about the careless handling of facts in an earlier morning news series because some of that material may be included in the evening special. ABC-TV told the AEC it is preparing two one-hour programs on the environment and nuclear energy

dealing with past, present, and future - with the first segment to be shown on December 28.

4. The press continues to focus on such atomic energy topics as nuclear power, the AEC and its critics, radiation protection standards, the Plowshare program, and controlled thermonuclear research. For example, Newsweek said it plans to carry a cover article on atomic energy about the second week in October. Life is working on an article about the energy crisis for an issue in November or December. Other articles are being prepared by the Associated Press New York Bureau, Barron's Business and Financial Weekly, and the National Journal. New York City area papers have been giving considerable attention to the public hearing conducted by the Atomic Safety and Licensing Board on September 21-25 concerning the application by the Long Island Lighting Company to build a nuclear power plant on Long Island Sound. (These hearings are now recessed.)

5. Hearings on the adequacy of Federal radiation standards have been scheduled by a California State legislative committee on October 13 at Sacramento. Both proponents and opponents, including prominent Federal officials and scientific authorities, are expected to testify.

6. In Congress, the House on September 30 passed H.R. 18679, making amendments to the Atomic Energy Act, which include (1) abolition of the concept of practical value in issuing commercial licenses for nuclear facilities, (2) clarification of procedure for prelicensing antitrust review, and (3) word changes designed to clarify legislative intent and express the position of the Joint Committee on Atomic Energy concerning the Government's pricing criteria for uranium enrichment services. Also, the Commission testified on a supplemental budget request before the Public Works Subcommittee of the House Appropriations Committee in executive session on October 1. This request consists of $25.5 million to improve fire safety at weapons installations.

7. As part of a U.S.-Soviet exchange program to study the peaceful atom, five U.S. specialists in high energy physics are beginning research in the USSR. They will work with Soviet scientists from the Joint Institute for Nuclear Research at Dubna on an experiment to be conducted at the Institute of High Energy Physics at Serpukhov.

The Serpukhov Institute, situated near Moscow, has the world's highest energy accelerator, 76 BeV. The experience gained at Serpukhov should prove useful to the experimental program on the 200 BeV accelerator, which is under construction at the National Accelerator Laboratory at Batavia, Illinois. A sixth physicist will participate in the Plasma Physics Research Program at the Physioco-Technical Institute near Kharkov. These assignments, which are for six-month periods, were arranged in connection with exchanges provided under the Memorandum on Cooperation between the USAEC and the USSR State Committee on Atomic Energy, which is part of the overall U.S.-USSR Exchange Agreement. Reciprocal research opportunities will be provided for USSR scientists in U.S. laboratories at a later date.

consummated. I called Akiko Owen, Nancy Corsen (Manager, UCB Placement Center), Herbert Salinger (U.S. Alumni Placement Center), and Sherwood Washburne (Department of Anthropology) to enlist their help in finding jobs for Lynne and Bill.

I met with Jack Hollander and Andrew Sessler to discuss their summary report of the possibilities for Lawrence Radiation Laboratory to undertake environmental studies. I then conferred with Burris Cunningham to discuss his latest work and his progress on the revision of The Chemistry of the Actinide Elements. I agreed to support his nomination of Norman Edelstein for a Guggenheim fellowship and he gave me some biographical material on him.

I talked to Chris Anderson of Time, by phone, and discussed Flerov's science article on element 105.

I then went, with Rubin, up to the Hilac Building and talked with Ghiorso about the status of his program. He showed me his new apparatus for volatilizing trichlorides to form Am, Cm, Cf targets. He thinks that Flerov's two-second SF 105-261 may be wrong (is actually due to an isomer of a lighter element). He feels that he found alpha emitting isotopes of element 105 before Flerov did. He still thinks that 104-260 must have a much shorter SF half life than 0.1 second (reported by Flerov). I talked to Jim Halverson who is making an English language version out of the German film on the actinide elements in which I appeared during the filming in the Berkeley Radiation Laboratory. I met Norman Milleron who explained his work on a mass spectrographic "breath analyzer." (His wife Laura is a sister of Ralph Nader.) I also met Norbert Trautman, the man from the University of Mainz (who works with Gunter Herrmann) who is spending some 6-8 months with Ghiorso; he is working on a rapid ion exchange method involving isobutyrate elution to separate 105 from 104 and the actinides. I also met Jack Gavin who is working on production of zinc ion beams and saw his apparatus. I talked to Torbjorn Sikkeland about his new computerized analytical method for estimating excitation functions for HI, pxn reactions and SF half lives of the products.

Rubin, Gaarder and I had lunch in Perlman's office with Jack Hollander, Dick Diamond, Ken Street, Burris Cunningham, Stan Thompson and Earl Hyde. Lynne and Bill joined us at the end of lunch. Hyde talked to me about his hope that more than one person from Berkeley could attend Flerov's Dubna symposium on heavy ion physics next February. Possibilities are Hyde and Joe Cerny (who has discovered real proton radioactivity recently). Ghiorso doesn't want to attend this symposium. Hyde feels that LRL should be represented or Flerov would feel insulted.

I had a talk with Street, who is taking Perlman's place as head of the chemistry division during Perlman's stay in Israel, about the status of the work and about my future plans.

Jack Peterson and Andy Sessler came by and escorted Lynne and Bill (who had viewed the Building 70 Hot Lab and Perlman's archaeology laboratory during my talk with Street) and me to Building 58 to see the work in progress on the Electron Ring Accelerator.

Following this Lynne, Bill and I rode to Davis with Eddie White. I went to the Crocker Cyclotron Laboratory and Lynne and Bill went to the administration building to inquire about possible jobs. I had a tour of the 76-inch isochronous cyclotron under the guidance of John A. Jungerman, Bill Knox, Ivo Slaus (of UCLA and Zagreb, Yugoslavia), James Swinehart, and others - I met all the principal staff. I met Dave who also participated in the tour. (He is in the process of growing a beard.)

I then went to the chemistry building where I met Larry Andrews, Bob Brinton and others. We went to room 194 where I was to speak and here I met Steve, Carol Chelander and Sig Jacobson. I was introduced by Andrews and spoke on "New Prospects for the Transuranium Elements," illustrated by slides, followed by questions. Lynne and Bill came in near the beginning of my talk. The audience consisted of faculty and students of the Chemistry and Physics Departments.

Following my talk we went to the dining hall of the Tercero complex to have dinner. Here we met Mr. and Mrs. Monti Reynolds, who joined us for dinner. In our dinner group were Dave, Steve, Lynne, Bill, Carol, Sig and Paul Schwabe (Steve's former roommate).

After dinner we went to Hammarskjold House. I received a phone call from Barbara Cannon of the Sacramento Bee, who interviewed me on the peaceful uses of nuclear energy. Among other students I met were Scott Faivre and Dee Eiman. We visited Dave's room in Hammarskjold House - No. 219; he has a single room this year.

After this we visited with Steve in his room (No. 125) in Beckett Hall and met his roommate, Richard Nelson.

Lynne, Bill and I rode back to Berkeley with Eddie White. They then continued on to Lafayette in their Falcon and I went back to the Durant Hotel.

Thursday, October 8, 1970 - Berkeley - Salt Lake City

Rubin and I left the Durant Hotel about 6:20 a.m. and rode with Eddie White to the San Francisco Airport. Here we caught United Flight No. 262, leaving about 7:30 a.m. and arriving in Salt Lake City about 9:45 a.m. We were met at the airport by Dr. H. Z. Park from the University of Utah Division of Biology and Mr. R. L. Jones from the University's Administration. We stopped briefly in front of the airport where I was interviewed by Kraig L. Rieben of KUTV (Channel 2) on the University of Utah Radiobiology Laboratory and the uses of radioactive isotopes. We then rode to the Hotel Utah where I checked into room 203.

We then went to the pharmacology building on the University campus where the 20th Anniversary Symposium of the Radiobiology Division of the Department of Anatomy was being held. We received our badges and went to the auditorium where we heard the papers in progress. The paper by Henry Eyring, "A Steady State Theory of Mutations" was most interesting. This theory makes it possible to calculate the form of survival curves (e.g. related to cancer production from radiation), and the following paper by Betsy Stover on "Life Shortening by Pu-239" showed that her experimental data fit the Eyring theory very well.

Shortly after 11:30 a.m. I was interviewed by Art Kent of KSL-TV (Channel 5) and Ed Yeates of KCBS-TV (Channel 4). Their questions included: the effects on Utah due to fallout from the NTS underground testing program; any final determination on the success of RULISON; will there be more tests of this nature; a garbled question about the relationship of pollution and radiation from the sun; what uses of nuclear energy are available at the present time; is there any danger in the U.S. from nuclear tests in the atmosphere by other nations; and are there any plans for the U.S. to resume atmospheric testing.

Following the interview I walked with Betsy Stover and Julie Rubin to a luncheon for the conference delegates at the Fort Douglas Officers Club which is just off campus from the Medical Center. There appeared to be about 100 in attendance and I sat at a head table along with Dr. and Mrs. Jean Dougherty, Dr. and Mrs.

Robley Evans, Dr. and Mrs. A. M. Brues, Dr. John Totter, Julie Rubin and Dean Richmond of the Medical School of the University of Utah.

There were no speeches at the luncheon and immediately afterwards a small group toured the radiobiology facilities at the University College of Medicine. This was a brief tour and short stops were made at the total body counter and a roof overlook to the beagle dog colony where the experimental animals are housed. Our escorts for the tour were Mr. B. Atherton and Dr. Glenn Taylor. It was reported that about 550 dogs are presently in the beagle colony and that a total of about 1800 have been raised from the original group since the program started in 1952.

I proceeded to the auditorium at about 2 p.m. for the honorary degree ceremony. My nomination was made by Dr. Dougherty and the degree awarded by University of Utah President James C. Fletcher. Others on the platform during the ceremony were: Dr. Kenneth B. Castleton (Vice President), Franklin G. Ebaugh, Jr. (Dean), Mrs. Dorothy Watkiss (Institutional Council), Mr. Reed Brinton (Institutional Council), Dr. W. S. S. Jee, Dr. Jean Dougherty, Dr. Walter Stevens, Dr. Glenn Taylor, Dr. Charles W. Mays, Dr. Charles J. Nabors, Jr., Dr. John R. Totter, and Dr. Betsy J. Stover.

Following the ceremony I delivered my speech, "Plutonium Revisited" which, along with showing the slides, lasted about an hour and 20 minutes. Immediately after my talk I met briefly with Joyce Cummock (our former Lafayette neighbor) and her son Mike. This was followed by pictures of the platform group during the honorary degree ceremony.

I was approached at this point by Peter Monk of the Public Relations Office for the University to answer a few additional questions by Nelson Walsworth, representing the campus activities publication, and Cath Wilhelmson of the Desert News. Their questions included: the nature of pollution from nuclear plants, a projection of the accumulative fallout in Utah from NTS events; the future of nuclear power in Utah; the status of uranium reserves in Utah; and the effect of radon daughters on miners.

After this last interview and based on my earlier indication of interest in hiking, I was introduced to Dr. Charles Mays who arranged for a pair of lab slacks and jacket for me and Julie. We then climbed a fairly steep grade immediately behind the Medical Center which terminated in an area referred to as "the mines." Our climb lasted about one hour; the effect of a 1,000 foot climb from the 5,000 foot initial elevation was particularly noticeable. After changing into our regular clothes, we were driven to the hotel in Dr. Mays' Volkswagen and proceeded shortly afterwards to the reception and dinner which was held on the 24th floor of the nearby University Club building.

The dinner party was attended by about 50 guests and I sat at the head table along with Utah Governor Calvin Rampton, President and Mrs. Fletcher, Joyce and Dick Cummock, Dr. and Mrs. Dougherty, Dr. and Mrs. Brues, Dr. and Mrs. Stover, and Dr. and Mrs. Evans. I sat between Governor Rampton and Joyce Cummock.

There were again no speeches at the dinner except for some very brief remarks by Dr. Dougherty.

After dinner I returned to the hotel and read a draft of my statement for the record of the Subcommittee on NASA Oversight of the House Committee on Science and Astronautics that had been included in the mail package delivered to Berkeley last night.

Friday, October 9, 1970 - Salt Lake City - Washington, D.C.

Rubin and I left the hotel at 6 a.m., took a taxi to the airport and flew to Chicago on United Airlines Flight No. 364, leaving at 6:40 a.m. and arriving at 10:30 a.m. We then continued on American Airlines Flight No. 356 to Washington, leaving at 11:15 a.m. and arriving at National Airport at 1:45 p.m. We were met by Henry Hinds who drove us to the D.C. office where we arrived at 2 p.m.

From 4 until 4:45 p.m., accompanied by Julie Rubin, I met with Caspar W. Weinberger (Deputy Director, Office of Management and Budget) at the Executive Office Building. Cap Weinberger greeted us outside his office since it was being painted and we met in a small adjacent room where he had been working. Cap referenced the three letters sent to him over Tommy Thompson's signature as Acting Chairman that dealt with possible budget reductions in the weapons, naval reactors and LMFBR programs. I stated it was not my intent to discuss detailed budget matters today but rather to give him some insight into organization, personalities and a few special situations in the Commission prior to our more formal discussions. I expressed the hope that he could meet with my fellow Commissioners and hear their views on our program at some future date.

I briefly reviewed for Cap the major organizational breakdown of the AEC and noted our principal facilities as national laboratories, weapons manufacturing and production operations. The background, general attitude and areas of interest of the other Commissioners were explained as well as our historical and present relationship with the JCAE.

I encouraged Cap to visit some of our facilities at an early date, and he expressed great interest in doing this plus learning as much as he could about the AEC program. A two-day trip that would include ANL/NAL plus LRL-Berkeley and LRL-Livermore was suggested or, as an alternative, a one-day trip to ANL/NAL or the Oak Ridge area where laboratory, weapons and manufacturing activities could be observed was offered. Cap selected the Oak Ridge trip and a commitment was made for Friday, October 23, with the understanding that a MATS plane would be obtained for a trip departing Washington in the morning and returning in time for an evening engagement already on Cap's schedule. I agreed to make the necessary arrangements and develop an agenda for the visit.

I advised Cap that safety problems with the N reactor are causing expensive maintenance and could possibly result in our inability to operate the plant. He recognized the political implications of this situation and made a noe to alert other key White House staff to this situation. I reviewed the outstanding record of the 200 Bev Accelerator project and noted that a shortage of funds at this time would be a major blow to continued progress for this facility. Cap offered to cooperate in any way feasible but did not offer much encouragement in obtaining additional funds for AEC beyond our allocated ceiling.

I explained that in areas such as the 200 Bev Accelerator, AEC had experienced difficulty in satisfying all of our high priority programs within the OMB ceiling due to large allocations of funds for fire and safety protection in certain weapons facilities and other increases required in the weapons manufacturing complex. While expressing understanding for our problem, the importance of the ceiling within the total Administration budget was re-emphasized. Cap was very complimentary to the AEC for our past record of adhering to budget ceilings.

I noted the importance of the LMFBR program and also the significance of the CIP program to the future of nuclear power.

Cap stated he would try and sit in on some of the hearings for review of AEC's budget. He indicated Don Rice would be the major contact with AEC but clearly indicated that I should call him or George Shultz whenever there is any need. I suggested that Rice contact me or Julie Rubin on policy and management matters and deal directly with the staff if he desired on budget activities.

Attached is a memorandum from Commissioner Johnson listing various actions that occurred during my absence.

I received a letter from John A. Hannah (Administrator, AID) (copy attached) thanking me for sending him a report on my African trip. He mentioned that Dr. Glenn Schweitzer from his office plans to get together with me soon to discuss U.S. scientific cooperation with African countries.

I received a letter from Yasuhiro Nakasone, member of the Japanese House of Representatives, (copy attached) concerning the proposal he made about enrichment technology during his recent visit to this country (while I was in Europe).

I received a letter from Russell E. Train (CEQ) (copy attached) advising they have no objection to our proposed statement of policy concerning the siting of fuel reprocessing plants and related waste management facilities.

I received a letter from Paul McCracken (copy attached) asking us to propose and analyze certain programs within our area of competence which can be used with others to formulate a long-term program for the supply of fuel.

I received a letter from Chet Holifield (copy attached) raising questions on the reasonability of continuing cooperation with the British in the field of sharing classified nuclear data.

Saturday, October 10, 1970 - D.C.

I worked in the office until 11:40 a.m.

I then went home and joined Helen, Eric, Dianne and Suki for a drive to Washington Monument State Park near Boonsboro, Maryland, where we took a hike north along the Appalachian Trail; Helen and Dianne went about a mile up and back and Eric, Suki and I about two and one-half miles up and back.

I spent the evening reading AEC papers and reports.

Sunday, October 11, 1970

Helen, Eric, Dianne and I went to Kennedy Stadium to see the Washington Redskins-Detroit Lions game. The Redskins won, 31-10, in a game which they dominated throughout.

After I returned home, Suki and I took a hike in Rock Creek Park, beginning at Oregon an Nebraska Avenues, going north on the White Horse Trail to Cross Trail 2 and back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

Monday, October 12, 1970 - Germantown



At 9:50 a.m. I presided over Regulatory Information Meeting 426 (notes attached). We discussed the question of whether Commonwealth Edison should be

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October 9, 1970

Monday, October 5

I met with Raff Faulkner to discuss UNC's request for approval to sell ore made available by deferral of a quantity previously scheduled for delivery prior to July 1972. AEC permission is needed by the terms of the contract, however, UNC could sidestep this obligation by delivering the material to their customer and having the customer sell it or put it out for loan. We are meeting with United Nuclear Friday, October 9.

I signed a letter to Carl Walske requesting DOD to give consideration to the assignment of either a Marine officer or a Naval officer to DMA.

Tuesday, October 6

I wrote a letter to Van der Spek regarding his proposal on the Inga project - should discuss this with you when convenient.

I met with Warren Johnson and discussed with him the possible need for revision of the Atomic Energy Act so as to avoid the conflicts in the research field brought about by having Restricted Data born classified.

I had lunch with General Nichols who was interested primarily in methods of obtaining electric utility support for the financing of a fast breeder program. A memorandum is attached.

At Commissioner Larson's suggestion, I met with Dr. Larson and E. Von Halle of Oak Ridge to review alternative enrichment processes. The information we got from Von Halle would indicate that the chance of success by using lasers is poor.

I met with Quinn, Price, Hennessey, et al, to discuss the status of NPR modifications and to discuss the procedure needed to make a decision as to that reactor's licenseability for power-only operation. Mr. Quinn was requested to produce a report on this subject shortly after the first of next year.

I wrote a letter to Mr. Holifield giving him the requested information on the AVCO enrichment activity; also signed staff letters to Senator Jordan, Frank Young (WINB), Shultz (S.1933) and Irwin (Cooperation with Europe).

I arranged for informal hearings with Messrs. Holifield and Hosmer on European cooperation for Thursday afternoon.

Wednesday, October 7

I met with Howard Brown on NSSM 101 - Classification of isotopic separation processes.

Thursday, October 8

I met with Howard Brown and Chuck Reichardt on NSSM 101.

Signed letters to Holifield on Agreement with U.K. and on cooperation with Europeans.

At 3:30 pm, we met with Holifield and Hosmer on foreign cooperation. Present were Alexis Johnson, Herm Pollack, Commissioners Larson and Ramey, Kratzer and myself. While the Committee staff took an irrational point of view, I think we reached a much better understanding with Mr. Holifield and got substantial support from Craig Hosmer. This was an informal meeting with the full Committee not invited to attend. Holifield and Hosmer will advise other members of the Committee of the outcome of this meeting and will let us know of the Committee's reaction. It is understood that we will withhold action until the Committee has had time to give us their comments.

Friday, October 9

Met with United Nuclear Corporation. It appears that there may be some equity on their side and at least a possibility of interpreting the contract two different ways. We agreed to take another look at the problems and advise them as soon as possible. My guess is that we will still be compelled to withhold our approval and that UNC may decide to make an appeal to the Contract Appeal Board.

I spent the afternoon with John Flaherty on the problems of stockpile disposition, etc. This problem will be coming around to the individual Commissioners for educational purposes and hopefully should be up to the full Commission within three weeks.

I discussed with Kratzer the end result of the meeting with Holifield and Hosmer yesterday and was advised that the Joint Committee staff is annoyed because we did not give them the talking paper in advance of the meeting. The meeting actually was informal and formal rules were dispensed with. I personally talked to Mr. Hosmer, who seems to be reacting favorably; however, the Committee staff may have had some unfavorable impact on Holifield.

W.S.S

DEPARTMENT OF STATE

AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON, D.C. 20523

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OFFICE OF
THE ADMINISTRATOR

OCT 7 1970

Dr. Glenn T. Seaborg
Chairman
U.S. Atomic Energy Commission
Washington, D. C. 20545

Dear Glenn:

Thanks for your letter of September 9 enclosing the report on your trip to Africa last January.

Since its inception, A.I.D. has been concerned with promoting scientific and technological advances in the developing nations. This has led to a variety of technical assistance projects particularly in the field of agriculture, with a substantial U.S. scholarship component built into them.

Members of the staff in our Africa Bureau have been in contact with both the Office of Science and Technology in the Executive Office of the President and with the National Academy of Sciences. In the case of NAS, we have been exploring the possibility of sponsoring workshops in selected African countries on the problems of science and technology in development. These workshops would serve to bring members of the scientific community together to discuss the development of science policy and the determination of science research priorities as these relate to national development.

I understand that Dr. Glenn Schweitzer from our A.I.D. Office of Science and Technology has already written to you about getting together in the near future to discuss U.S. scientific cooperation with African countries. Your continued interest is most appreciated.

Best regards.

Sincerely yours,

John A. Hannah

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YASUHIRO NAKASONE

Member of
The House of Representatives

18-6 Takada 2-chome
Toshima-ku, Tokyo

Nagatacho, Chiyoda-ku, Tokyo

Private Office:
4th Floor, Sabo Kaikan Bldg.
2-7, Hirakawacho
Chiyoda-ku, Tokyo

Dr. Glenn T. Seaborg,
Chairman,
the United States Atomic Energy Commission,
Washington D.C. USA.

26th September 1970

Dear Dr. Seaborg,

I regret very much that we were unable to see each other during my stay in your country. I wanted to have an opportunity to talk with you on the question of enriched uranium. My proposal about enrichment technology was made in my personal capacity and also as an ex-Chairman of the Japanese A.E.C.. On my return to Tokyo I talked this question with the Prime Minister and also at the last Cabinet meeting the subject was taken up by the Minister of Science and Technology who undertook to send the question to the Japanese Atomic Energy Commission.

I thought that the opportunity was mature to make such a proposal when the future world supply of enriched uranium was being reviewed to cope with the rapidly growing nuclear power. I am confident that the Japanese nuclear industry will welcome any proposal on the part of the United States to offer technical assistance in this field. I am aware of legal, technical, political and other difficulties which have to be overcome, but I sincerely hope that your Commission would review the proposal for which I am ready to give you my personal advice or any other information neccesary.

Yours trully

Yasuhiro Nakasone

Yasuhiro Nakasone

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EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

OCT 5 1970

Dear Mr. Chairman:

In accordance with your request of September 9, we have reviewed the AEC's proposed statement of policy concerning the siting of fuel reprocessing plants and related waste management facilities. We have no objection to the statement of policy.

We assume that any future actions taken under the policy which come under the coverage of section 102(2)(C) of the National Environmental Policy Act, and particularly the selection of sites for disposal of radioactive wastes, will be accompanied by an Environmental Statement.

Sincerely,

Russell E. Train
Chairman

Honorable Glenn Seaborg
Chairman, U.S. Atomic Energy Commission
Washington, D. C. 20545

UNCLASSIFIED
NOV 86

THE CHAIRMAN OF THE
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON

October 8, 1970

Dear Mr. Chairman:

The fuel supply problem for this winter is, of course, still a matter of concern but it is important that we also direct our efforts to the longer-term aspects of the problem for the next five years. We must begin at once the urgent task of preparing a program dealing with the longer-term problem. The Domestic Council has requested that this be completed by next January in order that it can make recommendations to the President. I am therefore asking various members of the Domestic Council's Energy Subcommittee to take on particular assignments within their respective areas of competence. When we have reports from the members, which should be early in November, we will convene the Subcommittee to consider them. There are several programs within your agency that can be of material assistance in alleviating our need for sufficient supplies of clean energy in the coming five-year period. We are requesting you to propose and analyze programs for the following items that the Energy Subcommittee and the President can then consider.

1. We understand that the AEC's research and development program for underground nuclear detonations to facilitate the production of natural gas in the Rocky Mountain area shows promise of technical and economical feasibility. We should like you to formulate and propose a four-year program to make commercially available the natural gas resources in the Rocky Mountain area by underground nuclear detonations. We should expect that the bulk of the financial support for the program would be industry financed.

2. The AEC has long been pursuing R&D on the fast breeder reactor as the major long-term answer to our energy supply problem. We should like to consider a program that would establish and implement a national goal of completing a successful demonstration of a commercial size fast breeder reactor in this decade.

3. The AEC has announced that it intends to remove the embargo on the importation of uranium at some date around 1973. We should like your definitive proposal for removing the import restrictions on uranium.

I cannot stress too greatly the importance of receiving these proposals at the earliest possible date and in any event no later than November 1, 1970. They are, I understand, already under very active consideration in your Department. The proposals should include budget estimates for the entire program and identify any changes in the FY 72 budget that would be required in order to implement the program you propose and draft legislation, if required, to implement the program. The proposals should also be accompanied by analysis of the arguments for and against them.

I must also stress the confidential nature of this request and make clear that our request for these particular items does not imply any judgment by the Domestic Council or the White House as to their inclusion in a final Presidential program. It does, however, mean that these proposals will be ingredients to be considered in the formulation of a program.

Sincerely,

Paul W. McCracken

Honorable Glenn Seaborg
Chairman
Atomic Energy Commission
Washington, D. C.

JOHN YOUNG, TEX.
ED EDMONDSON, OKLA.
CRAIG HOSMER, CALIF.
JOHN B. ANDERSON, ILL.
WILLIAM M. MC CULLOCH, OHIO
CATHERINE MAY, WASH.
EDWARD J. BAUSER, EXECUTIVE DIRECTOR

# Congress of the United States

JOINT COMMITTEE ON ATOMIC ENERGY

WASHINGTON, D.C. 20510

ALBERT GORE, TENN.
HENRY M. JACKSON, WASH.
GEORGE D. AIKEN, VT.
WALLACE F. BENNETT, UTAH
CARL T. CURTIS, NEBR.
NORRIS COTTON, N.H.

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October 6, 1970

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Dr. Seaborg:

Since 1958 the United States has shared classified nuclear data, including sensitive nuclear weapons design information, with Great Britain under an Agreement for Cooperation for Mutual Defense. This Agreement, which has been renewed several times, runs through 1974 when it will be subject to review by both the US and UK. The principal mechanisms through which information is exchanged between the United States and Great Britain are the Joint Working Groups (JOWOGS) and Exchange of Information by Visits and Reports (EIVRS). At present there are 18 separate currently authorized joint working groups. There are 35 categories of subjects which have been agreed to between the US and UK for the purpose of exchanging information. These subjects include computer codes, weapon electronics, nuclear warhead explosives, weapon diagnostic methods and interpretations, antimissile missile warhead development, and existing and proposed Polaris warheads.

Periodically the Joint Committee has raised questions on the reasonability of continuing this cooperation with the British, particularly in the highly sensitive area of design of nuclear weapons.

I believe it is appropriate that this question be raised again. The Atomic Energy Commission should show cause as to why this exchange should not be severely curtailed for the following reasons:

(1) The British Government has initiated a policy of retrenchment concerning its defense efforts.

For example, the UK "Defence Estimates - 1969" states: "For the first time since 1958-59, the Defence Budget is lower than that of the previous year, even at current prices"...

The "Defence Estimates - 1968" contained the decision to withdraw British forces from areas east of Suez by the end of 1971, to cancel an order for 50 F-111 aircraft and to "phase out" the carrier force.

In regard to Nuclear Strategic Forces, the estimate states:

> "In 1968, the main United Kingdom contribution to the western strategic nuclear deterrent will, as hitherto, be the medium-bomber force of the Royal Air Force. But the Royal Navy will begin to take over the role when the first of the Polaris submarines becomes fully operational during the year. The two Victor B Mk 2 Blue Steel squadrons will then be withdrawn from service during the second half of 1968."

In regard to the British Polaris capability, on June 13, 1967, in the House of Commons, the Prime Minister was asked if he would give an assurance that the House be informed of the Government decision to authorize the manufacture of a new generation of nuclear weapons. The Prime Minister, Mr. Harold Wilson, replied as follows:

> "If my honorable friend is referring to a proposal to replace the Polaris missile by the Poseidon missile, the answer is that Her Majesty's Government have no such intentions."

The cumulative effect of these broad policy decisions is to reduce to a bare minimum the capability posed by the UK against the Soviet Union. Even the very limited Polaris nuclear submarine capability (four boats) cannot be counted on because, although the Polaris subs are assigned to NATO, the British have a "Supreme national interest" clause in the joint Kennedy-MacMillan statement made at Nassau on December 21, 1962, which allows them to withdraw the Polaris commitment from NATO by evoking this loophole clause.

(2) <u>There are strong indications that the UK is contemplating collaboration with France in the field of nuclear weapons.</u>

A <u>London Times</u> story of July 14, 1970, contains excerpts from a book by the present British Prime Minister Edward Heath. Although this position was taken before he took office, it gives a significant insight into Prime Minister Heath's thinking in this matter. Mr. Heath stressed that the countries of Europe must learn to do more to protect themselves.

He said:

> "...I was led by this train of thought to propose that the British and French nuclear forces should be pooled to form a joint deterrent which would be held in trust for Europe...(emphasis added)
>
> "The arrangement would not involve a breach of the nonproliferation treaty since it would not involve giving control over nuclear weapons to non-nuclear powers...This proposal could provide a means for healing the breach which at present exists between France and her NATO allies."

While the Committee is aware that the Agreement for Cooperation for Mutual Defense is supposed to preclude proliferation of classified information received under the Agreement, it is also well aware of the tortuous logic used by the British to provide "conical endcap" information to the gas centrifuge triumvirate despite the fact that such data had clearly been obtained during a US-UK exchange and that there was a U.S. patent on file in Britain on the matter.

(3) UK-USSR Civil Agreement

In January 1968 the UK signed a five-year scientific and technical cooperation agreement with the Soviet Union that calls for far-reaching technical cooperation in several industrial fields. Companies such as Rolls Royce would be included in this exchange. Thus it presents a circumstance where a company would be dealing with the Soviet Union while at the same time engaging in providing equipment of a classified nature for the British defense effort.

(4) UK proposed legislation which may weaken security

We understand British security offices have expressed concern regarding proposed legislation which is designed to transfer certain segments of research and development now under the UK AEA to private industry. They believe that such a move may weaken security protection of U.K. top secret information and material.

According to an AEC security official, UK security personnel hope that the classified UK weapons program and related areas will be transferred to the Ministry of Defence; however, it is not clear from the proposed legislation what specifically will be transferred from the

UKAEA to the Nuclear Fuels Company nor where the security split will be made. The Atomic Energy Authority bill was proposed under the Labor Government. It has not been acted upon yet by the Conservative Government.

The following are quotes from a study dated January 1970 on this subject:(1)

> "...We have shifted the emphasis from defence research to civil tasks; have reduced the previous concentration on the aerospace and nuclear industries -- both having very strong defence associations -- in order to release effort in support of a wider range of industry; have sought to put more stress on extramural rather than intramural research; and, finally, have given much greater encouragement to the exploitation of innovation by which the results of research are carried through to full-scale application.
>
> * * *
>
> "This Green Paper outlines a proposal to set up a new Corporation, outside the Civil Service, to run civil research and development laboratories of the Atomic Energy Authority and of the Ministry of Technology under a single management..."

(5) UK plans to sell advanced computer technology to the Soviet Union. (eg 1906-A, 1903-A)

According to a State Department official, a British commercial attache delivered an aide memoir to the State Department on August 14, 1970, asking that consideration be given to a request by International Computers, Ltd., a British firm with offices in Moscow, to export a 1906-A computer to Serpukhov, U.S.S.R. According to the State Department official, if this computer goes to the Soviet Union, it will be the largest ever sent by a Western nation to Russia.

The transaction, as proposed, involves the export of

---

(1) Industrial Research and Development in Government Laboratories, "A New Organization for the Seventies; Ministry of Technology, United Kingdom.

a free-standing 1905-A computer (exportable without formal COCOM review) and two interconnecting computer complexes each consisting of a 1906-A computer, a 1903-A computer, and a small 790/3 computer. The 1906-A alone is more powerful than the IBM 360-65 and approaches the capability of the CDC 6400. The BESM-6, which is believed to be the best available Soviet-designed scientific computer, is roughly comparable to the IBM 360-65 and can handle the same kind of problems.

The acquisition of the ICL machines will significantly enhance Soviet research capabilities at the Serpukhov facility. These machines also are capable of helping the USSR in strategic research. Thus, the 1906-A alone is suitable for use in the design of advanced ABM systems and nuclear weapons.

The British prefer to work out a bilateral deal with the United States ahead of time to preclude a fight at a COCOM meeting. The Joint Committee has strongly urged in the past that advanced computers, such as the CDC 6600, not be sent to the Soviet Union. If the 1906-A is approved by the United States, and then by COCOM, this will be the opening wedge for the export of advanced computers from other Western European countries. It will also serve as a precedent for opening the way for advanced U.S. computers to go to the Soviet Union, thus assisting the Russians in one of the few areas where they are clearly behind the United States.

(6) One-Way

Nuclear weapons experts have indicated that they consider the exchange between the United States and the UK on weapons data overwhelmingly one-way--favoring Great Britain.

(7) British nuclear weapons scientists cannot assist U.S. scientists in advanced nuclear weapons design.

There is a limitation on information that U.S. scientists can discuss with the British in the nuclear weapons field. This restriction limits discussion to information on weapons developed up to the MK 61 and to information concerning weapons concepts or devices known prior to March 31, 1965. Because advanced weapon concepts cannot be discussed with British scientists, they cannot assist us in the areas where they might be able to contriubute.

(8) Key British nuclear weapons expert, security risk by U.S. standards.

One of the key contributors to the UK weapons program, who has access to U.S. Top Secret restricted data, is an admitted and continuing homosexual; and under United States standards, would not be entitled to a security clearance. The work of this particular scientist was cited by AEC Commissioner Theos J. Thompson at a Joint Committe hearing on amending the US-UK Agreement for Cooperation for Mutual Defense on March 6, 1970, as a prime example of the contribution made by British scientists to the United States nuclear weapons program. Commissioner Thompson stated in response to a question regarding the issue of who profits most from the US-UK exchange:

> "For instance, one I remember, a Mr. Martin--I think you visited his group--he was responsible for developing the technique by which using
>
> He came to the United States and has installed this sort of system in the United States, and has been very helpful."

By coincidence, after Commissioner Thompson's defense of the exchange and his comments on Mr. Martin, the Director of Security of the AEC advised the Joint Committee that Dr. John Christopher Martin, whom he identified as the same man cited by Commissioner Thompson, had been identified as a notorious and continuing practicing homosexual. Despite this fact, in response to a letter from the Joint Committee, the Commission has given approval for Mr. Martin to retain his access to U.S. nuclear weapons information.

Taking all these factors into consideration, and with particular attention to the danger to American security if nuclear weapons design information should fall into the hands of a potential enemy, and also noting the possibility of the proliferation of U.S. nuclear weapon design information to France, it would seem to me that, if the United States does not take steps to curtail this exchange, the potential exists for grave danger to our national security.

In regard to the security aspects, the Committee remembers full well the damaging effects caused by Klaus Fuchs in the late 1940's.

The total effect of this is to raise serious doubts over the usefulness of this exchange with Great Britain as presently constituted.

The Joint Committee understands that broader political considerations may preclude any abrupt termination or drastic action to curtail our cooperation. However, the Committee believes strongly that such an exchange of nuclear weapons design information and related matters and materials should be significantly reduced.

The AEC is strongly urged to review this matter and indicate to the Joint Committee which arrangements can be curtailed. Of those remaining, please indicate the reasons why exchange is necessary to United States security.

Sincerely yours,

Chet Holifield

Chet Holifield
Chairman

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
October 12, 1970

# REGULATORY INFORMATION MEETING 426

9:50 a.m., Monday, October 12, 1970, Room A-458, Germantown Headquarters

1. Mr. Price's October 9 Memorandum re Request for Exemption by the Detroit Edison Company and Enrico Fermi Unit No. 2

   Approved. (DDR-ADRA)

2. Mr. Price's October 9 Memorandum re Backfit of Combustion Gas Controlled System for Dresden Nuclear Power Station, Unit No. 3

   To be rescheduled. Staff will discuss with the applicant and the ACRS. Commissioner Thompson requested additional information. (DDR-ADRA)

3. Mr. Price's October 9 Memorandum re Deep-Well Disposal of Wastes, Kerr-McGee Corporation

   Approved. (DDR-ADRA)

4. Dr. Beck's October 9 Memorandum re Draft Reply to Senator Bible re Question on Consequences from Enemy Attack on Nuclear Power Plant

   Staff is to discuss with Senator Bible. (DDR-ADRA)

5. Topics for the Commissioners' October 15 Meeting with the ACRS

   Approved. (SECY)

6. September 24 Letter from Messrs. Holifield and Hosmer re Licensing of Nuclear Power Plants

   The Commissioners requested early consideration of a draft reply. (ADRA-SECY)

W. B. McCool
Secretary of the Commission

10:30 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Beck | Commissioners |
| Commissioner Ramey | Mr. Hennessey | Dir/Regulation |
| Commissioner Johnson | Mr. Rubin | General Manager |
| Commissioner Thompson | Mr. Nussbaumer | General Counsel |
| Commissioner Larson | Mr. Wells | Secretary |
| | Mr. Buck | |
| | Mr. McCool | |

required to back fit, for Dresden Nuclear Power Station, Unit No. 3, the installation of a mechanism for control of combustible gas concentrations in the containment following a loss of coolant accident and decided to consider this further.

This was followed at 10:35 a.m. by Information Meeting 1066 (notes attached). We discussed Walker Cisler's letter of August 4, 1970 requesting AEC help in funding the Fermi breeder reactor to increase its suitability for test irradiations - Commissioner Thompson made an impassioned plea, including some spirited exchanges with Milt Shaw, for funding to the extent of $13 million (spread over six years) requested by Cisler. I suggested that this discussion be continued in a later Commission meeting. We also adopted policies and practices for major AEC laboratories for inducing or requiring the termination of unproductive staff members. We approved a letter to Kerr-McGee Corporation denying their request to dispose of liquid waste by injection into a disposable well.

I had lunch with Howard Brown and Julie Rubin. We discussed the forthcoming document being prepared in response to NSSM 101 (attached on 9/15) which requested views on the securitiy aspects of the U.S. sharing its uranium enrichment technology with Europe and other friendly nations. We also discussed my speaking schedule and proposed meetings with news media in connection with our public relations problems.

At 2:15 p.m. I presided over Commission Meeting 2437 (action summary attached). We discussed industry participation in uranium enrichment, both gas centrifuge and gaseous diffusion, and decided to discuss with the White House a staff plan that would bring industry into the picture in two steps.

Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returning to our starting point.

Tuesday, October 13, 1970 - D.C.

Officials of the Office of Management and Budget (Caspar W. Weinberger, Deputy Director; Arnold R. Weber, Associate Director; and Donald B. Rice) met with me, Commissioners Ramey, Johnson, Thompson and Larson, Ed Bloch, John Abbadessa and Julius Rubin at our D.C. office.

Cap Weinberger opened the discussion by reviewing the organizational plan for OMB and their method of operation. This was similar to the briefing I attended in the State Department auditorium several months ago. Weber was introduced as the principal figure in OMB on the management side and Rice was described as a "desk man" for the economic and scientific areas. Other individuals in Rice's category as assistant directors will be Schlesinger and Nathan. Weinberger made it clear that while Rice would be our principal contact, he would refer matters to others in the White House and whenever necessary the Commission should feel free to contact Shultz, Weinberger or others directly.

While George Shultz and Kenneth Cole of the Domestic Council could not be present for this meeting, Weinberger explained that the intent is for the Domestic Council to concentrate on long-range planning and policy issues while OMB would be the principal organization for day-to-day business and execution of policies adopted. He stated there would be certain items under John Ehrlichman and the Domestic Council that will be followed from initiation to completion by them but in general our main contact would be with OMB and Don Rice.

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ATOMIC ENERGY COMMISSION
WASHINGTON. D.C. 20545

COPY NO. 3
October 12, 1970

# INFORMATION MEETING 1066

10:35 a.m., Monday, October 12, 1970, Room A-458, Germantown Headquarters

1. NTS Events (See General Giller's October 7 Memorandum)

   Noted. (AGMMA)

2. Commissioners' Meeting with Mr. Laurance Rockefeller

   Tentatively scheduled for 10:00 a.m., October 29, 1970, in New York City. (SECY)

3. October 5 Memorandum from Secretary Richardson re Interagency Committee on Population Research

   A response designating Commissioner Larson is requested. (AGMR&D-SECY-Rubin)

4. Commissioner Thompson's October 6 Memorandum re Technical Talks with Soviets on PNE

   A revised letter is approved. (PNE-Rubin)

5. September 30 Memorandum from Mr. McCracken, Chairman, Council of Economic Advisers re Power and Energy Problems

   Commissioner Ramey requested discussion on October 14, 1970. (SECY)

6. Mr. Casper Weinberger's, Deputy Director, OMB, October 23 Visit to Oak Ridge

An agenda is to be developed and Commissioner Larson will plan to accompany Mr. Weinberger. (AGMO-OC-SECY)

7. Briefing on Fermi Reactor; and,
SECY-476 - Reply to PRDC Letter on Fermi Reactor

Discussed and to be rescheduled soon. (RDT-OC-SECY)

8. SECY-466 - GSA Survey Reports: BNL and ANL Land

The letter is approved with changes and an early meeting of staff with Commissioner Kingsley is to be requested. (AGMO)

9. SECY-386 - Laboratory Administration

Approved. (AGMO)

10. SECY-454 - Payments for Continued Medical Studies of Utirik People

Approved. (BM)

11. SECY-449 - Power Reduction Policy

Approved with changes. (AGMD&P)

12. SECY-434 - West German National: Proposed Assignment to LASL

Approved. (AGMIA)

13. SECY-462 - Revised Manufacturing Plan for LWBR $ThO_2$ Fuel

Approved. (NR-DC)

14. Pending Contractual Matters Report No. 377

Noted. (PAR)

15. SECY-474 - Press Release on Uranium Enrichment Charge

Noted as a response to inquiries and not a press release. (PI)

W. B. McCool
Secretary of the Commission

12:40 p. m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Bloch | Commissioners |
| Commissioner Ramey | Mr. Abbadessa | General Manager |
| Commissioner Johnson | Mr. Hennessey | General Counsel |
| Commissioner Thompson | Mr. Rubin | Secretary |
| Commissioner Larson | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Quinn* | |
| | Mr. Kelly* | |
| | Mr. Friedman* | |
| | Mr. Shaw* | |
| | Mr. Sinclair* | |
| | Mr. M. Johnson* | |
| | Mr. Erlewine* | |
| | Mr. English* | |
| | Mr. McGee* | |
| | Mr. Totter* | |
| | Mr. Clark* | |
| | Mr. Greer* | |
| | Mr. Steele* | |
| | Mr. Fournier* | |

*Attendance by Topic (s)

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 13, 1970
Approved EJB
Date

E. J. Bloch, Acting General Manager

ACTION SUMMARY OF MEETING 2437, MONDAY, OCTOBER 12, 1970, 2:15 P.M., ROOM A-410 GERMANTOWN, MARYLAND

SECY:FG

Commission Business

1. SECY-443 - Industry Participation in Uranium Enrichment (See also SECY-270, General Manager's August 3 Draft Staff Proposal, SECY-107, SECY-106, AEC 610/218, Commissioner Johnson and Larson's May 21 Memoranda and AEC 610/212)

The Commission requested:

a. revision of paragraph 11 of the proposed press release concerning the time schedule for Steps I and II;

b. deletion of subparagraph c. of the special evaluative criteria in Step II, as set forth in Paragraph 5, page 3 of SECY-443;

c. the White House be informed of AEC's proposal and alternatives; and

d. the matter be rescheduled.

(AGMD&P/AGMP/SECY)

2. SECY-436 - U.K. Participation in Experiments and October 6 Letter from Holifield re Agreement for Cooperation with U.K. for Mutual Defense Purposes

The Commission:

a. Noted General Giller's draft interim response to Mr. Holifield's October 6, 1970 letter would be circulated to the offices of the Commissioners for comment; and

b. Requested the matter be rescheduled.

The Commission designated Commissioner Thompson to discuss the matter with DOD and the State Department.

(AGMMA/SECY)

3. NSSM-101

A working session is scheduled for 9:30 a.m., October 13.

4. Report on Special Flights

Noted. (AGM)

ORIGINAL SIGNED
W. B. McCOOL

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

Weinberger described the budget planning for the year as similar to our past experience but he hopes to bring the President in on specific parts at an early date rather than dump the whole package in his lap as a Christmas present. He emphasized the need to stick within our ceiling and stated at this point and again later that maximum flexibility by each agency within their ceiling would be permitted.

The individual Commissioners then commented on various phases of AEC activities of current interest. Thompson referenced the three letters he had signed as Acting Chairman dealing with the evaluation of a 10 percent reduction in AEC funding for weapons development, naval reactors, and the LMFBR program. He emphasized the importance of these programs to the AEC and to the country and offered a view that AEC's contribution to the national interest should command priority in allocation of resources towards these objectives. Ramey referenced the recent McCracken letter that raised questions about establishing goals in the energy field and suggested it is a good way to develop policy. He also offered support for the breeder reactor program and the need for Congressional backing in areas we are pursuing.

Johnson talked about the enrichment business and suggested consideration be given to its management as a business rather than a burden on the taxpayers. The CIP issue, projected revenues and the effect of this program on our dollar trade balance were noted. Abbadessa also clarified that out-of-pocket budget costs when compared to revenues are quite favorable as a large part of the CIP budgeted category involves depreciation and other factors that would not affect current outlays. Larson also supported the breeder development by comments about the capital investment requirements by the utility industry through the remainder of the country.

I mentioned a problem we have encountered with the GSA initiatives to identify government-owned land for disposal. AEC facilities utilized buffer zones for protection of the general public and AEC had acquired certain land to permit normal growth in our laboratories. Initial indications from the GSA field teams suggest certain tracts used by the AEC could be made available for disposal, but in our view this would severely handicap our future operations. Mr. Weber stated that he is chairman of the committee that will be reviewing eventual decisions on disposal of government property and that we should provide him or Don Rice with any information necessary to clarify AEC's critical need for retaining its government property.

The meeting was concluded by a mutual expression of appreciation for the opportunity to get together. I informed Weinberger as he was leaving that a Jetstar has been arranged for the trip to Oak Ridge on October 23 and that an agenda for the visit is being prepared.

I had lunch with John Abbadessa, Julie Rubin and Stan Schneider at the Longworth Cafeteria (1800 G Street, N.W.). We discussed the possibility of my speaking to the American Management Association Conference in New York City on March 8, 1971, and I said I would do so. We also discussed a number of policy and budgetary matters including the session with Weinberger, Weber and Rice this morning.

Steve Lawroski stopped in to say hello. He passed on the bad news that Fred Albaugh had suffered strokes on September 2 and 5; however, he seems to be recovering satisfactorily.



From 3 to 3:25 p.m. I met with Ambassador Robert J. Schaetzel, U.S. Representative to the European Communities, who was accompanied by James D. Phillips, EUR/RPE, State Department. Julie Rubin was also present. We

discussed a plan for the U.S. to share its diffusion plant enrichment technology with England and the Euratom countries and the problems of overcoming JCAE resistance to this. It was agreed that it will be necessary to get some kind of a congressional concurrence and that we hope to get this soon. We would then have a moderately high level negotiating team, led by a USAEC Commissioner, go to Brussels to explain the plan and concurrently the U.S. ambassadors in the six Euratom countries and England would explain the plan to the prime ministers or other high officials of the countries in which they are stationed. We also discussed the problems that Schaetzel is having with Germany in view of the price increase for U.S. enrichment services. The Germans are buying about $56 million worth of enrichment and attendant services from the United States and would like to have the 60-day advance delivery of the uranium waived so that they could get under the line with the old price; however, this seems unlikely as a possibility.

I sent a letter to President Nixon (copy attached) describing my recent trip to Europe.

Attached is a copy of a letter to Chet Holifield from Commissioner Johnson clarifying certain points in a paper "Plan for Exploratory Talks on Gaseous Diffusion Cooperation" that Johnson gave Holifield and Hosmer last Thursday.

Eric, Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Helen and I attended Parents Night at the Ben Murch School. After a general session in the auditorium in which Anne Stultz, President of the Parents Association, and Miss Miriam Kaufman, Principal of the school, spoke, Helen and I visited the various rooms in which Dianne has classes (a new system is in effect this year whereby the kids go from room to room for their classes). We met a number of Dianne's teachers: Mrs. Peterson, Home Room; Mrs. DeBerry, reading; Mrs. Rose, language; Mr. Carter, science; Mrs. Kallio, French; Mrs. Meredith, music; and Mrs. Skartvedt, the librarian. We also met Mr. and Mrs. Don Nicholl; he is Senator Edmund Muskie's top assistant.

My cousin Ethel Clauss and her husband Clifford, on a two-week vacation trip that included West Virginia and Williamsburg, arrived at about 7 p.m. to stay with us for a few days.

A shot of the EMERY series, was detonated at the Nevada Test Site today.

Wednesday, October 14, 1970 - D.C.

We learned that the Chinese exploded a 3-megaton nuclear weapon in the atmosphere at Lop Nor this morning and the Soviets a 6-megaton underground nuclear explosion at Novaya Zemlya. TIJERAS, the second test of the EMERY series, was detonated at 10:30 a.m. at the Nevada Test Site today.

At 9:55 a.m. I presided over Information Meeting 1067 (notes attached). In executive session we discussed the case of the individual whose clearance has been in question and who is now requesting clearance which includes access to weapons information in connection with the requirements of his new company affiliation. This is a very difficult situation, and we will have Security staff discuss it with him with the view of his possibly having a Personnel Security Board review, a method of procedure which I inherently deplore. We

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

October 13, 1970

The President
The White House

Dear Mr. President:

I have just returned from a trip to Europe where I visited nuclear research centers and installations in France, Germany, and the United Kingdom and where I served as the United States Representative to the 14th General Conference of the International Atomic Energy Agency (IAEA) in Vienna. This was the tenth consecutive time that I have served as the United States Representative to this annual conference which draws nuclear leaders from all over the world.

I opened my address to the delegates at the IAEA General Conference with your statement which was well received by the Conference delegates and by the press.

In my previous trips abroad, I had visited nuclear facilities in all of these countries and I was much impressed by the great strides made in each of them, since my earlier visits, in the application and utilization of nuclear energy for the production of electrical power. France has recently completed a reappraisal of its nuclear power production planning and has decided to concentrate on American type nuclear reactors -- the light water reactors, which utilize enriched uranium fuel; Germany is building several large nuclear power stations and has plans for many more; and the United Kingdom, thanks to an early start and an ambitious program, has generated more nuclear power to date than any other country in the world -- approximately 137 billion kilowatt hours of electricity. The installed gross nuclear capacity in these countries is approximately 1,600,000 kilowatts for France, 900,000 kw for Germany, and 4,100,000 kw for the United Kingdom. The figure for the United States is currently about 5,800,000 kw. By 1980, I estimate that the installed nuclear capacity in these countries will be about 8 million kw for France, 15 million kw for Germany, 24 million kw for the U.K., and 150 million for the United States. (The world figure, by 1980, will be of the order of 320 million kw.)

All of these three countries visited are also aggressively pursuing well planned and well financed fast breeder reactor research and development programs.

In the course of my visit to these countries, I met with science leaders, nuclear industry representatives, and principal government officials. I also gave radio, television, and press interviews during these visits.

In Germany, I presented the opening address at a major international seminar on Radiation Protection Problems Relating to Transuranium Elements, jointly sponsored by the European Atomic Community (Euratom) of the European Community and the OECD's European Nuclear Energy Agency. I also gave scientific lectures in France and the United Kingdom.

Throughout my visit, I was impressed by the extent and effectiveness of international cooperation in nuclear energy research and development, and I am convinced that the effective cooperation between the USAEC and the nuclear energy programs of these countries has resulted in significant political as well as scientific benefit to the United States.

A summary of each of the stops on my itinerary follows:

FRANCE

Following my arrival in Paris, I met, on September 17th, with the outgoing Administrator General of the French Atomic Energy Commission, Robert Hirsch; the new Administrator General, Andre Giraud (whose appointment was to be announced the following week); Dr. Bertrand Goldschmidt, the French Atomic Energy Commission Director for International Activities and Plans, and their representative on the UN and IAEA Science Advisory Committees; and other principal officers of the French Atomic Energy Commission. They discussed with me their decision to develop American type water reactors, their program of research in fast reactor technology, and the status of technical cooperation between our two countries in nuclear science and technology. Our cooperation with French scientists in atomic energy began in 1942 when Dr. Goldschmidt worked in my group in Chicago on the separation and chemistry of the then newly synthesized element plutonium. In 1956, we signed an Agreement for Cooperation with France. This cooperation with France has continued even through periods of political stress between our countries, and is today as useful and effective as ever.

I then visited the research laboratories at Orsay, outside Paris, where important pioneering work is being done with their heavy ion accelerator on the search for super-heavy elements as well as research on the physics and chemistry of the transuranium elements. I was interested to find there scientists from the United States, France, and the USSR -- all collaborating on these important researches -- most of whom had studied in the United States. The laboratory at Orsay is one of the few in the world developing cyclotrons capable of application in the search for new super-heavy elements -- the others are in Germany, in the Soviet Union's international laboratory at Dubna, and in the USAEC's Lawrence Radiation Laboratory at Berkeley where essentially all of the transuranium elements have been discovered. Following my visit to Orsay, I met with the principal officers of our Embassy in Paris and with the French Minister of Science, Francois X. Ortoli, as well as with other French Government and industry leaders in science and technology.

On September 18th, I visited the two major scientific centers in Grenoble in the southeastern part of France -- the Institut Max von Laue-Paul Langevin and the Grenoble Nuclear Research Center. Both of these facilities are carrying out important research in the nuclear sciences. The principal facility at the Institut Max von Laue-Paul Langevin is a high-flux reactor, similar in design to our own Brookhaven High Flux Beam Reactor, and, when completed next year, will be the highest flux reactor outside of the United States. Here again is an example of the effectiveness of international cooperation in science. The Institute is jointly funded and operated by France and Germany. Its Director is the world famous German physicist, Professor Meier-Leibnitz, and the Deputy Director is the French physicist, Professor Jacrot. The international character of this laboratory at the time I visited was evident from the number of scientists visiting from other countries, including Professor Lenard Pal, the Director of the Hungarian nuclear energy program (whose laboratory I had visited last year). Following my visits to the laboratories at Grenoble, I gave a scientific lecture on the super-heavy elements to scientists from the Grenoble Nuclear Research Center, the Institut Max von Laue-Paul Langevin, and the University of Grenoble.

SWITZERLAND

En route from Grenoble to Germany, I stopped at Geneva where I met with several members of the United States delegation to the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR).

This UN Committee has been playing an important role, over the past fifteen years, in correlating the results of research on the effects on man of worldwide atomic radiation. It was commencing its 20th session the following week in Geneva, and the U.S. delegation was, as usual, effectively represented by our top radiation and medical scientists.

GERMANY

On September 21, I visited the European Institute for Transuranium Elements at Karlsruhe. This important international research institute was set up by the European Atomic Community (Euratom) adjacent to the site of the German National Nuclear Research Center on the outskirts of Karlsruhe to carry out research on plutonium and its use as a fuel in nuclear reactors. It serves the dual function of meeting the immediate needs of nuclear industry in the European Community and contributing to the development of basic science in the field of transuranium research.

The Germans are carrying out an important and well conceived fast breeder reactor development program and the Karlsruhe Transuranium Laboratory is playing a significant role in this effort. The United States, Germany, France, the United Kingdom, and Japan, all have major research and development efforts going on in fast breeder reactors and we are exchanging technical information on this area with each of these countries.

Following my tour of the Transuranium Laboratory, I presented the inaugural lecture of the International Seminar on Radiation Protection Problems Relating to Transuranium Elements. This conference was held at the Karlsruhe Center and was jointly sponsored by Euratom and the European Nuclear Energy Agency. The leading heavy element scientists from the United States and Europe participated in this meeting.

INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA

I was the United States delegate to the 14th General Conference of the International Atomic Energy Agency which was convened in Vienna on Tuesday, September 22, 1970. Ambassador Keith Glennan, who has effectively taken over his responsibilities as U.S. Representative to the Agency, was a member of the U.S. delegation and was invaluable in insuring the successful participation of the delegation in the work of the Conference. My detailed report on the Conference is

being prepared for the Secretary of State in accordance with the usual practice.

Delegates from 85 of the 103 member countries of the IAEA participated in this General Conference. At the opening session, the Conference unanimously elected Dr. Vikram Sarabhai of India as President.

IAEA Director General Sigvard Eklund's opening address to the Conference referred to proposals to amend Article VI of the IAEA Statute to increase the membership of the Board of Governors, the Agency's safeguards role under the Non-Proliferation Treaty, the Agency's budget, and its technical program. The Director General also noted with interest my proposal, made on the occasion of the IAEA Symposium on Environmental Aspects of Nuclear Power Stations at the UN in New York last August, that the IAEA become a central repository of data on radioactivity released in connection with civilian uses.

My address to the General Conference the following day, and your message which I read to the Conference, were well received. In my speech, I cited the role of nuclear energy in fulfilling increasing world demands for electrical power. I suggested that periodic scientific meetings be held in the developing nations. I also stressed the important role that the Agency was to play in carrying out safeguards under the NPT and noted that all nations should contribute to safeguards financing. I also confirmed our support of a plan to amend Article VI of the Statute to increase the number of members in the Board of Governors.

The major issue before the General Conference was the amendment to Article VI of the Statute. Several proposals to expand the Board of Governors were submitted. The United States cosponsored a plan which would permit the Federal Republic of Germany and Italy to obtain permanent seats on the Board in view of their advanced nuclear energy programs, and increase the representation from the developing countries in view of their expanded membership in the Agency. After extensive debate, this plan was approved by the General Conference, and will become effective upon ratification by two-thirds of the members of the Agency. The USSR opposed this plan on the grounds that it would upset the existing East-West balance of the Agency's Board of Governors, and because it would permit the Federal Republic of Germany to obtain a permanent seat through designation as one of the most advanced nuclear countries.

There was one other issue which while not the subject of action by the recent General Conference was clearly on everyone's mind in Vienna.

It has to do with the manner in which safeguards costs should be financed in a post-NPT regime. Up till now it has been the IAEA's policy, which we have supported, to have the costs of safeguards financed by all IAEA member states under the IAEA regular budget, in accordance with what is basically the UN scale of assessment. In view of the prospective sizeable increase in the Agency's safeguards budget attributable to applying safeguards in the more advanced nonnuclear weapon states as well as in the U.S. and the U.K., many developing countries are pressing for a modification in the policy. They wish to be assured that IAEA safeguards costs will not place the Agency's other activities (such as technical assistance) at a disadvantage. Moreover, they also want to be assured that their own assessments will not be increased significantly to pay for safeguards which will be primarily applied in the industrialized states. Resolving this issue is apt to be basic to the Agency's ability to conclude the safeguards agreements called for by the NPT, and the AEC and State Department, therefore, are actively studying the question to see if any modifications in our policy are warranted.

President Ceausescu, with whom I had met during my visit to Romania last year, was in Vienna on a State visit and addressed the General Conference on September 25th. The USAEC had signed a Memorandum on Cooperation with Romania early last year under which our two countries have agreed to exchange scientific delegations, research assignees, and unclassified basic science information. The two-year term of this memorandum expires at the end of this year and Professor Ion Ursu, Chairman of the Romanian State Committee for Nuclear Energy, told me that his country was very anxious to renew the memorandum for an additional two-year period.

I also discussed with the Romanians their recent decision to postpone construction of a planned heavy water natural uranium nuclear power plant as well as a heavy water production plant. The Romanian decision to postpone its heavy water reactor program for approximately two years was based on: (a) serious economic consequences of the spring floods, (b) the higher than anticipated price of a heavy water plant, and (3) their inability to make satisfactory credit arrangements.

In my discussions with the members of the Soviet delegation, I reiterated my invitation to Chairman Petrosyants of the USSR State Committee for Atomic Energy to come to the United States to visit Atomic Energy Commission facilities. He was happy to accept and plans to come in April of 1971. The Soviet delegation also invited me to visit Soviet atomic energy installations and I may be able to accept their invitation and visit the USSR in August 1971.

Although the fighting in Jordan was at its height during the period of the General Conference and the situation in the Middle East was particularly tense, there was no reflection of this situation in Vienna. The rapport among all of the delegates was excellent. On one occasion, however, the Saudi Arabian delegate sought us out to tell me that Saudi Arabia was not like the other Arab countries, that they were in the U.S. camp and they would vote with us on issues before the Conference. The Israeli delegation made no reference to the fighting in Jordan, but they did, as on previous occasions, express the concern that they had essentially no voice in the IAEA since they could never aspire to membership in the Board of Governors in view of the regional basis for selection of Board members.

I had useful conversations with most of the delegates and other senior government officials present in Vienna on the occasion of the General Conference, including the Chancellor of Austria, Dr. Bruno Kreisky.

In the course of my stay in Vienna, I had a press conference and I appeared, along with Sir John Hill, Chairman of the UKAEA, and Dr. Vikram Sarabhai, Chairman of the Indian Atomic Energy Commission and President of the General Conference of the IAEA, on a taped television program in which we discussed the future of nuclear energy throughout the world.

UNITED KINGDOM

I left Vienna on September 27th for the United Kingdom where Sir John Hill, Chairman of the U.K. Atomic Energy Authority, accompanied me on a tour of several of the nuclear reactor facilities in England and Scotland.

The United Kingdom early initiated an ambitious nuclear power program which has resulted in the generation, to date, of more nuclear power in the U.K. than in any other country in the world. Its present installed capacity of 4,100,000 kw is surpassed only by the United States' 5,770,000 kw of installed nuclear capacity. The United Kingdom has pursued a nuclear power development program based on gas-cooled reactors which now employ slightly enriched uranium. Although the United Kingdom continues to make strong bids for foreign sales, they have not been successful other than for the sale of one reactor each to Japan and Italy.

The United Kingdom Atomic Energy Authority is devoting much effort and financial support to the development of the sodium-cooled fast

breeder reactor concept. I visited the Dounreay Experimental Reactor Establishment on the northern tip of Scotland where most of this effort is centered, including a 250,000 kw prototype fast reactor now under construction and scheduled for completion by the end of 1972. In this respect, the U.K. fast reactor program is ahead of that in the United States. Although a final decision has not yet been made, the UKAEA plans to begin construction in 1974 of a 1,300,000 kw commercial fast breeder reactor.

In response to the invitation of the Chairman of the UKAEA, I gave a scientific lecture to the staff of the Dounreay Experimental Reactor Establishment.

Following my visit to Dounreay, I proceeded to the Calder Works at Windscale in the north of England. Windscale is the site of the original air-cooled plutonium production reactors which were shut down following a reactor incident in 1957. There are four power reactors at Calder which started producing power in 1956 (and four more at Chapelcross) that also produce plutonium for the British weapons program. They contribute, in total, about 360,000 kw of electrical power to the national grid.

The reprocessing plant for all of the United Kingdom commercial nuclear power plants is located at Windscale as well as the fabrication plant for the plutonium fuel for the prototype fast reactor. Windscale is also the site of the 28,000 kw Advanced Gas-Cooled Reactor (AGR) where the research and development program for this reactor concept is carried out.

From Windscale, I flew to the Hunterston Nuclear Power Station where I visited the power reactors being built and which, when completed, will generate 1,500,000 kw of electricity.

I returned to London where I met with Ambassador Annenberg and the principal staff of the Embassy prior to returning to the U.S.

I would be pleased to provide any additional information regarding this trip which you may desire.

Respectfully yours,

Chairman

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

October 13, 1970

Honorable Chet Holifield
Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

The discussion at Thursday's meeting with you and Congressman Hosmer resulted in the clarification of certain points raised in the paper we left with you entitled, "Plan for Exploratory Talks on Gaseous Diffusion Cooperation". I thought it might be useful to the Joint Committee in its review of the Executive Branch proposal if I were to record these clarifications.

1. The plan presented to the Committee represents the parameters within which the proposed exploratory talks would be contained and responds to the Joint Committee's request for a "specific proposal of action" contained in your letter of September 25 to Dr. Seaborg and at the conclusion of the hearings held on September 16.

2. The plan apparently created the impression that the opening discussions in the exploratory talks would convey all of the considerations which had been developed by the United States' side. You suggested it might be desirable at the outset simply to notify the Europeans that we were prepared to talk and leave the initiative in their hands to meet with us in Washington, if they have such an interest. We agree that these

negotiating tactics are preferable, and will be used insofar as negotiations are concerned. However, from the political point of view, and apart from the negotiations proper, we feel it necessary to broach the subject from the U.S. side by a small, high-level team visiting Europe.

If I can be of any further assistance to you in your review of the Executive Branch proposal, please let me know.

Sincerely,

W. E. Johnson

Wilfrid E. Johnson

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 20
October 14, 1970

# INFORMATION MEETING 1067

9:55 a.m., Wednesday, October 14, 1970, Chairman's Conference Room, D. C.

1. President's Letter to Mr. Cecil King re Assistance at the White House

2. October 11, 1970, New York Times Article "What Kind of Power Plant?"

3. Commissioner Thompson's Report on his Attendance at the Panel Discussion of the New York Metropolitan Chapter of American Nuclear Society and Health Physics Society Meeting on Science and Politics of Environmental Effects of Nuclear Power, October 13, 1970

4. Commissioners' Meeting with Mr. Laurance Rockefeller, 10:00 a.m., October 29, 1970, New York City

   The Chairman and Commissioners Ramey, Thompson, and Larson plan to attend accompanied by Mr. Howard Brown and Mr. Joe DiNunno. (AGM-SECY)

5. Fact Sheet on Nuclear Power vis a vis Coal

   Commissioner Ramey requested preparation of a fact sheet and said he would write the Chairman of the Federal Power Commission, John Nassikas. (PI-SECY)

6. Revised Schedule for Monday, October 19, 1970

7. October 8 Letter from Paul McCracken, Chairman of the Council of Economic Advisers, re Domestic Council's Energy Subcommittee (See also September 30 Memorandum for the Subcommittee on Energy from Mr. McCracken)

Staff is drafting the requested report. (AGMP)

8. SECY-496 - Proposed Letter to Glenn Lee re Availability of Land at Hanford; and,
SECY-497 - Hanford Nuclear Park - WPPSS

Approved. (AGMO)

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EXECUTIVE SESSION

9. Mr. Riley's October 9 Memorandum re Access Authorization

Staff will proceed as requested. (S-Rubin)

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10. SECY-488 - Emery II Tests

Approved. (AGMMA)

11. SECY-473 - FY 1971 Environmental Statement: Underground Nuclear Test Programs, NTS

To be rescheduled. The Commissioners' comments will be addressed to staff. (AGMO-SECY)

12. SECY-475 - Draft Environmental Statement for Radioactive Waste Repository

Approved with changes. Additional comments will be addressed to staff. (AGMO)

13. SECY-489 - Japanese Request for Compressor Technology

The staff recommendation is approved. (AGMIA)

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14. SECY-486 - Canadian National: Proposed Assignment to LASL

Approved. (AGMIA)

15. SECY-476 - India: Heavy Water Plant

Noted. (AGMIA)

16. Commission Briefing for Under Secretary Irwin and Other Department of State Officials

To be scheduled. (AGMIA-SECY)

17. SECY-477 - Okinawa: New York Times Article September 27, 1970

Noted. (C)

18. SECY-484 - Proposed Renewal of Research on Many-Body Systems

Noted with a request. (R)

19. Proposed Press Release re Nuclear Weapons Tests

Staff may coordinate with the White House. (AGM)

W. B. McCool
Secretary of the Commission

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Bloch
Mr. Hennessey
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. King*
Mr. Flaherty*
Mr. Erlewine*
Mr. Vinciguerra*
Mr. Riley*
Mr. Tesche*
Mr. Facer*
Mr. Bartlett*
Mr. Levine*
Mr. Friedman*
Mr. McDaniel*
Mr. Gean*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

will also check with the White House to get their views. We decided that we would suggest to Allis Chalmers that they not sell compressors to Japan for their proposed gaseous diffusion plant in view of the possibility of compromising seal information by so doing.

Regulatory Information Meeting 427 (notes attached) followed at noon. We approved the transfer of a number of identified individuals to the Environmental Protection Agency and approved a number of names that we would recommend for the directorship and key positions of this agency.

I then presided over Regulatory commission Meeting 289 at 12:50 p.m. We approved a plan for implementation of the National Environmental Policy Act (NEPA) of 1969 in AEC regulatory activities. We decided to encompass environmental matters, in addition to the radiological aspects, rather broadly, but short of direct control over water quality standards since these are handled by the States or, alternately, by the EPA under the Muskie Act. However, we will discuss this with the Council on Environmental Quality and perhaps the Department of Justice in order to be sure that we are interpreting the legal authority (that is, lack of it) correctly.

I had lunch at the World Buttery with Stan Schneider and Syd Gaarder during which we discussed the progress of the writing assignments.

From 2:35 until 4:30 p.m. I attended a briefing by Atomics International and North American Rockwell officials on their planning for the building of a LMFBR prototype in cooperation with utilities. Those attending included W. F. Rockwell, Jr. (Chairman of the Board and Chief Executive Officer, NR), D. Bateman, Jr., (Senior Vice President, Corporate Development, NR), J. D. Wethe (President, Power System Division, NR). H. M. Dieckamp (President, AI, NR), W. G. Kuhns (President and Chief Executive Officer, General Public Utilities), W. A. Verrochi (Technical Assistant Vice President, Penelec), W. H. Hirst (FBR Program Manger, GPU), P. J. Dapello (AI staff), N. G. Dodson (President, Penn Electric), W. L. Clark (Vice President, NR, Washington Office), Commissioners Ramey, Johnson, Thompson and Larson, Ed Bloch, Milt Shaw, George Kavanagh, Ernie Tremmel, Julie Rubin and other AEC staff.

Dieckamp opened the briefing and then Rockwell made a few introductory remarks concerning the importance that North American Rockwell attaches to the breeder program. Dieckamp made a detailed briefing of a financial plan illustrated with slides. They plan to have a non-profit corporation of utilities created which, through a combination of raising cash and borrowing together with contributions from the AEC, would finance the undertaking. Their estimated costs for a 500 megawatt electric prototype ran in the $3-400 million range of which they would ask for about $110 million from the AEC. I pointed out that we are at present limited to $50 million for our contribution and that it will be difficult to increase this. Larson suggested that the Federal Government might guarantee the loan taken by the utilities in connection with the non-profit corporation, but I indicated that this would be somewhat difficult to do on any near time scale. I thanked the group for their excellent briefing and indicated that we would take into account their suggestion. (After the meeting I talked to Rockwell privately and suggested that it might be well for him and his friends to contact the White House privately in order to try to motivate them to support the breeder program at the higher level needed.)

At 4:35 p.m. I met with George Ionita (Chargé d'Affaires, Romanian Embassy) who was accompanied by O. Plascaru (Third Secretary). Abe Friedman and Julie Rubin were also present. After passing on the amenities, Ionita indicated that he was here to help explain the Romanian Government's recent decision to drop their

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 20
October 14, 1970

# REGULATORY INFORMATION MEETING 427

12:00 N, Wednesday, October 14, 1970, Chairman's Conference Room, D. C.

1. Mr. Price's October 9 Memorandum re Transfer of Functions - AEC to EPA - Under Reorganization Plan No. 3

   Approved with a change. (ADRA-PER)

2. SECY-498 - Shipments by Tri-State Motor Transit Company

   The staff position on the Tri-State request is approved. (SMM-ADRR)

3. Dr. Beck's October 14 Memorandum re Draft Reply to Senator Bible re Questions on Consequences from Enemy Attack on a Nuclear Power Plant

   Approved. (DDR)

4. Mr. Price's October 1 Memorandum re Consideration of Various Regulatory Items

   To be rescheduled. (ADRA-SECY)

5. September 30 Letter from Governor Marvin Mandel re Agreement with the State of Maryland

6. Illinois State Hearing on Dresden 3

W. B. McCool
Secretary of the Commission

12:40 p.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Price | Commissioners |
| Commissioner Ramey | Mr. Beck | Dir/Regulation |
| Commissioner Johnson | Mr. Henderson | General Manager |
| Commissioner Thompson | Mr. Hennessey | General Counsel |
| Commissioner Larson | Mr. Rubin | Secretary |
| | Mr. Wells | |
| | Mr. Case | |
| | Mr. Morris | |
| | Mr. Hanauer | |
| | Mr. Mann | |
| | Mr. Shapar | |
| | Mr. McCool | |
| | Mr. Bloch* | |
| | Mr. Vinciguerra* | |
| | Mr. Kull* | |
| | Mr. Crowson* | |
| | Mr. Cunningham* | |

*Attendance by Topic (s)

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negotiations with the Lummus Company for heavy water technology. He knew, of course, that I had had a long talk on this matter with Ioan Ursu et al in Vienna last month. He delivered to me a letter (copy attached) from Ursu, dated September 10, 1970, with apologies, saying it had missed the September pouch from Bucharest and since there is only one pouch per month, it had come in the October pouch. He indicated that he hopes we will continue our cooperation by renewing our agreement and spoke especially of fellowships that we might provide for Romanian scientists working in the United States. (Actually, I believe that we received the Ursu letter, or its equivalent, through our embassy or some such routing before I left for Europe last month, but I didn't mention this to Ionita.)

Commissoner Johnson came in to show me the letter he received from Chet Holifield (copy attached) in response to Johnson's letter to Holifield of yesterday (copy attached October 13), indicating that Holifield still intends to resist the U.S. plan for exploratory talks on the sharing of United States gaseous diffusion technology with Euratom countries, England, and other friendly countries.

I received a letter from Keith Glennan (copy attached) commenting on matters relating to the 14th General Conference of the IAEA.

I sent a letter to the Chairman, NSC Under Secretaries Committee, presenting for approval the underground nuclear test program planned for the second quarter of FY 1971, EMERY II.

I sent a reply (copy attached) to Yasuhiro Nakasone's letter of September 26 (attached on October 9) advising him that economic as well as political factors have to be considered before the U.S. can transfer abroad its enrichment technology.

Suki and I went for a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Ethel and Clifford Clauss spent the day sightseeing at the Capitol building, etc. and joined us after dinner for the evening.

Thursday, October 15, 1970 - D.C.

Accompanied by Lester Rogers and Saul Levine, I went to the Evening Star (225 Virginia Avenue, S.E.) for lunch and discussions with Newbold Noyes (Editor), S. H. Kauffmann (Senior Director), J. H. Kauffmann (President), Rudolf Kauffmann II (Associate Editor), Charles Seib (Managing Editor), Thomas Noyes (Associate Editor), James Heavy (Associate Editor) and John Lannan (Science Writer). The discussion covered the nation's need for electric power and the place of nuclear power (water cooled reactors, breeder reactors, and fusion) in filling these needs, radiation standards, radiation effects and thermal effects. The Star staff was well informed and asked many intelligent questions. Among the more significant items discussed were (1) the role of the breeder reactor and controlled fusion reactors in filling the nation's energy needs without the noxious air pollution due to burning of fossil fuels; (2) the relationship of effluent releases from nuclear facilities to FRC standards and the natural background of radioactivity; and (3) the thermal effects of nuclear power plants on Chesapeake Bay and other large bodies of water.

I returned from the luncheon to join a Commissioners' meeting with the ACRS, which was already in progress. Those present were Commissioners Ramey, Johnson,

COMITETUL DE STAT
PENTRU ENERGIA NUCLEARĂ
C. P. 1167
ROMCSEN - 311
B-dul Ilie Pintilie 5
Sectorul 1 — Bucureşti

Bucharest, 1o September 1970

UNCL. BY DOE
NOV 85

Dear Dr.Seaborg,

As you already know, during the last years, negociations have been carried on between the Romanian foreign trade enterprise "Industrialimport" and the "Lummus" company in the U.S.A., regarding the purchase of a heavy water plant. Fruitful discussions have taken place on this matter between our institutions, and we do appreciate the useful contribution of the United States Atomic Energy Commission in advancing these negociations, and the support you have personally given us.

In our opinion the evolution of the commercial negociations may generally be considered as a positive one, although very important problems for us, such as certain provisions of the draft contract, the level of the proposed prices, the financing and the securing of payment means on the U.S.A. market, were not agreed upon.

As you have pointed out, on the occasion of your visit to Romania last autumn, the implementation of our national nuclear programme requires important material means and a great number of well trained specialists.

As your Government is informed, this spring our country has been affected by unprecedented natural

Dr.G.T.SEABORG
Chairman
UNITED STATES ATOMIC
ENERGY COMMISSION
WASHINGTON

calamities which caused us important damages. Despite all efforts which are being made to remove their consequences, these great losses forced us to delay the construction of the heavy water plant. For the time being we cannot still exactly appreciate the period of delay, but we hope it will not be too long.

I am sure that thanks to the good relations existing between our countries, between the Romanian State Committee for Nuclear Energy and the United States Atomic Energy Commission, and also taking into account the particular attention you have personally attached to the co-operation with Romania in the field of peaceful applications of nuclear energy, we will find on the part of the concerned American authorities and, first of all, of the United States Atomic Energy Commission, the necessary understanding for the step we were compelled to take.

In the meantime, we plan to take full advantage of the time at our disposal, for training our personnel, preparing adequate technological means, intensifying the contacts with experts from other countries, especially those from the United States, and for exchanging technical-scientific information.

We are convinced that, to this effect, we shall enjoy the valuable support of the United States Atomic Energy Commission, as well as yours, personally, for the further development of the co-operation in nuclear reserach, particularly in the technological field, between our two countries.

As a first step to this regard, we deem very useful the conclusion of a new legal instrument of co-operation in the field of peaceful applications of nuclear energy between our countries, bearing in mind the fact that the existing Memorandum is due to expire this year. We are confident that this will contribute to the increasing of our exchanges in the

nuclear field and correspond to the ascending course of the development of relations between Romania and the U.S.A.

I hope that we shall also have the opportunity to talk about all these matters, at large, on the occasion of our meeting, which I am looking forward to, at the I.A.E.A. General Conference, in September, this year.

Please accept, dear dr.Seaborg, the assurances of my highest consideration.

PRESIDENT,

Prof. Ioan Ursu

UNCL. BY [illegible]
NOV 8 [illegible]

[illegible], CALIF., Chairman
[illegible]
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[illegible]
EDWARD A. [illegible], Executive Director

JOHN O. [illegible], OHIO, Vice Chairman
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# Congress of the United States

## JOINT COMMITTEE ON ATOMIC ENERGY

WASHINGTON, D.C. 20510

October 14, 1970

Honorable Wilfrid E. Johnson
Commissioner
U.S. Atomic Energy Commission
Washington, D.C.

Dear Mr. Johnson:

This is in response to your letter of October 13, 1970 in which you reiterated your plans for exploratory talks on the possible sale of highly classified United States advanced gaseous diffusion technology with foreign entities. You refer somewhat obliquely to the suggestion made to you on October 8, during our "informal" discussions on this matter. The suggestion was that the United States appeared to be aggressively interested in selling our advanced gaseous diffusion technology and that perhaps it would be more appropriate if we allowed the initiative to come from the Europeans. Apparently you reject this approach because your letter states that you feel that it is necessary to "breach the subject from the U.S. side by a small, high-level team visiting Europe."

Your letter does not state whether or not you plan to proceed with exploratory talks with Europeans at any time in the near future. In this connection, I want to reaffirm my statement made toward the conclusion of the September 16 executive hearing on this matter and reiterated during the "informal" meeting you requested on October 8; that is--and let me quote from the September 16 hearing:

> "I am perfectly willing to consider this confidential and classified, and I hope the other Members will too until you present us with a definite plan of negotiations. At that time I will place it before the Committee for a vote as to their position on it because this is too important in the light of history for us to let this thing go by with an informal discussion that may be misunderstood by your side or by the Committee."

As you are well aware, it has not been possible in the last few weeks to hold a hearing on this matter; and Congress will be in recess beginning today. I strongly urge you to defer any exploratory talks on this matter until the Committee has had a chance to vote on it.

The transcript of the October 8 "informal" meeting should be sent to you and Under Secretary U. Alexis Johnson in the next few days. I believe the thrust of the exchange of this meeting clearly points up possible international pitfalls as well as our doubts and concerns in regard to this undertaking. I also note what appears to be unseemly haste in aggressively pushing this matter during the concluding days of this Congressional session.

Sincerely yours,

Chet Holifield

Chet Holifield
Chairman

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NOV 86

THE REPRESENTATIVE
OF THE
UNITED STATES OF AMERICA
TO THE
INTERNATIONAL ATOMIC ENERGY AGENCY

October 6, 1970

Dr. Glenn T. Seaborg
Chairman
U.S. Atomic Energy Commission
Washington, D.C. 20545

Dear Glenn:

As the dust settles and we are a few days removed from the confusion of the meetings, it is possible to look back with some satisfaction to the outcome of all the debate and maneuvering at the General Conference and the Board meetings. The outcome of the Article VI discussions certainly pleased the sponsors of the accepted plan. And I really believe that the opposition accepted the result with very good grace. After all, there will be a span of many months before ratification can take place and, in the meantime, perhaps those elements which were cited by them as root causes of their opposition may well be dealt with. Here, of course, I refer to the ratification of the NPT by certain involved nations. Our discussions with our Soviet colleagues have been constructive and friendly since the Conference. Perhaps the Safeguards meetings will give us a more accurate measure of their real attitude, however.

I am sorry that my preoccupation with the work of the Conference prevented my seeing more of you in Vienna. Your willingness to talk with Sarabhai was greatly appreciated and you handled it in such a way that, at least on the surface, there are no scars. I had several talks with Sarabhai after you left and he was most open and cordial. I am glad we were no more deeply enmeshed in that controversy. Actually, I think the U.S. came through all of the meetings having stood by its commitments while providing some elements of stability and maintaining a suitably low profile.

I wanted to express my appreciation to you and to Myron for the support and counsel given to the Mission staff by Abe Friedman and Bill Yeomans. They fitted into the daily (and nightly) routine without strain and were available for special tasks at all times. I hope and trust that they share the sentiments I have expressed above.

I will return to Washington immediately following the opening of the Safeguards meeting on 13 October to meet some personal obligations which will keep me in the States until close to the end of October. Then I propose to return to Vienna for another period of two or three weeks -- perhaps longer if the Safeguards schedule so dictates. As of the present writing, Dr. Waldheim will be able to spend a longer period of time getting the work of the Committee started than seemed likely when you were here.

I'll get in touch with you as soon as I return. In the meantime, best regards and thanks for your support.

Sincerely,

T. Keith Glennan

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 14 1970

Mr. Yasuhiro Nakasone
House of Representatives
Daiichi Giinkaikan
Nagatacho, Chiyoda-ku
Tokyo, Japan

Dear Mr. Nakasone:

I appreciated very much receiving your letter of September 26, 1970. I, too, regret that it was not feasible for us to meet personally during your recent visit to Washington.

As you may be aware, the Atomic Energy Commission and the other interested United States Government agencies have under active consideration the question of whether it would be desirable for the United States to change its policy which prohibits the transfer abroad of U. S. enrichment technology. As you have noted in your letter, this is a complicated policy matter and a number of serious economic as well as political factors have to be considered.

I can assure you that your views will be given serious consideration, and I appreciate your bringing them to our attention.

Sincerely,

Chairman

Thompson and Larson, Harold Price, Marvin Mann, Peter Morris and other AEC staff and ACRS members Joseph M. Hendrie (Chairman), Spencer Bush (Vice Chairman), Harold Etherington, Hibbert M. Hill, Herbert S. Isbin, Warren Kaufman, Harold Mangelsdorf, Arlie O'Kelly, David Okrent, Nunzio Palladino, Chester P. Siess, Lombard Squires and William R. Stratton. We discussed the backfit of the combustion gas control system for the Dresden Nuclear Power Station, Unit No. 3, and reached tentative agreement on alternative (1), which states that the indication of our public Safety Evaluation is that the matter is till under review, with an additional statement that it will be resolved by some later time (such as the time of the first refueling outage). In the event of a public hearing this matter could be raised as an unresolved issue by the board or by an intervenor, because of Commonwealth's stated opposition to providing a hydrogen control system. We also discussed the ACRS workload which seems to be manageable and methods of speeding up the regulatory process in general.

At 4 p.m. I met with R. Ward Crary of the Industrial Research Institute. Also present were Ernie Tremmel so that I could hear from Mr. Crary his proposal to have the organization that he represents meet at ORNL to learn more about the Laboratory and to exchange views on mutual areas of research interest. The Industrial Research Institute is loosely associated with the National Academy of Sciences and is made up of industrial companies which perform significant private research. Members of the Institute have visited the National Bureau of Standards and the Agriculture Research Service Laboratory in Beltsville. William Martin of Proctor and Gamble is now the President of the organization. (Howard Vesper is a past president.) Crary proposed that a group of from 100-150 people make a one or two day visit to ORNL in March, 1971, during which time they would be briefed by senior laboratory personnel on the general aims of the research programs, and would then break into smaller groups to visit laboratories of specific interest to them. I told Crary that I had no objection to such a plan, subject to acceptance by Alvin Weinberg and Sam Sapriie. Tremmel and Crary are to pay a visit to ORNL in the near future to explore the feasibility of the plan.

I went to a reception for European Community Commissioner Ralph Dahrendorf (of Germany), given by Nathaniel Samuels (Deputy Under Secretary of State for Economic Affairs), in the John Quincy Adams Room of the Department of State. I talked with Dahrendorf and with our Ambassador, Robert J. Schaetzel, about the status of the European Community and the lack of knowledge of its exact functions and accomplishments by people in the United States and even in England. Among the people I met was Mrs. Marina Whitman, the daughter of John von Neumann, who is in Washington to work on a temporary assignment as an economist in the White House.

Friday, October 16, 1970 - Germantown

We learned that representatives of the House Appropriations Committee have met with representatives of the Senate Appropriations Committee and agreed that we can use advance engineering funds money in order to proceed with the building project for more fireproof weapons development facilities, along the lines asked for in our $25.5 million request for a supplemental appropriation in FY 1971. (I testified at a hearing concerning this request on October 1.)

At 9:55 a.m. I presided over Information Meeting 1068 (notes attached). We decided to concur in the suggestion by Roger Egeberg (HEW) that the date on which the review of uranium miner radiation exposure guidelines will be due should be postponed from January 1, 1971, to July 1, 1971. We approved a recommendation from Spoff English that the AEC support the establishment of a

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
October 16, 1970

# INFORMATION MEETING 1068

9:55 a.m., Friday, October 16, 1970, Room A-458, Germantown Headquarters

1. Senator Pastore's Request to the Chairman for Statement re Nuclear Power

   In staff review. (AGM)

2. October 13 Letter from KMS re Meeting with the Commission

   Scheduled for consideration Wednesday, October 21, 1970. (SECY)

3. October 13 Letter from Mr. Egeberg, HEW, re Review of Uranium Miner Radiation Exposure Level Guidelines

   The Commission concurs. (AGMO)

4. Agenda for the Weeks of October 19, 26, November 2 and 9, 1970

   Approved. (SECY)

5. Briefing on Release of Radioactive Effluents

   To be scheduled. (SECY)

6. NTS Events for the Week of October 19, 1970

   Noted. (AGMMA)

7. SECY-518 - Startup of N Reactor

Approved. (P)

8. SECY-470 - Swedish National: Proposed Assignment to LASL

Approved. (AGMIA)

9. SECY-506 - BNL: Proposed Establishment of Technical Advisory Group for Energy Resource Development

Revisions in the letter are requested. (AGMR&D)

10. Strike at Paducah

11. Pending Contractual Matters Report No. 378

Noted. (PAR)

W. B. McCool
Secretary of the Commission

12:00 N

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Johnson | Mr. Bloch | General Manager |
| Commissioner Thompson | Mr. Hennessey | General Counsel |
| Commissioner Larson | Mr. Abbadessa | Secretary |
| | Mr. Rubin | |
| | Mr. Fremling | |
| | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Brown* | |
| | Mr. Levine* | |
| | Mr. Erlewine* | |
| | Mr. Baranowski* | |
| | Mr. English* | |
| | Mr. Kavanagh* | |

*Attendance by Topic (s)

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Technical Advisory Group at Brookhaven National Laboratory, devoted to broad consideration of energy resource development. We approved the startup of the N reactor at Hanford on the basis that the failure of the preliminary control rod safety system has been diagnosed and corrected. We discussed the October 13 letter of K. M. Siegal, Chairman of KMS (copy attached), and decided we would respond to this in connection with the discussion of the whole problem scheduled for next Wednesday.

I had a telephone call from Joe Fogarty of Senator Pastore's office. He said he was calling at the request of the Senator, who is in his office in Providence, Rhode Island, to read me a news release that has just appeared in the Providence paper. He said it concerns a five-point atomic safety plan that Father McLaughlin (Pastore's opponent in the senatorial campaign) is recommending, namely: (1) Construction of all nuclear reactors underground in remote areas; (2) A ban on construction of any reactor that would release any form of radioactive plutonium in the air; (3) Development of fusion instead of fission reactors; (4) At least a 10-fold reduction in the level of radiation considered safe; and (5) Legislation making reactor operators liable for any damage caused by reactor accidents. He said if I would send someone over he would give me a copy of the entire release; I said I would. Fogarty said the Senator would like to get something in writing from us, although he is not sure at this point whether he will respond. He said they think Gofman is behind this. He said Senator Pastore would like to talk to me and gave me his office phone number in Providence.

I then called Senator Pastore who seemed very disturbed by this item, saying that if a thing like this begins to take hold throughout the country, we can say goodbye to the atomic energy program. He said these allegations should be refuted by someone of my stature--preferably a scientist of great prestige. I asked him how he would suggest our proceeding. He said we could send him a letter, saying that this matter has come to our attention and we thought the public ought to have the true facts. He then went on to talk about the criticism that has built up as a result of the bill they passed restricting the authority of the EPA for setting radiation standards. I said we don't have any problem with that. I also said we would prepare something to send to him.

I asked him if Chet has talked to him about the study that has been underway for some time in the Administration with respect to approaching our European friends, and maybe some countries that are making great progress in uranium enrichment, about sharing our technology with them - for a price - in order to (1) slow them down and (2) to be able to get in and influence them. I said he should look at this pretty carefully before making up his mind. He said he has heard some rumors about it and that he would take a good look at it right after the elections.

I had lunch with Bob Silber (Director, Membership Activities Division, ACS). He described to me a proposal he is working on to form a corporation named Science Education Association, which would be concerned with evaluating and helping procure science equipment for high schools as well as other educational functions. Knowing of Science Service's financial problems, he suggested that it might be possible to combine this as a profit making function with a non-profit arm, such as Science Service. I indicated an interest and said that if the merger of Science Service with AAAS does not work out, I feel that the Science Service Board would certainly want to consider his proposal. I told him some of the problems developing with the Science Service-AAAS merger.

I met with Al Weinberg and Art Snell from 2 to 2:40 p.m.; Julie Rubin was also present. Al opened the discussion by inquiring if I had read Pettitt's book,

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KMS industries inc.
220 East Huron Street
Ann Arbor, Michigan 48108
313/769-1100

13 October 1970

Dr. Glenn T. Seaborg, Chairman
U.S. Atomic Energy Commission
Washington, D.C. 20545

Dear Dr. Seaborg:

Over nine months ago KMS Industries, Inc. proposed a program to the Commission to determine the technical feasibility of certain processes for the controlled release of thermonuclear energy. We continue to feel that the program we offer to the Commission is a suitable vehicle for proceeding. While there have been various discussions with your staff over the last nine months, there has been no exploration with us of the merits of our proposed program. The purpose of this letter is to request an early meeting with the Commission to reach a decision as to the conditions under which KMS Industries can proceed.

KMS Industries recently received a letter from the General Counsel of the Commission focussed primarily on scientific and technical matters. My over-all impression is that everyone understands the formidable problems that exist in these areas. We have already stated our willingness to proceed with full knowledge of the uncertainties. The issue we face at this juncture is not scientific and technical but rather simply to determine the circumstances under which KMS Industries may proceed.

KMS Industries urgently requests a meeting with the Commission to determine how KMSI can best contribute its talent, time and money to the achievement of controlled thermonuclear energy.

Respectfully,

Keeve M. Siegel
Chairman

KMS:jr

Prisoners of Culture. I indicated having seen a book review and we discussed Pettitt's general background in this field. Al thought the book is worth reading.

I noted Al's letters about the Tandem Van de Graaff had just been received and explained the issue is not one of competition between ANL and ORNL but rather a lack of any construction funds for projects of this nature. Snell admitted that there is no firm offer to give the High Voltage machine to ORNL but this might be in the offing. We talked about the excellent work in heavy elements in Lew Keller's group and agreed it should be supported.

I told Al that a Mr. Ward Crary of the Industrial Research Institute would be arranging a visit soon to Oak Ridge following correspondence and a meeting with Clarence Larson and me here in Washington.

Al inquired about the nature of Weinberger's visit to Oak Ridge on October 23. I told him it is for orientation purposes and that he should concentrate on visits to facilities rather than sit-down lectures on activities at ORNL.

Al advised of a call from Dow Chemical about a visit to Oak Ridge to discuss construction of a molten salt reactor in Texas. He also reported that recent work on the separation of rare earths from the fuel salts had been very successful.

He stated that he still foresees problems in the shipment of spent fuel and inquired whether we have considered the advantage of large nuclear parks (i.e., 25,000 MWe) to eliminate shipments of fuel throughout the country. The possibility of nuclear power parks being included in some of the reactor siting long-range plans was noted. I mentioned the recent concern over industrial sabotage of truck shipments involving plutonium nitrate or spent fuel that might result from incidents similar to rifle fire detonating a truck shipment of dynamite.

Al inquired about any advice I could give him on the FY 1972 budget picture and nothing specific was offered except a general comment that the overall economic situation does not look too promising. In that connection, Al asked if I have talked to Bill McElroy recently as he is concerned about a recent report that McElroy is disenchanted with the ORNL/NSF arrangement for the environmental laboratory in the Washington area. I agreed to talk this over with McElroy when I have lunch with him next week.

Al stated that recent reviews of CTR work make it clear that this would not be free of all problems presently experienced by nuclear power plants. I agreed and said that even in my speeches, I make it clear that radiation and thermal effects problems with CTR indicate that this energy source will not be pollution free. Al also repeated his well-known position that we should not be placing all of our effort on the LMFBR as it still has many unsolved problems, particularly in chemical reprocessing. He acknowledged that the molten salt reactor also has many problems to solve.

At 3 p.m., in the auditorium, I presented the Presidential Management Improvement Certificate, as an individual award, to John Abbadessa, and as a group award, to the Data Processing Evaluation and Control Branch, Office of the Controller.

I sent a letter to Under Secretary of State John Irwin (Chairman, Under Secretaries Committee) (copy attached) recommending a schedule for the next set of talks with the Soviets on the Plowshare program and advising that the Commission would like to brief the Under Secretaries Committee on the previous bilateral talks and the progress of our studies to date.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 16 1970

Honorable John N. Irwin, II
Under Secretary of State

Dear Mr. Irwin:

The AEC in its Plowshare program has been studying the use of nuclear explosions for excavation applications. Several aspects of this program impinge on the foreign relations of the United States and, consequently, are of interest to the Under Secretaries Committee.

In the course of reviewing an Interagency Study done in the summer of 1969, the Under Secretaries Committee last October requested the AEC to undertake a study of the feasibility of using objective technical criteria as a basis for modifying the Limited Test Ban Treaty so as to permit the exploitation of the nuclear excavation technology. During the past year, we have had our laboratories examine this problem in considerable depth and will shortly present a report on our work to the Interagency Study Group.

Following the Under Secretaries review, a second set of bilateral talks with the USSR was approved and these talks were held in February 1970 in Moscow. The first set of talks had taken place in April 1969. Trip reports on the February 1970 meeting are enclosed for your information. Both sets of talks were very beneficial to the United States since they have revealed the extent and many of the details of the Soviet program to develop peaceful uses for nuclear explosions.

When the talks began, we agreed with the Soviets that there should be periodic technical discussions on this subject to exchange new information on our respective programs and to explore specific problem areas.

The Soviets have continued to emphasize that they want to keep a continued dialogue going with the U.S. on this subject and the related international arrangements that should pertain to the implementation of Article V of the Non-Proliferation Treaty. In general, we have felt it also to be in our interest to keep this conversation going and to try to move in parallel with them in this area.

During the February 1970 meeting in Moscow, at which Commissioner Thompson headed the U.S. delegation, there was a feeling on the part of the participants that we should meet again for further discussions, possibly this fall. It was also implied that the next meeting would be held in the United States since the Soviets hosted that meeting. More recently, during the meeting of the IAEA General Conference in Vienna, it was suggested by Professor I. D. Morokhov, who headed the Soviet delegation at the February talks, that we meet again in late November or January in the United States.

One topic I am sure the Soviets will want to discuss is their ideas concerning radiation criteria which might be used to permit full exploitation of nuclear excavation. This subject was raised by them at both previous meetings, and is one the AEC has been studying since last fall at the request of the Under Secretaries Committee.

In our study to date, we have identified areas where there are discrepancies between U.S. and Soviet data and calibration techniques. Consequently, we feel we should discuss this matter further with the Soviets before we in the AEC can be in a position to make a final recommendation as to whether it would be technically feasible to attempt to establish any technical criteria. At the present time, our work leads us to believe that a modification of the approach proposed by the Soviets at the meeting last February might be the most feasible. Basically, this would be to establish criteria based on limiting the radiation dose, or exposure, of populations outside the country or countries conducting

the project to the limits of the guides recommended by the International Commission for Radiological Protection.

With regard to the Soviet suggestion regarding the next set of bilateral talks on peaceful nuclear explosions, November appears to be too early. As for January, the IAEA is holding a technical panel on peaceful nuclear explosions January 18 - 22, and this will occupy the attention of some of the same individuals. Consequently, we feel that the bilateral talks could be scheduled for early February and I would like, therefore, to recommend that the Under Secretaries Committee consider, at an early meeting, the question of our extending an invitation to the Soviets for another set of technical talks.

In preparation for these talks, the Commission would like to brief the Under Secretaries Committee on the previous bilateral talks and the progress of our studies to date on technical criteria, including our evaluation of the approach suggested by the Soviets.

Sincerely,

Chairman

Enclosures:
1. "Report on US-USSR Technical Talks on Peaceful Nuclear Explosions," 2/12-17, 1970 (C/DI)
2. UCID-15606, "Highlights of the Second Stage of Soviet-American Technical Talks on the Use of Nuclear Explosions for Peaceful Purposes," by G. C. Werth, 2/24/70

I received a letter, signed jointly by Governors Marvin Mandel of Maryland and Linwood Holton of Virginia, giving official recognition to the Chesapeake Bay Cooling Water Studies Group and to the Steering Committee of the Studies Group and thanking us for Walter G. Belter's and Robert L. Holton's efforts during the formative stage of the Chesapeake Bay Water Studies Group. (A copy of the letter is attached.)

I received a copy of a letter which Congressman Holifield and Hosmer wrote to California Assemblyman John V. Briggs, assuring him of their abiding interest in the matter of research on power plant siting, a matter on which Briggs had previously written to me.

Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Ethel and Clifford Clauss had dinner with us.

Saturday, October 17, 1970 - D.C.

Ethel and Clifford Clauss left for New York this morning, continuing their vacation and concluding their stay with us.

I worked in the office until about 12:30 p.m. Joe Hendrie (Chairman, ACRS) dropped in to see me about 10:30 a.m. to propose a couple of candidates - Stephen Lawroski and Jesse C. Ebersole - to fill the 15th slot in the membership of the Advisory Committee on Reactor Safeguards.

I received another letter signed by Governors Marvin Mandel and Linwood Hoton (Maryland and Virginia) (copy attached) inviting our participation on a Committee on Power Plants and the Environment.

With the help of Howard Brown and Drs. Bibb and Burr, a letter was prepared and sent to Senator Pastore (copy attached), at his request, in refutation of the claims of Gofman and Tamplin concerning increased cancer deaths caused by radioactive effluents from nuclear power plants.

Attached is a copy of a memorandum from John Flaherty to the General manager regarding a meeting he and Commissioner Johnson attended today concerning industrial participation in uranium enrichment technology.

Helen and I went to a lunch at the National Academy of Sciences in honor of President Miron Nicolescu of the Academy of the Socialist Republic of Romania and Mrs. Nicolescu, given by Harrison Brown. Present at the luncheon, in addition to Harrison Brown, the Nicolescus, Helen and I, were the Walter Jenkinses (he was in our embassy in Poland, where I met him during my trip to Warsaw in October, 1967), Professor and Mrs. Joseph L. Walsh (mathematician, University of Maryland), Mr. and Mrs. Arthur Roe (NSF), Mr. and Mrs. Norman Neureiter, Dr. and Mrs. Lewis Branscomb, and Ed David.

I then went to the meeting of the AAAS Board of Directors at the AAAS Headquarters, 1515 Massachusetts Avenue. Present at the meeting were Bentley Glass (Chairman), Board Members Athelstan Spilhaus, Mina Rees, David Blackwell, Richard Bolt, Lewis Branscomb, Phyllis Parkins, Leonard Rieser, Kenneth Thimann and Gerald Holton; William Bevan (Executive Officer), William T. Golden (Treasurer), and Phil H. Abelson, Science magazine Editor. Along with Wallace

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NOV 86

STATE OF MARYLAND
EXECUTIVE DEPARTMENT
ANNAPOLIS, MARYLAND 21404

MARVIN MANDEL
GOVERNOR

September 8, 1970

The Honorable Glenn T. Seaborg
Chairman, Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Seaborg:

We appreciate the efforts of members of your organization to join together to conduct a coordinated research program on the use of waters of the Chesapeake Bay and its tidal tributaries for cooling steam power plants. It is our view that the research program is vitally important to the management and regulatory processes of our State governments.

Therefore, it is our desire to give official recognition to the Chesapeake Bay Cooling Water Studies Group and to the Steering Committee of the Studies Group. The responsibility of the Steering Group to plan, assess, stimulate, support, guide and coordinate the necessary research needed to provide a more adequate basis for decisions with respect to the location and size and operation of power plants suggests the involvement of highly motivated and experienced individuals. The effort and contribution of Mr. Walter G. Belter and Dr. Robert L. Holton over the past several months during the formative stage of the Chesapeake Bay Water Studies Group have been very valuable. We are pleased to have the opportunity to thank you for Mr. Belter's and Dr. Holton's help in this important research effort and hope that their continued involvement will prove beneficial to all of us.

Sincerely,

Marvin Mandel
Marvin Mandel
Governor of Maryland

Linwood Holton
Linwood Holton
Governor of Virginia

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NOV 86

STATE OF MARYLAND
EXECUTIVE DEPARTMENT
ANNAPOLIS, MARYLAND 21404

MARVIN MANDEL
GOVERNOR

September 15, 1970

FM 10/17/70

The Honorable Glenn T. Seaborg
Chairman, Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Seaborg:

We are writing to invite the participation of your organization on a Committee on Power Plants and the Environment (Chesapeake Bay). We are now formalizing a Chesapeake Bay Cooling Water Studies Group under the guidance of a small and effective Steering Committee to conduct the necessary research. The Studies Group represents many years of experience with research institutions and sponsors of research in the Chesapeake Bay region. We believe that this experience can be brought together in a cooperative and collaborative focus on the environmental aspects of power plant siting. We are, of course, concerned that there be a minimum of unnecessary duplication and that there be maximum utilization of available monies. The Steering Committee will have the responsibility to accomplish that coordination and we have confidence in their ability.

It is anticipated that the Committee on Power Plants and the Environment (Chesapeake Bay) will meet periodically, once or twice a year, to be brought abreast of the Studies Group's progress. Your participation at these meetings will help to identify the critical information needed by Federal, State and industry decision-makers. Further, we expect that the Steering Committee will forward to you important results and information as they occur. We sincerely hope you can accept our invitation to assist us in this important undertaking.

Best regards until the Committee's first meeting.

Sincerely,

Marvin Mandel

Marvin Mandel
Governor of Maryland

Linwood Holton

Linwood Holton
Governor of Virginia

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 17, 1970

OFFICE OF THE CHAIRMAN

Honorable John O. Pastore
Vice Chairman, Joint Committee
on Atomic Energy
Congress of the United States

Dear Senator Pastore:

Mindful of your long-standing and continuing interest in protecting the health and safety of the American public, I am writing you concerning allegations that have been made recently with respect to the adequacy of radiation standards for the protection of the public.

Two scientists from the Lawrence Radiation Laboratory at Livermore, California, Drs. John W. Gofman and Arthur R. Tamplin, have maintained in various public statements that, as a result of the expected growth of nuclear electric power, there would occur a substantial increase in the cancer deaths from exposure of the entire population to very low doses of radiation.

Let me say at the outset that these allegations are not supported by the preponderance of knowledgeable scientific opinion around the world.

Their assumptions and calculations have been repeatedly and effectively challenged by the recognized experts in the fields of biology and medicine, by the scientists who have actually performed the research on which many of the Gofman/Tamplin assumptions and calculations are based.

It is the responsibility of the Atomic Energy Commission to make certain that the health and safety of the American people is paramount over all other considerations. That is the guiding philosophy that we have followed and will continue to follow. The American people can rest assured that their welfare is our first concern.

Cordially,

Glenn T. Seaborg

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NOV 86

UNITED S ATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 19, 1970

R. E. Hollingsworth, General Manager

INDUSTRY PARTICIPATION IN URANIUM ENRICHMENT

On October 17, I accompanied Commissioner Johnson to a meeting at EOP in which we discussed the Commission's consideration of SECY-443*regarding participation in enrichment technology. Executive office representatives at the meeting were William E. Kriegsman; Donald B. Rice, Assistant Director, Office of Management and Budget; and Col. Robert M. Behr, Sr. Staff Member, National Security Council.

We outlined the two-step procedure discussed in SECY-443 and provided copies of the proposed public announcement and request for proposals which are attachments to the paper.

There appeared to be complete agreement with our general approach and there were no suggestions for any changes. Mr. Rice is planning to make a more detailed review of the announcement and request for proposals and will provide me with any comments by telephone. EOP has given us a go ahead, subject to Mr. Rice's detailed comments, and is not expecting a formal submission of our plans.

J. J. Flaherty
Assistant General Manager
for Plans

*Secretariat Note: At Meeting 2437, October 12, 1970.

Brode and Bowen Dees, Science Service trustees, I was invited to the meeting to present the case for the merger of Science Service with AAAS. This discussion lasted from 2:15 until 4:30 p.m.

After introductory remarks by Glass and Spilhaus, I presented my case for the merger. I described the background for my involvement, first as a trustee and then as president of Science Service. I said that the activities of Science Service, that is, science clubs, science fairs, science talent search, things of science, and Science News offer AAAS an excellent opportunity to get into science youth activities and the public understanding of science. I said that I wanted to describe the financial status of Science Service in the most candid way and handed out a simple type of financial statement (copy attached), which I described in detail. I indicated that there is a difference of opinion on the importance of the deferred liabilities (that is, unfulfilled subscription obligations) for Science News. Some feel that this should not be carried as a liability at all. I emphasized the sale value of Science News as an offsetting factor. I particularly emphasized the value of the prestigious Science Service youth activities program which cannot be evaluated in dollars and cents.

Golden strongly opposed the concept of merger on the basis that AAAS would be taking on too great a financial risk, particularly in view of the recent financial problems that have come to light in AAAS. He also expressed strong doubts as to the accuracy or validity of Sherburne's projected revenue for the next twelve-month period. He was supported by Bolt and had considerable influence on a number of the other Board members. I made the point that one of the reasons Science Service is in its present financial predicament is that it has assumed there would be a merger with AAAS on the basis of negotiations that have been going on for about ten months and, thus, haven't been active in fund raising, etc. The debate involved most members of the Board. I received support from Brode and especially Dees, in addition to Spilhaus.

As I was leaving, I was told that the Board would try to make the decision later in the afternoon.

Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, by the police headquarters, and back to our starting point.

Helen and I attended a reception in honor of Dr. William Bevan, the new Executive Officer of the AAAS, in the Old and New Member Dining Rooms of the Cosmos Club (6:45-8:45 p.m.). The Board of Directors of the AAAS, and Golden and Abelson were present. Among those present, to whom Helen and I spoke, were the Leonard Carmichaels, Ed David, the Frank Careys, the Joel Snows, Mrs. Spilhaus, Mrs. Bolt, the Allen Astins, the Milt Harrises, Mrs. Branscomb, Wallace Brode, the Livermores, the Becklers, the Andreasons, the Hansons and the Roes.

Sunday, October 18, 1970

I worked on the text of my Karlsruhe speech of September 21, "Recent Developments in Transuranium Research" in order to prepare it for publication in the Symposium Proceedings.

Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, by the police headquarters, and back to our starting point.

## SCIENCE SERVICE

| ASSETS | |
|---|---|
| Cash | $ 20,000 |
| Real estate (appraised value) | 480,000 |
| Inventories | 20,000 |
| Science News (estimated sale value) | 600,000 |
| THINGS of Science (estimated sale value) | 100,000 |
| TOTAL ASSETS | $1,220,000 |

| LIABILITIES | |
|---|---|
| Accounts payable | $ 230,000 |
| Science Talent Search scholarships | 120,000 |
| Loan | 100,000 |
| Science News deferred liabilities | 360,000 |
| THINGS of Science deferred liabilities | 90,000 |
| Miscellaneous | 10,000 |
| TOTAL LIABILITIES | $ 910,000 |

October 17, 1970

## SCIENCE SERVICE BUDGET OVER NEXT 12-MONTH PERIOD

| | Revenue | Expense | Excess or Deficit |
|---|---|---|---|
| Science News | | $905,000 | $ |
| Subcriptions | $ 760,000 | | |
| Advertising | 125,000 | | |
| Other | 20,000 | | |
| THINGS of Science | 155,000 | 170,000 | -15,000 |
| Science Clubs of America | 20,000 | 40,000 | -20,000 |
| Science Talent Search | 93,000 | 93,000 | |
| International Science and Engineering Fair | 50,000 | 65,000 | -15,000 |
| Retail Books | 25,000 | 25,000 | |
| Book Publishing | 85,000 | 7,000 | +78,000 |
| TOTAL | $1,333,000 | $1,305,000 | $+28,000 |

I watched parts of several football games on TV, including one in which the Minnesota Vikings beat the Dallas Cowboys, 54-13; one in which the Baltimore Colts beat the New York Jets, 29-22; and the one in which the Kansas City Chiefs beat the Cincinnati Bengals, 27-19.

Allyne Snyder had lunch and dinner with us.

Monday, October 19, 1970 - D.C.

I called Athelstan Spilhaus who said that AAAS deliberated until almost noon yesterday about Science Service. Spilhaus made the motion for AAAS to take over the assets, liabilities, responsiblities, etc., of Science Service; it was voted down 7-3. This was a result of Bill Golden's unhappiness over assuming the liabilities of Science Service. In an effort not to be entirely negative, Dick Bolt then made the suggestion that AAAS offer to accept from Science Service some kind of management contract; this was accepted unanimously. I said this wouldn't help with the main problem, which is the need for immediate financial assistance. He said "the honest truth is that nobody on the AAAS board has any confidence in Ted Sherburne;" he has let things pile up, and the trustees meet only once a year. He said that Abelson made the remark that in four months he could make Science News at least a break-even operation. After Spilhaus' motion for the merger was voted down, he asked to be relieved of the responsibility of being the AAAS representative on the Science Service Board of Trustees, but this was not accepted. He said that Bill Bevan, Executive Officer of the AAAS, will have the exact wording of their new proposal, and he suggested I contact him.

Ted Sherburne called and said he and Dorothy have been wondering about new trustees for Science Service and have thought of Jim Webb. Ted said he thought Webb would be very good at fund raising and it might be worth getting him involved now. I asked if it would be necessary to check with the other trustees and he said he didn't think so. I said I would think about it.

I called Sherburne back later in the day and told him I had called Jim Webb and given him a little background on Science Service and especially our need of a businessman's help because of the financial difficulty we are in. Webb said he has so many things going he isn't sure he can add any more, but he did say that maybe he could help in other ways. In any event, Webb didn't turn it down, so I suggested that Sherburne take it from there.

I had lunch with Algie Wells, John Buck, and Julie Rubin at the Roger Smith Hotel. We discussed the general problem of delays in the hearing process for the licensing of new nuclear power reactors and the unhappiness that Holifield and Hosmer have shown in this respect. We concluded that it might be a good idea for Wells to talk directly and openly with Holifield and Hosmer to discuss their concerns.

At 3:10 p.m. I presided over Information meeting 1069 (notes attached) and this was followed at 5:40 p.m. by Regulatory Information Meeting 428 (notes attached). We discussed the problem of an amendment to the Australian Agreement for Cooperation in which the ceiling quantity of U-235 would be increased to that necessary to fuel their 600 megawatt nuclear plant; this poses the problem of whether our enriching capacity is adequate without the CIP and, therefore, this will be further considered. We also approved the formation of a panel to review the current classification guides for information concerning the application of lasers in the weapons and CTR programs. We agreed that the panel would consist of J. Rosengren (LRL), J. Carson Mark (LASL), Gerald F. Tape, Marshall Rosenbluth, Fred Seitz, Robert F. Bacher, Charles Townes, Robert F. Sproull and James Fisk.

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 20
October 19, 1970

# INFORMATION MEETING 1069

3:10 p.m., Monday, October 19, 1970, Chairman's Conference Room, D. C.

1. September 15 Letter from Governors Mandel and Holton re Committee on Power Plants and the Environment

   The staff will prepare a reply. (OEA)

2. Chairman's Letter to Senator Pastore re Gofman/Tamplin Statements

3. October 14 Letter from Chairman Holifield, JCAE, to Commissioner Johnson re Gaseous Diffusion Technology

   A revised draft is approved for the Chairman's signature. (AGMIA-Rubin)

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4. Executive Session Items

   a. Oral Item -- Staff will discuss further

   b. General Manager's September 17 Memorandum re National Civil Service League Award -- Approved. (EAGM)

********

5. SECY-521 - Proposed Letter to SINB

Approved. (AGMO)

6. SECY-522 - Interim Response to JCAE re UK Information Exchange

Approved. (AGMIA-AGMMA)

7. Chairman's October 28 Luncheon with Washington Post Representatives

8. SECY-499 - Amendment of the Australian Agreement for Cooperation to Accommodate the Jervis Bay Project

Deferred. (AGMIA)

9. SECY-515 - Czech National: Proposed Visit to LASL

Approved. (AGMIA)

10. SECY-523 - UNC Request for Contract Exception Approval

The staff recommendation is approved. (RM)

11. SECY-524 - AEC Comments on Draft Bill to Limit Ocean Dumping

Approved. (GC)

12. SECY-507 - Patent Issued to John W. Gofman and Robert L. Chapman

Additional information is requested. (GC)

13. SECY-490 - Laser Classification Panel

A revised list of nominees for the panel is approved. The letter of invitation and panel charter will be reviewed with the Commissioners. (C)

14. SECY-526 - Proposed Announcement on Supplemental Budget Request

Discussion with Congressional staff is requested. (Congr.-PI-OC)

15. Mr. Hennessey's October 14, 1970, Memorandum re Lasers - Isotope Separation

Noted. (GC)

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16. SECY-516 - FY 1971 Budget: Production Activities

Noted. (P)

17. SECY-525 - AIF Proposal to Establish International Safeguards Subcommittee

Noted. (AGMIA)

18. SECY-514 - Lawrence Award Criteria

Noted for discussion with the GAC. (SECY)

19. SECY-347 - AEC Special Awards

Noted. (SECY)

20. SECY-411 - Presidential Library Project

Noted. Staff will check with Commissioner Ramey. (SECY)

W. B. McCool
Secretary of the Commission

5:40 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Bloch
Mr. Rubin
Mr. Schur
Mr. Kull
Mr. McCool
Mr. Friedman*
Mr. Kavanagh*
Mr. Erlewine*
Mr. Tesche*
Mr. McBride*
Mr. Quinn*
Mr. Faulkner*
Mr. Minsch*
Mr. Bauer*
Mr. Harris*
Mr. Baranowski*
Mr. Hobbs*
Mr. McKinney*
Mr. Hewlett*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
October 22, 1970

# REGULATORY INFORMATION MEETING 428

5:40 p.m., Monday, October 19, 1970, Chairman's Conference Room, D. C.

1. Mr. Rogers' Report on the California Hearing on Radiation Standards

2. Request by Chairman Sam Jensch re Palisades Hearing Documents

   The Director of Regulation reported the position staff is taking on production of certain inspection records in Palisades and Monticello. The Commission requested the rule on production of inspection reports be expedited. (ADRA-SECY)

W. B. McCool
Secretary of the Commission

5:50 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Price
Mr. Beck
Mr. Case
Mr. Rogers
Mr. Hanuaer
Mr. Henderson
Mr. Bibb
Mr. DiNunno
Mr. Schur
Mr. Rubin
Mr. McCool
Mr. Wells*

DISTRIBUTION:

Commissioners
Dir/Regulation
General Manager
General Counsel
Secretary

*Present for Item 1

REVISION II

There has been recent correspondence between Charlie Luce, Chairman of Consolidated Edison Co., and George Quinn, our Assistant General Manager for Development and Production, relative to the matter of the surcharge imposed by AEC on the electricity released from our diffusion plants and made available to Consolidated Edison by TVA and OVEC.

Suki and I went for a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returning to our starting point.

I watched on TV the Monday Night Football game between the Washington Redskins and the Oakland Raiders which the Raiders won 34-20.

Tuesday, October 20, 1970 - D.C.

I had lunch with Pete Quesada. I met him in his office (990 L'Enfant Plaza) and then went on to the restaurant in the neighboring building for lunch. He explained to me his recent illness that made it impossible for him to attend the opening Washington Senators baseball game at Kennedy Stadium, as we have been doing regularly in recent years. He said that he had just learned within the last three weeks from the Administrator at GSA that they are ready to pay more rent and, thus, it might be possible for the AEC to rent space in the West Building of L'Enfant Plaza, which will be finished next spring. He said that this is an area of 660,000 square feet of usable office space. I described our problem with respect to moving the entire operation from Germantown and the special problem of doing it all on such a time scale. With respect to the smaller amount of space required to replace our space in the H Street Office, we are inclined to think that the substitute space should be close to the White House as is the case in our present location. He pointed out that the subway will have a station at L'Enfant Plaza with two crossing lines. I told him that I would take this up with my fellow Commissioners.

Commissioner Larson dropped in to tell me about a conversation he just had with Ash O'Donnell of the Bechtel Corporation. Ash has learned, as a result of a trip of a Bechtel aide through Europe, that there is a movement afoot among European countries, with France reputedly as the leader, to put together a cooperative effort with Canada to build a gaseous diffusion plant for the enrichment of uranium in Canada where the cost of hydro power for the production of electricity is so cheap. Apparently Canadian Prime Minister Pierre Trudeau is going to approach President Nixon on this at some time in the not too distant future.

I called Alexis Johnson to tell him very confidentially about the conversation I just had with Commissioner Larson and that I thought the White House should be informed. He said he would pass it on to Henry Kissinger. Larson said that Nakasone also mentioned the possibility of a Japanese-Australian-Canadian consortium to build a uranium enrichment plant in Canada. he doesn't know though whether this is official Japanese thinking or merely on of Nakasone's ideas; he will see whether Sato raises this issue. I mentioned, as a closely related problem, that as we amend our agreements of cooperation, more and more we come to the point where we find that our commitments to supply enriched uranium are exceeding our capacity, unless we get the Cascade Improvement Program. The Joint Committee simply refuses to consider any more amendments; presently we are hung up on the Australian one. I suggested to Johnson that when he talks to Kissinger he also mention this problem, and he agreed to do so.

Carl Behrens, Editor of Science News, dropped in to see me to express his concern, and that of the senior staff, about the continuing uncertain status of

Science News and Science Service. I told him to be as patient as he can while we are going through this period of trying to find sufficient money to keep the enterprise going, and I asked him to pass this on to his senior colleagues in Science News. He made the suggestion that perhaps in seeking funds we should suggest that sufficient funds be included to enable Science News to serve as a training ground for science writers for newspapers.

I sent an interim response (copy attached) to Chet Holifield's letter of October 6 (copy attached on October 9) concerning the question of cooperation with the U.K. in the area of nuclear weapon design.

Attached is a copy of my biweekly status report to the White House on significant developments in the atomic energy program.

Suki and I want for a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returning to our starting point.

Wednesday, October 21, 1970 - D.C.

At 9:20 a.m. I presided over Information Meeting 1070 (notes attached). We agreed to approve the proposal for modification of the agreement for cooperation to provide the enrichment services required over the anticipated life of the 600 megawatt Jervis Bay nuclear power plant in Australia. We are bothered by the total supply problem. I will send another letter to OMB Director Mayo admonishing him of the need to move with the CIP. Rickover gave us a briefing on the methods his Division uses to determine contractors for the supply of naval reactor cores, described the capabilities of United Nuclear and B & W, and the need for additional suppliers.

In an adjudicatory session we reviewed the position of the Atomic Safety and Licensing Appeal Board on the matter of access to Regulatory staff inspection reports in the Monticello case and decided that the Appeal Board action directing the Regulatory staff to provide these inspection reports, with a few specific exceptions, should be supported. An appropriate Commission order will be issued today confirming this Commission decision.

At 11:20 a.m. I presided over Commission Meeting 2438 (action summary attached). We took up the extremely difficult question of the KMS proposal for the investigation of laser induced controlled thermonuclear reactions. After some additional discussion, based on our previous discussions, we voted 4-1, with Ramey dissenting and with indications that he will do everything he can to promote opposition to this in the JCAE, to proceed with an arrangement whereby KMS can proceed with this development. This will be under a no-fund contract and the work will be carried on under the cover of secrecy. An outline of a proposed press release is attached. We decided to drop the idea of having an independent panel, involving Ed David and his office, to evaluate the validity of Bruechner's claim to invention. I will answer Siegel's letter of October 13 (copy attached on October 16) suggesting a meeting between KMS management and the Commissioners sometime in November (copy attached on October 30). Next we discussed the equally difficult matter of possible AEC support for the Fermi breeder reactor. Commissioner Thompson made another plea for this, which was opposed by Shaw, with some emotion on both sides. Ramey is also against such a venture while Johnson and Larson have it still under consideration. I suggested that I sign a prepared response (copy attached) to Walker Cisler's letter of August 4 with the understanding that we are still investigating the possibility of more AEC financial participation than is implied in this letter. I also

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 0 1970

Honorable Chet Holifield
Chairman, Joint Committee
on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

The Commission is giving serious consideration to your thought-provoking letter of October 6, 1970, concerning the question of cooperation with the United Kingdom in the area of nuclear weapon design. We realize that the Joint Committee has always considered this a most important question. Let me assure you that the Commission also considers this to be very important.

Some of the points raised in your letter involve other agencies. The collaboration with France and the "Supreme National Interest" clause of the Kennedy/MacMillan Polaris Agreement involve matters in the area of responsibility of the Department of State. Some points on military matters, such as the changes in level of the U.K. defense effort and associated nuclear capability, involve the Department of Defense. There has also been a long-standing exchange through intelligence channels for the evaluation of foreign nuclear tests, which from the U.S. weapon design aspect has involved only that Restricted Data otherwise transmitted to the United Kingdom. A few of the JOWOGs, mainly in the diagnostic areas, used data on foreign tests from the Atomic Energy Detection System for basic experimental input; in turn, the output of these JOWOGs has supported the development of new intelligence collection techniques. The effect of reducing this intelligence cooperation, including the value of these JOWOGs, must be jointly assessed with the intelligence agencies involved.

As you note, broad political and long-range defense considerations argue strongly against any drastic action to curtail ongoing forms of cooperation. In this connection the Commission is now considering a request by the U.K. to buy space in AEC underground tests for effects evaluation.

The questions raised in the letter of October 6 are complex and involve several facets of U.S. policy. It may take some time to obtain and correlate the evaluations of agencies having significant responsibilities in the matter. We are proceeding promptly with this task so we can make our findings available to you as soon as possible.

Cordially,

Chairman

October 20, 1970

Honorable Peter W. Flanigan
Assistant to the President
The White House

Dear Pete:

Enclosed is the biweekly status report on significant developments in the atomic energy program for October 20, 1970.

Cordially,

(Signed) Glenn T. Seaborg

Glenn T. Seaborg

Enclosure

(Identical letter to Dr. Edward E. David, Jr., w/cy encl.)

cc: Cecil King
Julius Rubin
Helen Gearin

JLB/tvf

US DOE ARCHIVES
326 US ATOMIC ENERGY
RG COMMISSION
Collection G T Seaborg (326 74)
177
Biweekly Report to White House

1. To help alleviate possible shortages of electricity, AEC has adopted a policy for reducing power consumption at uranium enrichment plants. AEC would offer to release limited amounts of power to the supplying utilities for a minimum period of thirty days, provided that: (1) requirements for enriching services could still be met, (2) substantial curtailment of residential and commercial loads would otherwise probably result, (3) an alternative source is not available, and (4) cascade operating levels would not go below 400 MW at Oak Ridge, 600 MW at Paducah, and 400 MW at Portsmouth. The terms and conditions of such power reductions, which would be effected pursuant to requests by utilities to alleviate emergency shortages, would provide compensation to AEC in order that the unit costs of enrichment are not penalized.

2. Plans to build fourteen nuclear generating plants were announced by utilities during the first nine months of 1970. These plants would have a total capacity of 14,415 MWe. By comparison, in the first three quarters of 1969, four plants with a total of 4,005 MWe were announced. The status of nuclear plants is now seventeen operable (5,774 MWe), fifty-four under construction (43,844), and forty-seven planned (45,122), making a total of 118 plants and 94,740 MWe.

3. At Project Rulison, initial flaring of the natural gas for the purpose of calibrating instruments has been concluded. (Rulison is a Plowshare experiment that used a forty-kiloton nuclear explosive 8,400 feet underground on September 1969 to stimulate the recovery of natural gas from a low permeable rock formation.) Radioactivity measurements during this calibration flaring were lower than originally expected and at the closest local residences were 300 to 400 times less than appropriate guides. Preliminary data on gas quality and production rates are encouraging. The longer term production testing, to be accomplished over the next several months, will provide more conclusive data.

DOE ARCHIVES

4. Legislation consenting to the Western Interstate Nuclear Compact (S.1628) has passed Congress. The Compact establishes a framework for cooperation in nuclear and related fields by the thirteen member states of the Western Governors' Conference (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming). The Western Interstate Nuclear Board, composed of one representative from each state, is the principal agent for promoting such cooperation.

5. At the request of the Colorado government, AEC will provide technical assistance in evaluating the indoor radon problem in that State. A steering group, consisting of members from the AEC, U.S. Public Health Service, and the Colorado Health Department, has been created for this purpose. The problem - which results from practices that have never been within AEC's jurisdiction to regulate - was caused by houses having been constructed on land filled in part with waste materials from uranium processing mills.

6. The Vermont Public Service Board rejected opposition by conservation groups to certification of a bond issue to finance the Yankee nuclear power plant, which is now being built. The Board approved the application by the Vermont Nuclear Power Corporation to issue the bonds and did not set radiation limits or require that the utility construct a "zero-release" plant. At the same time, the Public Service Board pointed out that both the State's Board of Health and its Water Resources Board are considering the adoption of radiation standards for Vermont that would be more stringent than those required by the Federal government.

7. In California, the State Legislature's Joint Committee on Atomic Development and Space has issued a report on nuclear energy. The report takes a fairly positive stand in favor of nuclear power, while asserting the Committee's intent to maintain legislative awareness of nuclear problems.

8. Congressman Holifield said the Joint Committee on Atomic Energy intends to hold hearings soon on whether states should regulate in the area of radiation protection standards. In a statement on October 13 to the California State Legislature's Joint Committee on Atomic Development and Space, considering whether that State should legislate its own standards, the Chairman of the Congressional Joint Committee on Atomic Energy said the hearings will comprise a detailed examination of the subject, probably as part of a review of some aspects of the AEC licensing system. Also in Congress, Senator Muskie announced on October 12 that the Air and Water Pollution Subcommittee of the Senate Committee on Public Works plans to investigate the handling of radioactive waste at AEC's weapons plant at Rocky Flats, Colorado. He has asked the staff of the Subcommittee, of which he is Chairman, to make a study in preparation for hearings next year.

DOE ARCHIVES

9. The Pennsylvania State Senate panel created to investigate the environmental effects of nuclear power plants has scheduled another session of hearings on October 21. According to press reports, some anti-nuclear witnesses, including representatives of coal interests, are expected to testify. The panel has already heard pro and con testimony by scientists, engineers, and state officials.

10. The Washington Star's senior editorial staff was briefed on atomic energy programs by Chairman Seaborg on October 15. AEC has issued a new publication that lists all current environmental research and development sponsored by the AEC; more than 1,000 projects at an estimated cost of $71.2 million are listed for FY 1971. Newsweek still intends to run an article on atomic energy, but it will not be a cover story as previously planned.

11. Some significant nuclear testing events were announced by AEC last week: (1) the first announced underground test was conducted at the Nevada Test Site since the end of the 112-day strike; (2) seismic signals originating from the Soviet Union's test area in Novaya Zemlya indicated an underground explosion of about six megatons, which would be the largest underground test ever conducted; and (3) Communist China set off a three megaton explosion in the atmosphere at its Lop Nor test area.

DOE ARCHIVES

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 20
October 21, 1970

INFORMATION MEETING 1070

9:20 a.m., Wednesday, October 21, 1970, Chairman's Conference Room, D. C.

1. AIF Request to the Chairman to Meet with the Commission to Discuss "AEC Environmental Statements"

   Noted. (SECY)

2. Statement by Dr. Rabi at the Fourth Geneva Conference -- Dr. Sigvard Eklund's Proposal to the Chairman

   Noted. (AGMIA-Rubin)

3. SECY-530 - CTR Lasers: Fourth European Conference on Plasma

   The Chairman suggested review by the Commissioners.

4. Chairman's Discussion with Mr. Quesada re D.C. Office Space

   Consideration is suggested and the Chairman will call GSA Administrator Kunzig. (Rubin-SECY)

5. Status of NSSM 101

   Commissioners' comments on the current draft are to be addressed to staff by close of business today. (AGM)

6. Briefing by Admiral Rickover re Procurement of Naval Reactor Cores

7. SECY-535 - Proposed Contract for Submarine Reactor Cores

   Approved. (DC)

8. SECY-528 - Press Request for 1963 Inspection Report

   Staff will proceed as directed. (PI-INS-GC)

9. Mr. Harris' Report on Statement by Dr. Sternglass

10. SECY-531 - Industry Participation in Uranium Enrichment

    Noted. (AGMP)

11. SECY-499 - Amendment of the Australian Agreement for Cooperation to Accommodate the Jervis Bay Project

    Approved. A letter to the OMB is requested. (AGMIA)

12. SECY-534 - Study of Nuclear Explosion Services Fielding System

    Noted. (PNE)

13. SECY-537 - Carrying Prohibited Articles into Federal Buildings

    Noted with a request. (S)

14. Pending Contractual Matters Report No. 379

    Noted with a request. (EAGM)

W. B. McCool
Secretary of the Commission

10:55 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Bloch
Mr. Brown
Mr. Schur
Mr. Rubin
Mr. Kull
Mr. McCool
Adm. Rickover*
Mr. Clark*
Mr. Greer*
Mr. Marshall*
Mr. Miazga*
Mr. Harris*
Mr. Reichardt*
Mr. Smith*
Mr. Friedman*
Mr. Hoyle*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

October 22, 1970
Approved EJB
Date

E. J. Bloch, Acting General Manager

ACTION SUMMARY OF MEETING 2438, WEDNESDAY, OCTOBER 21, 1970, 11:20 A.M., ROOM 1115, D. C. OFFICE

SECY:RDL

Commission Business

1. SECY-519 - KMS: Independent Review Panel (See also SECY-248, SECY-249, SECY-108, SECY-2, AEC 532/100, AEC 532/99, Commissioner Ramey's June 9 Memorandum, KMS September 14 Letter, Mr. Hennessey's September 15 Memorandum, and KMS October 13 Letter

The Commission:

a. Approved, with Commissioner Ramey dissenting, a general policy which would permit work by private entities, on a no-fund contract basis, in the field covered by the KMS proposal.
b. Approved, with Commissioner Ramey dissenting, negotiation of a no-fund contract with KMS, after the Commission has had an opportunity to review the contract in detail along the lines of the contract suggestion contained in SECY-248;
c. Agreed an independent panel of non-AEC experts would not be appointed to ascertain the origin of the ideas described in the KMS-Brueckner work;
d. Requested staff prepare a reply to the JCAE;
e. Requested a revised public announcement of the AEC agreement to contract with KMS on a no-fund basis, similar to that contained in SECY-248, to be timed for release when KMS is notified of the decision to offer a no-fund contract; and
f. Requested staff prepare a response to Mr. Siegel's request for an early meeting with the Commission.

(GC)

2. Director of Intelligence's Oral Report on Recent Chinese and Russian Nuclear Tests

3. SECY-511 - Reply to PRDC Letter on Fermi Reactor

The Commission:

a. Approved the proposed letter to the President, PRDC;
b. Noted one or more Commissioners will visit the Fermi Reactor; and
c. Noted the Fermi Reactor will be evaluated further in the context of the entire LMFBR program.

4. SECY-455 - Downgrading Classification of Production and Allocation Rates of Certain SNM

Approved. (C)

Original signed
W. B. McCool

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

UNCL. BY DOE
NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 1 1970

Mr. Walker L. Cisler, President
Power Reactor Development Company
1911 First Street
Detroit, Michigan 48226

Dear Mr. Cisler:

We are most appreciative of your invitation of August 4, 1970 to participate in the future utilization of the Fermi reactor for test irradiations. The design, construction and operation of Fermi represents a pioneering effort by you and others involved in this project. Without question, it has contributed to the advancement of fast breeder technology, and it is our hope that it will continue to do so in the forthcoming years.

In our letter of October 1, 1970, we informed you of the Commission's active consideration of the offer to participate in the utilization of the Fermi reactor. As you will recall, on the date of the Fermi fuel meltdown incident four years ago, we had been planning to utilize the Fermi reactor for irradiation testing. A memorandum of understanding had been agreed to and plans were being executed to place various test assemblies in the Fermi reactor. Since that date, we have been successful in upgrading the EBR-II operation significantly, and it has achieved progressively higher plant factors, thus providing increased capability for our fast neutron irradiation test program, within the funding that has been available for that purpose. In addition, in this same period of time, important progress has been made in the FFTF Program and we are looking forward to its use to augment the EBR-II capability.

The foregoing considerations, coupled with the imposed severe budgetary circumstances, limit our ability to respond to your invitation in a substantive way at this time. Nevertheless, for a number of reasons, we do not wish to rule out a possible arrangement for future irradiation experiments in Fermi, assuming the reactor can be made available for such experiments. We are prepared to discuss this possibility further including the contractual arrangement for such use in the event that our future budgetary situation and other circumstances may permit. Such discussions would take into account your suggestions regarding waiver of fuel use and burnup charges, as well as the terms and conditions for any new arrangement and the justification therefor. Mr. Shaw and his staff would be glad to meet with your representatives at their convenience to pursue these matters.

All of us involved in the high priority fast breeder reactor program are most deeply interested in the continued and successful operation of the Fermi reactor. We hope that you will continue to keep us informed of your plans and progress. If you desire to explore any further aspects of this matter with us, please let us know.

Sincerely,

Glenn T. Seaborg

Chairman

suggested that either Commissioner Johnson or Larson visit the Fermi reactor, as Commissioner Thompson has already done, in order to get a first hand view of the situation.

We learned from Reichardt that the Soviet test of October 14 will probably present a problem with regard to the Limited Test Ban Treaty.

I had lunch at the White House Mess with Ed David. We discussed a number of items involving relations between his office and my office. First, I passed on to him the invitation of AEC staff to speak at the Germantown staff seminar, and he said that he would do so.

I told him that the AEC has decided to go ahead, with Ramey dissenting, on the KMS proposal. I also described to him the AEC decision to bring industry into the gas centrifuge program for the enrichment of uranium (again with Ramey dissenting). In both cases I mentioned the implications this has for opposition for the JCAE. I also brought him up to date on the AEC position, concurred in by the State Department and the White House, through Flanigan's and Kissinger's operations, to offer to share gaseous diffusion technology for the enrichment of uranium with Euratom countries, England, and other friendly countries; I mentioned Holifield's opposition to this.

I described our budget pinch for FY 1972 if the OMB ceiling is adhered to, saying that among other decreases in research activities there will be a 3 percent decrease in the budget for AEC support of university research, amounting to about a 10 percent cut in the program. I said this corresponds to dropping about 400 graduate student slots and substantial cutting of our national laboratory personnel.

We discussed the role that AEC national laboratories might play as national environmental laboratories, and David expressed great enthusiasm for this, saying that the AEC national laboratories are by far the best Federal laboratories. I said that I would have someone get in touch with him in order to discuss this further.

I also emphasized the great importance that I place on the development of the breeder reactor, and we agreed that someone from AEC would come over and brief him on this. I emphasized the approaching public relations problems in connection with the large underground test at Amchitka and the need to prepare for this.

After lunch we went to the Executive Office Building (Room 208) for a meeting of the Federal Council for Science and Technology from 2:10 until 3:20 p.m.

Present, besides David and I, were Dr. Ned D. Bayley (Agriculture), Lewis M. Branscomb (NBS), Donald Dunlop (Interior), Johnny Foster (DOD), George Lowe (NASA), Bill McElroy (NSF), Herman Pollack (State), Robert N. Parker (Transportation), Jesse L. Steinfeld (HEW), Dave Beckler, Bill Gouse and Eric Ward (OST).

David said the purpose of the meeting was to discuss the future operations of the Federal Council for Science and Technology and ways of increasing its effectiveness. It was for this reason that this meeting was limited to the principals. He began by describing his relations with the various offices in the White House, indicating he thought they were pretty good.

David indicated that he thought it might be worthwhile for the FCST to make some studies of important areas and suggested, as an example, the area of energy and

national policy related to energy. He said that if the President asked him if we have a national energy policy, he would have to say that we do not. He asked members of the Council if they agreed that this was a good area to study, and I immediately said I felt that it was. I indicated that there should be good coordination with Dave Freeman and his office (OST). McElroy indicated that he didn't think the function of the Council should be to try to coordinate the various agencies' budgets--he thought rather that the Council should make assessments of situations and, in general, try to strengthen the hand of the Science Adviser in connection with important issues that might be brought before the President, scientists, and the general public.

Foster said he thought another important area in which a paper might be prepared is in connection with the trend in the United States toward decreasing the health and vigor of science and technology. In the course of the discussion of this I called attention to the increasing anti-science, anti-technology, and even anti-intellectual atmosphere in the U.S. and it was agreed that this would be part of this study picture. Foster agreed to prepare a sort of draft of what might turn out to be a letter to the President on this subject, but which would leave some paragraphs for others to fill in--he suggested that this could be done in six pages. There was general agreement, but with some questioning as to the exact nature of the project, that this should be done, and in the course of this David asked Branscomb to get together with Tribus to prepare their variation of such a letter, also about six pages long.

David then came back to the energy study undertaking and suggested that I and Don Dunlop take responsibility for this, which we agreed to do.

David then went on to a third area and that is the problem of getting public education on the issues of science and suggested that McElroy get something together on this. David pointed out that the President, members of the Cabinet and members of Congress do not get regular communications on science and this is an area where improvement might be made. McElroy, in agreeing to undertake this study, said that he had already been giving it some thought and that he is investigating the possibility of creating a sort of industrial science forum similar to the Atomic Industrial Forum.

David then went on to the fourth area, which he identified as a general assessment of international relations in science and suggested that Pollack undertake the preparation of material on this with the help of Lowe.

David then suggested that the members of the Council try to identify other issues, of which the energy study is an example, that might be the subjects of studies by the Council.

McElroy made the suggestion that we need better means of informing Cabinet officers on various scientific matters, and I suggested that perhaps this could be done in a meeting with the Cabinet, a suggestion that found general agreement.

David suggested, as a final thought, that he might bring people in from industry to hear their descriptions on new technical things and their thoughts on what the Federal Government should do. This idea was expanded to include these representatives describing important studies that have been made in industry of science policy and other science matters.

I sent a letter to Laurance Rockefeller (copy attached) discussing our forthcoming meeting in New York City.

Helen and I attended the parents visiting session of the Home and School Association at Woodrow Wilson High School. After a general meeting in the

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 1 1970

Mr. Laurance S. Rockefeller
Chairman and Director of
Rockefeller Bros., Inc.
No. 30
Rockefeller Plaza
New York, New York 10000

Dear Laurance:

We are very pleased that you will be able to meet with us on October 29 at 10:00 am in New York. We are looking forward to the opportunity to acquaint you with some of the things we are doing in developing the peaceful uses of nuclear energy as well as some of the problems we face in explaining these developments to citizens who are increasingly disturbed by evidences of a degrading environment.

One important aspect of this problem is the relationship between energy demands and environmental concerns. As you know, electric power usage in this country is predicted to increase rapidly in the next few decades and the growth of nuclear power is expected to proceed at an even more rapid rate. There are substantial indications that many of our citizens have only begun to appreciate the implications of this growth and to develop the perspectives needed to properly envision their social and other consequences. The development of such perspective is of course essential to the formulation of policies, plans, and programs which will govern future growth of the nation and the power industry.

We are much interested in benefiting from your experience as Chairman of the Citizens Advisory Committee on Environmental Quality. We have become increasingly aware of the need for an informed public in considering the environmental aspects of power generation and would like to hear your ideas on how to provide more effective channels of communication between the government and its citizens.

We look forward to seeing you next Thursday.

Cordially,

Chairman

auditorium, classes were simulated in the regular classrooms and, thus, we visited Eric's classrooms according to his schedule. We visited his home room supervised by Miss Chiappinelli; the American Civilization course, a team effort by Mrs. Isaacs (English) and Mrs. Miner (history); his mathematics class taught by Charles Toxey (advanced algebra, trigonometry, analytic geometry as preparation for a high school course in calculus next year); his physics class, with Mr. W. Allen Barwick, Jr. (who demonstrated stroboscopes and various electronic gear); and his French class taught by Mrs. Deutch.

Thursday, October 22, 1970 - D.C.

At 9 a.m. I met with Bill Bevan (Executive Officer, AAAS) to discuss further the actions of the AAAS Board concerning Science Service at their meeting last Sunday. Bevan said that although there was a negative vote with respect to the merger of Science Service and AAAS, a resolution was adopted unanimously which was designed to be helpful to Science Service. This offered to furnish management consulting services to Science Service paid for by AAAS and would consist of a few management consultants assigned to work with Science Service to try to devise ways of economizing and making the operation self-sustaining. The offer from AAAS also implied that they might give Science Service a loan or provide funds through a second mortgage on the Science Service buildings. The suggestion was also made that it might be possible to sell the Science Service buildings to a buyer who would then lease them to Science Service. I said that I would discuss this with the Science Service Board of Trustees at the meeting scheduled for November 7, after which we would give a response to this proposal from AAAS.

I had lunch with Julie Rubin, Justin Bloom, Stan Schneider, George Sakalosky, and Syd Gaarder at the World Buttery. We discussed various items of business involving the Chairman's Office.

I called Rod Kreger (Assistant Administrator of GSA) and told him that we have been talking to GSA over a number of years about the possibility of getting different space for our downtown operation, but we were always blocked by the fact that GSA wouldn't pay for the kind of space we wanted. I said I have heard that GSA is now willing to pay more and wondered if that is true. He said the price has gone up some, although it is a little difficult to compare prices because in some instances more services are included with the space. Kreger did concede that the price of space is going up every year. He asked what we were thinking about now. I said we are thinking about a more congenial place downtown because we have a very antiquate situation here and somewhat of a morale problem. We have heard that there are places available in the downtown area. He said he supposed they have a record of the space we would need, and I said it would be 70,000 square feet to replace our downtown operation. He said he would talk to their space people to see what they could come up with and that he would be back in touch with me.

At 4:30 p.m. I went to the State Department (office of Assistant Secretary Martin J. Hillenbrand) to participate in the signing ceremony for the Amendment to the Agreement for Cooperation in the Civil Uses of Atomic Energy with Sweden. Those signing included Ambassador Hubert de Besche for Sweden, Martin J. Hillenbrand (Assistant Secretary of State for European Affairs) and I. Others present were John P. Trevithick (Acting Director, Office of Atomic Energy Affairs, Bureau of the International Scientific and Tecnological Affairs, State Department), Charles I. Bevans (Legal Adviser/Treaty Affairs, DOS), George M. Ingram (Country Director) and William Bodde, Jr. (Swedish Desk) of the State Department, Anders Olander (Second Secretary, Swedish Embassy) and Bill Yeomans (DIA).

I sent a letter to Chet Holifield (copy attached) enclosing a copy of the report that we furnished to the Council on Environmental Quality as required by the National Environmental Policy Act of 1969 (copy attached).

Eric, Suki and I took a hike in Rock Creek Park, commencing at Oregon and Nebraska Avenues, going along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returning to our starting point.

Friday, October 23, 1970 - Washington - Oak Ridge, Tennessee - Washington

Leaving my house at 6:30 a.m. I rode to Andrews Air Force Base with Julie Rubin, arriving at 7:15 a.m. Cap Weinberger (Deputy Director, Office of Management and Budget) was already in the plane and Clarence Larson and Don Rice (OMB) were just arriving. We took off on schedule in our Jetstar No. 12489 with Major Herr as the pilot, Major Julian as the co-pilot, Sergeant Marchitto as the crew chief and Sergeant Porter as the steward. Major Herr alerted us to possible ground fog at Knoxville before our departure and upon arriving in the Knoxville area at 8:12 a.m., we had to circle for almost an hour before the required visibility conditions existed to permit landing.

We were met at the airport by Sam Sapirie and John Abbadessa and were driven immediately to Oak Ridge in one of the stretchout sedans. Incidentally, the driver was Dave Lee, who formerly was one of the Washington couriers that drove for the Commissioners.

In view of our late arrival, it was agreed that the attached schedule would be compressed by reducing each stop by about 15 minutes. Our first visit was to the K-33 building where we were met by Roger Hibbs (President of Union Carbide Nuclear) and escorted to the control room. A brief discussion with use of slides was presented by Paul Vanstrum (Vice President, Production, UCN). He showed some of the capacity versus requirements picture and the part the CIP/CUP program would play in increasing the capacity. In attendance during this briefing were R. G. Jordan (Plant Superintendent, ORGDP--K-25, UCN) and Al Weinberg. A number of pictures were taken by an official plant photographer.

We inspected some of the basic equipment in a diffusion plant cell and the key features were observed through a window in one of the cells. K. W. Sommerfeld (Superintendent, Operations Division, ORGDP--K-25, UCN) acted as our guide.

Our next stop was at the gas centrifuge development laboratory where W. J. (Bill) Wilcox, Jr. (Superintendent, Development Projects, ORGDP--K-25, UCN) explained the historical progress in this technology and pointed out some of the various size centrifuge bowls used in the past and projected as we toured the laboratory. Some slides and charts were also presented, demonstrating the economic potential of the centrifuge and the required funding level to obtain the necessary information required to permit a sound decision for future enrichment expansion that is required by about 1975.

Our next stop was at Y-12, where Roger Hibbs conducted the group on a brief tour of an exhibit room where the major nuclear warhead components of the Spartan, Mark 61 and W68 weapons were displayed and described. Accompanying the group at this location were Jack Case, R. M. Smith and Floyd Culler. After leaving the exhibit room the group observed some of the arc plating work and computer taped machine tools in operation.

We departed Y-12 for the ORNL area and had a box lunch enroute. Al Weinberg sat with me and Cap Weinberger on the second row of seats in the stretchout car and

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 2 2 1970

Honorable Chet Holifield
Chairman, Joint Committee on
Atomic Energy
Congress of the United States

Dear Mr. Holifield:

This is to advise you that the Atomic Energy Commission has furnished to the Council on Environmental Quality the report required by Section 103 of the National Environmental Policy Act of 1969. Section 103 requires all agencies of the Federal Government to review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of the National Environmental Policy Act and to propose to the President such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in that Act.

In our report, two copies of which are enclosed, we stated that we see no need for additional legislative authorization at this time.

Cordially,

Glenn T. Seaborg

Chairman

Enclosures:
Two cys. of report

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

OCT 13 1970

Mr. Russell E. Train
Chairman
Council on Environmental Quality
1016 16th Street, N.W.
Washington, D. C. 20036

Dear Mr. Train:

The Atomic Energy Commission is pleased to report that it has conducted the review provided for in Section 103 of the National Environmental Policy Act of 1969, Section 2(d) of Executive Order 11514, and paragraph 13 of the Council's Interim Guidelines regarding statements on proposed Federal actions affecting the environment, and that it sees no need for additional legislative authorization at this time. This confirms advice given by telephone on October 2, 1970, by Mr. Howard Shapar, our Assistant General Counsel, Licensing and Regulation, to Mr. Timothy Atkeson, your General Counsel.

As you know, the Commission is presently conducting a rule making proceeding for the revision of Appendix D to Part 50 (10 CFR) of its regulations. This Appendix D, when finally adopted, will set out the manner in which the Commission proposes to exercise its new responsibilities under the National Environmental Policy Act in its regulatory activities. Copies of the proposed policy statement, as well as copies of an earlier policy statement on the same subject, have previously been furnished to the Council. We have received a number of public comments on our proposed policy statement, which are in the process of being analyzed. We will, of course, also send you copies of any further documents that are proposed for issuance at the conclusion of the pending rule making proceeding.

Sincerely,

/s/ Glenn T. Seaborg

Chairman

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AGENDA FOR VISIT OF: Caspar W. Weinberger
Donald B. Rice, Jr.
Glenn T. Seaborg
Clarence E. Larson
Julius Rubin
John P. Abbadessa

Friday, October 23, 1970

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| | | |
|---|---|---|
| 8:15 a.m. | Arrive Knoxville Airport<br>Pickup at Airport | <br>Sam Sapirie, Manager<br>Oak Ridge Operations<br>John Abbadessa<br>Controller |
| 9:15 a.m. - 10:00 a.m. | Enrichment Enterprise | P. R. Vanstrum |
| | Discussion of Gaseous Diffusion -<br>View K-33 Cell and Control Room | K. W. Sommerfeld |
| 10:00 a.m. | Depart for Lab "J" | |
| 10:15 a.m. -11:00 a.m. | Centrifuge Program | W. J. Wilcox, Jr. |
| 11:00 a.m. | Depart for Y-12 | |
| 11:20 a.m. - 12:15 p.m. | Weapons Program | R. F. Hibbs |
| | Alpha-5 Operations<br>Assembly<br>Weapons | J. M. Case |
| 12:15 p.m. | Depart for ORNL - Box Lunch enroute | |
| 12:30 p.m. - 1:30 p.m. | ORNL | A. M. Weinberg |
| | TRU )<br>HFIR) To extent time permits<br>MSRE)<br>ORIC) | |
| 1:30 p.m. | Depart for Airport | |
| 2:30 p.m. | Depart Airport for Washington | |

used the time to brief Cap on some ORNL activities. We made a short stop at the MSRE where Al described the four basic functions of ORNL (production, applications, control and safety, and basic research). Support for the MSRE in

Trip to Oak Ridge, Tennessee; October 23, 1970.
L to R: Alvin Weinberg, Seaborg, Donald Rice, Caspar Weinberger, Sam Sapirie.

the breeder program was particularly identified. A brief look at a model and flow diagrm for the MSRE was had by the group, with an explanation by Paul Haubenreich. Next we made a short stop at the HFIR and a dramatic display of Cherenkov radiation was observed when the lights were turned out over the main pool where several spent cores were stored. A final stop was made at the accelerator facility where the significance of basic research in heavy elements was briefly reviewed by R. S. Livingston (Director Electronuclear Division, ORNL) and Bob Silva.

The group departed ORNL for the airport almost exactly on schedule and left Knoxville shortly before 3 p.m., arriving back at Andrews Air Force Base on schedule at 4 p.m.

I went to the D.C. office for about an hour.

Eric, Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Saturday, October 24, 1970 - D.C.

Eric took his PSAT test this morning, which is the practice SAT.

I worked in the office until noon. I received a memorandum from John Ehrlichman, addressed to Heads of Executive Departments and Agencies (copy attached), advising that the President has approved the recommendations of the Domestic Council subcommittee on energy and including a statement by Paul McCracken and George Lincoln with a detailed list of the specific actions required by the Executive Branch (copy attached).

I then attended the fair given by the Home and School Association at Murch School. Helen, Brendan Canary, who is spending the weekend with us, and Dianne were also there. We had box lunches. I met the principal, Miss Miriam Kaufman, a number of teachers, and parents of Murch students.

Later in the afternoon I went to the University of Maryland where I gave a talk in the Chemistry Building auditorium at the first formal meeting of the newly organized Maryland, Northern Virginia and Washington, D.C. Chemistry Teachers Association. I spoke at the invitation of Mrs. Jeanne Vaughn, Chairman of the Formation Committee, and was introduced by Glen Gordon. I talked on the "Present Status and Future Prospects for the Transuranium Elements," including a few words on the practical applications. The talk was illustrated with slides and followed by questions. It was quite well attended. After the talk I met many of the people who had been in the audience, including Miss Woodson who was Eric's chemistry teacher at Wilson High School last year and is spending a year at the University of Maryland as an associate in order to upgrade her knowledge of chemistry.

I played nine holes of golf with Eric at the Chevy Chase Club. He shot 67, I 55.

I worked on what should be the final draft of the manuscript for the book, "Man and Atom," which I am writing with Bill Corliss for publication by the Dutton Co.

Sunday, October 25, 1970

Helen, Eric and I went to Kennedy Stadium to see the football game between the Washington Redskins and the Cincinnati Bengals, which the Redskins won, 20-0.

Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going along the White Horse Trail to Cross Trail 2, back on the Black Horse Trail via Cross Trails 3 and 4, past the police headquarters, and back to our starting point.

In the morning and in the evening I worked on the manuscript for our book, "Man and Atom."

Monday, October 26, 1970

At 9:50 a.m. I presided over Information Meeting 1071 (notes attached). We approved a change in the U.S. negotiating position concerning IAEA safeguards which, in recognition of the desires of a large number of IAEA developing countries, would allow the financing of safeguards to be at less than a pro rata amount by such countries. We also learned from Abe Friedman that ACDA is now planning to keep AEC more informed concerning the SALT talks than has been the case in the past; this doesn't mean that there has been any relaxation in the White House guidance that has excluded AEC and other agencies up until now, but represents more a decision on the part of ACDA to expand the involvement of AEC and these other agencies.



I then presided at 11:25 a.m. over Commission Meeting 2439 (action summary attached). We discussed the increasingly difficult problem of the handling,

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THE WHITE HOUSE

WASHINGTON

October 22, 1970

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

The President has approved the recommendations of the Domestic Council subcommittee on energy.

Enclosed is a copy of a statement by Chairman McCracken and General Lincoln which contains a detailed list of the specific actions required by the Executive Branch. Department and Agency Heads are requested to take appropriate action to implement the decisions reflected in the statement.

In summary, the decision requires the following:

1. Conserve fuels in federal installations (Action: All Departments and Agencies).

2. Modify requirements of the oil import program (Primary Action: Department of the Interior).

3. Increase the availability of railroad cars for moving coal (Action: Interstate Commerce Commission).

4. Minimize interruptions in electric service (Primary Action: Federal Power Commission).

5. Issue guidance to consumers on conserving the use of energy (Action: Special Assistant to the President for Consumer Affairs).

6. Participate in an interagency board to identify fuel problems and coordinate remedial action (Action: Office of Emergency Preparedness, Department of the Interior, Department of Commerce, Council on Environmental Quality, Interstate Commerce Commission, Federal Power Commission).

John D. Ehrlichman
Assistant to the President for
Domestic Affairs

Enclosure

UNCL. BY DOE
NOV 86

FOR RELEASE AT 10:00 A.M.
TUESDAY, SEPTEMBER 29, 1970

Statement by

Paul W. McCracken, Chairman
Council of Economic Advisers
and
General George A. Lincoln, Director
Office of Emergency Preparedness

on

# THE FUEL SITUATION FOR THE WINTER OF 1970-71

Last May, in anticipation of the tight electric power supply in some regions of the United States this summer, the Interagency Power and Energy Committee convened by the Office of Emergency Preparedness issued a report which identified the problem areas and suggested measures which the electric utility industry, consumers, and the appropriate agencies of the state and federal government should take to avoid a breakdown in service. The power supply problems in the East occurred as anticipated but the contingency planning -- primarily by the electric power industry itself, but assisted by federal actions -- enabled the general public to continue to be served. We have had difficulties this summer, and as recently as last week, but considering the magnitude of the problem and the potential for truly disastrous consequences, the contingency planning has worked well.

We have continued to study the energy supply situation and find that as winter approaches the nation faces a potential shortage in the supplies of natural gas, residual fuel oil and bituminous coal. The potential shortage appears to be more serious in some regions of the country than in others, but no section is completely immune from concern.

The prospect of an energy shortage arises for many reasons. Demand for energy continues to grow more rapidly than in previous years. And the demand for clean fuels to meet air pollution controls has placed extraordinary demands on natural gas and low sulfur oil and coal. Some coal stockpiles are lower than normal and some electric utilities are unable to build up their inventories, in part because of railroad transport deficiencies. A sharp rise in the worldwide demand for residual fuel oil, especially low sulfur oil, and a shortage of oil tankers caused in part by production cutbacks in Libya and interruptions of an oil pipeline in Syria, have contributed to the tightness in U. S. fuel oil supply. Increased demand and inadequate exploration and development for natural gas are contributing to its scarcity. Nuclear power plants under construction as a source of electric power are behind schedule and this results in greater demands for fossil fuels.

To avert the threatened shortages and minimize their impact will require the combined efforts of all those involved in the production, distribution and consumption of fuels -- which means industry, labor,

consumers, and State and local governments, as well as the Federal Government. Basically, we rely upon the proven adaptability of the American economic system which must respond to the present and prospective demands for fuel by converting to the production of what is most needed and its delivery where it is most needed. The increased national requirements, and the changes in the price structure that arise from them, provide a powerful incentive to this adjustment of supply, which is in fact already taking place. We call upon the petroleum industry, the coal industry, the railroad industry and others, in the light of the national need, to increase the supply of fuels, as is made feasible by economic factors. We also ask the cooperation of the coal miners, the railroad workers and other fuel and transportation workers to help avert a fuel shortage.

While primary responsibility for fuel supply rests with the industry under our private enterprise system, responsible government should take effective action to avert a shortage of so critical a resource.

It must be recognized that solutions in which the government can play the greatest role are more long-term in nature. Those possibilities are under study by the Energy Subcommittee of the Domestic Council. For the moment we have considered what government can effectively do now this fall -- to facilitate supply.

We have concluded that certain actions by the Federal Government can help both to assure the adequacy of supplies and thereby to moderate the increase of prices. We are, therefore, taking the following actions which we believe are necessary to give reasonable assurance of the adequacy of fuel supplies this winter. In view of numerous uncertainties, no one can now be sure that these steps will be adequate. We will keep the situation under continuous observation to be prepared with further measures if they appear to be necessary.

(1) Action is being taken to:

a. Continue the importation through calendar year 1971 into the East Coast (District I) of an average of 40,000 barrels per day of No. 2 fuel oil with up to 80,000 barrels per day concentrated in the first quarter heating season.

b. Exempt natural gas liquids from the Canadian crude oil quota limitations. (These natural gas liquids are associated with the production of natural gas which we are importing from Canada.)

c. Permit the importation of liquified petroleum gas from the Western Hemisphere.

d. Permit topping of imported crude oil used for fuel into District I (East Coast) if all of the topping is used for fuel.

e. Permit topping of crude oil imported for fuel overland from Canada and the use of such topping product for fuel or for reexport to Canada.

f. Relax restrictions on viscosity requirements of crude oil used for burning.

g. Permit transportation of oil from Canada by waterway.

(It should be noted that, for all practical purposes there are currently no restrictions on importation of residual oil into District I (the East Coast) or on importation of crude oil for burning into District I and overland from Canada.)

(2) In order to increase the availability of railroad cars for moving coal, the Interstate Commerce Commission has doubled the demurrage charge for all general service and coal hopper cars standing idle in loading or unloading zones. In addition the ICC will take the following actions as conditions require:

a. Divert the use of general service hopper cars from alternative loads to the movement of coal; and

b. Require the return of all hopper cars within a specified period of time.

(3) We will continue to work closely with the electric power industry through the Federal Power Commission along the lines of our program for

the summer to assure that interruptions in electric service are minimized. We urge the State and local governments to meet with the utilities in their respective service areas to review contingency plans for meeting loads this winter in those areas of tight supply identified.

(4) We are continuing to urge the consuming public to practice conservation in the use of energy. The Special Assistant to the President for Consumer Affairs will issue suggestions to the public for doing this. Federal agencies will set an example by instituting programs to conserve fuels in federal installations.

(5) We are establishing a Joint Board composed of the Director of the Office of Emergency Preparedness (Chairman), the Secretaries of Interior and Commerce, and the Chairmen of the Council of Economic Advisers, the Council on Environmental Quality, the Interstate Commerce Commission and the Federal Power Commission, to identify emergency problems in fuel supply and fuel transport and coordinate prompt and appropriate remedial action by the responsible federal agencies.

These steps are in addition to a number of measures already taken, or in the process of being prepared for implementation, to use the transportation and power systems more efficiently and respond to local shortages.

Appropriate federal agencies will be meeting with State and local authories to discuss this winter's problems in detail. We also expect to maintain close contact with the energy industry in order to assist in averting shortages.

We are taking the actions announced today to avert serious shortages. We believe that with the cooperation and initiative of industry, labor, and consumers an energy crisis can be averted. There are certain other measures we have considered. And, if the measures taken today together with the initiatives of industry fail to avert a crisis, we shall not hesitate to resort to any additional actions necessary.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
October 26, 1970

# INFORMATION MEETING 1071

9:50 a.m., Monday, October 26, 1970, Chairman's Conference Room, D. C.

1. SECY-559 - Transport of Radioactive Materials by Tri-State Transit Company and October 20 Letter from George F. Boyd of Tri-State

   Staff will proceed as discussed. (SMM-NMS)

2. Nominees for the Advisory Committee on Reactor Safeguards

   Reconsideration is requested. (SECY)

3. Reorganization Item

   Approved. (EAGM)

4. Proposed Letter to the Chairman, Committee on Government Operations re the Report on the FFTF

   Approved. (Bloom-Spurgeon)

5. SECY-543 - Revised Plan for Financing the Safeguards Costs

   Approved. (AGMIA)

6. SECY-549 - Sale of Equipment for Gas Centrifuge Application

   Approved. (AGMIA-C)

7. SECY-550 - Proposed Letter to OMB re CIP

Revision and rescheduling are requested. (AGMIA)

8. SECY-551 - Proposed Letter to JCAE re Enriched Uranium

Approved. (AGMIA-Bloom)

9. Briefing Document on the SALT Discussions

Requested. (AGMIA)

10. SECY-539 - Observer Program for Upcoming NTS Event

Approved. (PI)

11. SECY-541 - Californium 252 Pricing

Noted. (P)

12. SECY-555 - Californium 252 Pricing

Noted. (IP)

13. NTS Events (See General Giller's October 21 Memorandum)

Noted. (AGMMA)

14. Staff Meeting with GSA Representatives, Wednesday, October 28, 1970, re Brookhaven Land

W. B. McCool
Secretary of the Commission

11:00 am

(Decisional items will be reviewed with Commissioner Thompson.)

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Bloch
Mr. Brown
Mr. Abbadessa
Mr. Ferguson
Mr. Bloom
Mr. Spurgeon
Mr. Kull
Mr. McCool
Mr. Schur*
Mr. Friedman*
Mr. Crowson*
Mr. Cunningham*
Mr. Voigt*
Mr. Crowson*
Mr. Price*
Mr. Brobst*
Mr. Reichardt*
Mr. Klein*
Mr. Quinn*
Mr. Nash*
Mr. Flaherty*
Mr. D. Hoyle*
Mr. Harris*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 28, 1970
Approved EJB/HLP
Date

E. J. Bloch, Acting General Manager
Harold L. Price, Director of Regulation

ACTION SUMMARY OF MEETING 2439, MONDAY, OCTOBER 26, 1970, 11:25 A.M., ROOM 1115, D. C. OFFICE

SECY:LGH

Commission Business

1. Minutes of Meetings 2428, 2429, and 2430

The Commission approved, subject to comments by Commissioner Thompson, the Minutes of Meeting 2428.

The Commission also approved, as revised, subject to comments by Commissioners Ramey and Thompson, the Minutes of Meetings of 2429 and 2430.

2. SECY-509 - Plutonium Handling and Storage
SECY-R 62 - Shipment of Plutonium

Discussed.

The Commission:

a. Requested staff evaluate the economic effects of a policy slightly more restrictive than Alternative V of SECY-R 62 to require:

(1) all plutonium shipments be made in the form of oxide powder; and
(2) the oxide powder be composed of large particles.

The Commission also requested:

a. data on the economic impact of these requirements on existing private conversion facilities;

b. ACRS comments on the subject; and

c. consideration of appropriate coordination with international agencies.

The Chairman requested a report on scrap inventories.

(SAGM/RPS)

Original signed
W. B. McCool
Secretary of the Commission

cc: Commissioners

transportation, and storage of plutonium involved in the country's civilian nuclear power program.

Helen and I attended a luncheon given by Secretary of State and Mrs. Rogers in honor of Romanian President and Mrs. Nicolae Ceausescu. Secretary of Commerce and Mrs. Maurice Stans and Mr. and Mrs. Gerard Smith were among the 100 or so people present. As I was going through the receiving line, President Ceausescu and I discussed briefly my visit with him in Bucharest a year ago. I sat between ion Romanu (Counselor to the President of the Romanian Council of State) and Mrs. Nutter and close to Ambassador Len Meeker, Harry Barnes, of our Embassy in Romania, and Nicolae Nicolae (Romanian Deputy Minister of Foreign Trade). I discussed with Romanu and Nicolae the matter of our impending renewal of our exchange agreement with Romania in the peaceful uses of atomic energy and the recent Romanian decision to postpone acquiring a heavy water plant. Helen sat next to Corneliu Manescu (Romanian Minister of Foreign Affairs) and the Romanian Ambassador to the U.S., Corneliu Bogdan, and near Mrs. Stans. At the end of the luncheon Secretary Rogers gave a short welcoming speech followed by a toast to President and Mrs. Ceausescu and to continuing friendship between Romania and the United States. This was followed by President Ceausescu's short response which included toasts to President and Mrs. Nixon and Secretary and Mrs. Rogers. He spoke with a hoarse voice due to nervousness.

Dr. Sigvard Eklund called from New York regarding his letter of October 16 to me in which he suggested a special recognition for Professor Isidor Rabi at the Fourth Geneva Conference, i.e., an honorary lecture by Rabi at the opening session. I said that as far as I am concerned I think it would be a good idea. He said that in that case he would pursue it further. He will be talking to W. B. Lewis tomorrow, and will mention it to him also.

I called Don Dunlop (Science Adviser to the Secretary of Interior) to tell him I will be out of town on Wednesday afternoon and that John Flaherty will represent me at the meeting on Energy. I said that this might be a good time for him to start talking to Flaherty on the energy study matter that Ed David handed to us at the last FCST meeting even though that subject isn't related to Wednesday's meeting. I said I am not sure just what we are supposed to do, and he said he thinks we can make of it anything we wish to. He said he will discuss it with Flaherty.

I sent a letter to Chet Holifield (copy attached) concerning our ability to enter into additional commitments to provide the separative work requirements of additional foreign and domestic power reactors.

Attached is a copy of a letter Commissioner Johnson received from Alexis Johnson thanking him for the excellent summary regarding the matter of cooperation with other nations in gaseous diffusion technology, as provided in his October 6 letter to the Chairman of the NSC Under Secretaries Committee (copy attached).

Dianne, Amy Ballou, Suki and I took a short hike in Rock Creek Park along the trails paralleling Oregon Avenue.

Tuesday, October 27, 1970 - D.C.

At 9 a.m. I met with Ambassador Keith Glennan in the presence of Abe Friedman and Julie Rubin. Glennan stated that his present plans are to return to Vienna in December. He was very complimentary about the performance of the U.S. Mission staff in Vienna and the cooperative support by Myron Kratzer and the other AEC personnel.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

OCT 2 6 1970

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

During the Executive Hearings of September 16, 1970, on Agreements Relating to International Cooperation in the Use of Atomic Energy, a question was raised about our ability to enter into additional commitments to provide the separative work requirements of further foreign and domestic power reactors. As was promised at the time, this letter responds to that question.

Our ability to enter into commitments for uranium enrichment services is, under current toll enriching criteria, limited to our available capability. An assessment of requirements versus available capability involves consideration of both the short- and long-term period. With respect to the longer term when the capability of our diffusion plants would be fully committed, such capability can be related to a total megawatt capacity of nuclear power plants which can be sustained in operation. Such analyses must be based on assumptions on the operating conditions of both nuclear power plants and enrichment facilities. The primary variables affecting separative work availability are the degree of improvement of the present plants through the use of advanced technology and the power level at which the plants are operated. On the demand side, the principal variables we have considered involve the extent of plutonium recycle and the tails assay upon which toll enriching transactions are based.

The enclosed table presents calculated data on the nuclear power reactor capacity that can be sustained under various assumed conditions by the existing diffusion plants operating at capacity. In this table, we have indicated, for illustrative purposes only, the effect of a change in tails assay from the current 0.20% U-235 to 0.25% U-235. In this connection, it should be noted that no decisions have yet been reached as to when or to what extent the tails assay will be increased. However, it currently appears that some increase will be appropriate within the next several years in order to maintain optimized production conditions. With respect to plutonium recycle, we feel confident that, over the term by which the capacity of the existing plants will have been committed, plutonium recycle will have been established.

It will be noted that, even employing the most stringent assumptions, the capacity of the existing plants would sustain 130,000 megawatts of nuclear power, relative to the 39,000 megawatts currently under fuel contracts and the additional 18,500 MWe in existing agreements for cooperation but not yet under contract. There is thus substantial capability to enter into additional fuel supply commitments. With respect to the nuclear power capacity projected several years in the future, e.g., 1978 or 1980, our ability to enter into contracts for all of such capacity will clearly be subject to decisions made in the interim regarding cascade improvements, tails assay and plutonium recycle. For example, in order to make firm commitments for the supply of enrichment services covering the 158,000 megawatts projected for 1978, some combination of cascade improvements, increase in tails assay or plutonium recycle would be necessary. We would anticipate that such decisions would be made in time to avoid any uncertainty concerning our ability to enter into additional contracts at the time such contracts would be needed.

On the shorter term basis, our projected production schedules provide for sufficient preproduction to avoid shortages over the next several years as new power reactor capacity comes into operation. For example, if one considers the cumulative requirements through 1978 of those reactors projected to be brought into operation by 1978, and again making the most pessimistic assumption of no cascade improvements, no plutonium recycle, no change in tails assay, and no supply of enriching services from non-U.S. plants (except to satisfy U.K. requirements), such cumulative requirements are essentially equal to the capability of the existing plants. This result is consistent with our earlier conclusion, with which you are familiar, that at the current tails assay and without cascade improvements, new capability would be required by the late 1970's.

With respect to future policy regarding commitments for foreign nuclear power plants, we believe that regardless of whether new capacity is provided by private industry or government, the construction of new plants will, for economic reasons, be undertaken on a schedule in close correspondence with the growth of requirements. Thus, the current policy of providing in agreements for cooperation firm assurances for fuel quantities required to meet forward programs of nuclear power plant construction, which to date have been highly important in the establishment of the U.S. enriched uranium export market, will necessarily have to be modified. We are, accordingly, considering an approach under which the current practice of including fuel supply commitments in agreements for cooperation will be discontinued, in which case all fuel supply commitments thereafter would be covered in the implementing contractual agreements. This new type of agreements for cooperation would involve elimination of the present practice of

including a ceiling quantity which now serves both as an assurance of supply and a limitation on commitments. We believe that there would be considerable interest abroad in such an approach. The Commission expects to discuss the issue of future foreign fuel supply policy with the Joint Committee in the near future.

Another point which was raised at the Hearings related to the right provided to toll enrichment contractors to terminate their commitments without penalty upon providing at least three and one-half years' advance notice. We consider that this practice has been justifiable so long as enrichment commitments have been limited to the capability of the existing facilities originally built and paid for to meet defense requirements. On the other hand, at such time as new facilities or improvements to the existing facilities are required, we believe that the termination provisions should be modified in order to secure a significant commitment by the customer toward the capital investment made to permit our contracting for his requirements. At the present time, we are studying possible revisions to our contracting policies in order to better safeguard any new capital investment in our enrichment facilities.

I trust that this letter is responsive to the questions raised during the Hearings. Should you have further questions, we would be pleased to discuss them with you.

Cordially,

Chairman

Enclosure:
Table I

## CAPABILITY OF AEC DIFFUSION PLANTS TO MEET STEADY STATE OPERATION OF NUCLEAR POWER PLANTS

| Capability | Separative Work in Metric Tons per Year | Electrical Megawatts of Nuclear Power That Can be Maintained in Operation: Tails Assay: 0.2% U-235, Without Pu Recycle | Tails Assay: 0.2% U-235, With Pu Recycle | Tails Assay: 0.25% U-235, Without Pu Recycle | Tails Assay: 0.25% U-235, With Pu Recycle |
|---|---|---|---|---|---|
| Without CIP/CUP | 17,100 | | | | |
| Minus requirements for other than civilian power | 1,500 | | | | |
| Available for civilian power | 15,600 | 130,000 | 183,000 | 146,000 | 205,000 |
| Added by CIP/CUP | 8,900 | 74,000 | 105,000 | 83,000 | 117,000 |
| Total with CIP/CUP | 24,500 | 204,000 | 288,000 | 229,000 | 322,000 |

## ELECTRICAL MEGAWATTS EQUIVALENT OF VARIOUS REQUIREMENTS CASES

| | Electrical Megawatts | |
|---|---|---|
| **A. Currently Under Fuel Contracts** | | |
| Domestic | 29,000 | 39,000 |
| Foreign | 10,000 | |
| **B. Firm Requirements, Including Fuel Contracts** | | |
| Domestic plants ordered and scheduled | 91,000 | 112,000 |
| Foreign plants ordered and covered by existing agreements | 21,000 | |
| **C. Anticipated Domestic Requirements and Obligations Under Agreements for Cooperation for Plants to Start Operation through 1978** | | |
| Domestic | 108,000 | 158,000 |
| Foreign | | |
| Under existing agreements | 28,500 | |
| Under agreements concluded or being negotiated but not yet in force | 21,500 | |
| **D. Forecast for Plants to Start Operation Through 1980** | | |
| Domestic | 150,000 | 240,000 |
| Foreign | 90,000 | |

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UNDER SECRETARY OF STATE
FOR POLITICAL AFFAIRS
WASHINGTON

October 19, 1970

Dear Mr. Johnson:

On behalf of the Chairman of the NSC Under Secretaries Committee, I would like to express our appreciation for your letter of October 6, 1970, which provided an excellent summary of the meeting held by AEC and Department personnel with the Joint Committee on Atomic Energy on September 16, 1970. The letter from Chairman Holifield to Dr. Seaborg of September 25, 1970, which you enclosed, also provides additional insight into the results of the meeting and the attitudes of the members of the Joint Committee regarding cooperation with the other nations in gaseous diffusion technology.

I found our subsequent meeting on October 8 with Chairman Holifield and Congressman Hosmer substantiated very clearly the conclusion of your report of the meeting on September 16. Although Chairman Holifield has questioned whether it is timely and in the best interests of the U.S. to share our diffusion technology, I trust that we will be able to convince him and the Committee in general that we should proceed with the exploratory talks.

Sincerely,

U. Alexis Johnson

The Honorable
Wilfrid E. Johnson,
Commissioner,
U.S. Atomic Energy Commission.

His principal topic for discussion was identified as what to do about the U.S. and U.K. offer for financing IAEA safeguards. Glennan wants to arrange for our plan to be introduced in a manner that removes its identity as a U.S. initiative. I stated that a recent letter from Eklund seemed to support and be consistent with our plan and gave him a copy of this correspondence. Glennan plans to review this matter at the STate Department tomorrow and will also talk to Eklund about the idea in New York on Thursday. We agreed that it would be desirable for me to join Eklund and Glennan at lunch on Thursday in New York.

Glennan expressed some general concern about the dominant role safeguards are assuming in the IAEA at the expense of the contribution to its broader development effort. He personally considers safeguards a negative control feature on an international body and the development effort is much more constructive. Glennan mentioned his plans to see McGeorge Bundy on Thursday in New York about the possibility of the Ford Foundation financing a study by Brookings or some other organization to take a fresh look at what role the IAEA should play and more specifically what the U.S. should seek through its participation in IAEA.

Glennan referred to a Peterson report that had been partially endorsed by the President which was reported to favor the U.S. taking the initiative through multi-national organizations. He repeated a personal view that steps should be taken to give new life and direction to the IAEA. We discussed Eklund's possible reaction to such a study and Glennan recognized the possible problem and indicated plans to talk to State Department officials about the idea to obtain their reaction.

As a closing item, Glennan indicated that there appears to be a need for developing nations to have available a smaller nuclear power plant than the present 800 MWe size that appears to be economical in the U.S. He is thinking of something in the 200-350 MWe area. I mentioned that this has received much attention in the past and the answer always came out that U.S. private companies could not see sufficient market to justify making any major effort for a smaller nuclear power plant. Glennan thought that with a total world market of about 40 such small plants some consortium should be able to satisfy this requirement. It appears to him to be a natural project for the IAEA to pursue. Glennan said he plans to talk to Bob McNamara at the World Bank about the idea; I indicated that we have already reviewed this with him and also suggested that Glennan might want to talk to Henry Kearns at the Export-Import Bank as he is a great supporter of nuclear power.

I gave Glennan a copy of the reprint of my African trip article in Science as further evidence of the important role IAEA plays in the development of these countries.

At 11 a.m. Commissioners Ramey, Johnson, Larson, Thompson, and I met with the following General Electric officials: Dr. A. Eugene Schubert (Vice President, Nuclear Energy Division), Dr. Karl P. Cohen (General Manager for Breeder Reactor Development), George Stathakis (Deputy Director, Nuclear Energy Division), and Thmas R. Clark (Manager, DC office). Others present were Bob Hollingsworth, Ed Bloch, Harold Price, Algie Wells, Howard Shapar and Julie Rubin. Milt Shaw came in later.

Schubert said they had requested the meeting to review two issues with us: (1) the Regulatory program, and (2) the fast breeder. As a general comment Schubert stated that General Electric believes the completion of a nuclear power plant should only require 48 months from the time of commitment to the availability of the plant. The present lengthy Regulatory process makes this objective

impossible, although some improvements in the engineering and construction are also needed. Experience in Japan without regulatory problems and with their productivity has demonstrated 48 months is a realistic objective.

Stathakis presented for General Electric a number of general and specific situations in the Regulatory program to emphasize the delays encountered. Viewgraphs were used and copies were promised for our records by Tom Clark. One of the complaints offered was that after delivery of the PSAR to Regulatory, the time until receipt of the first questions by the applicant has increased rather than decreased even with the experience gained over the past few years. It was also noted that in the case of the recent Fermi-II rector this was the sixth order for a 1,100 MWe BWR of essentially the same design and this last plant resulted in more questions than even the first one. A comment was offered that a very disturbing new trend is more amendments are being established by Regulatory during the course of completing a plant and there seems to be unnecessary duplication of inquiry to the same question from plant to plant. Also, the same question is frequently asked at the construction permit stage and operating permit stage.

Ramey and Price countered this last statement by noting that many questions raised at the construction permit stage are not answered prior to the operating permit stage.

Stathakis displayed a slide showing that 38 new issues were raised by Regulatory in 1969. He also complained that the backfit rule, wherein AEC is required to justify its action rather than the applicant, has never been applied to General Electric reactors and always results in a backfit requirement being imposed. A rough estimate was offered that backfitting has cost General Electric $18-20 per kilowatt or about $80 million to date. A further specific comment by Stathakis was that 36 topical reports had been submitted to AEC but, in spite of much discussion, no decision or approval has been taken on any of them to date. A similar comment was made about design criteria promised by the Commission.

Specific recommendations were suggested as follows: (1) tighten procedures, (2) if it is truly backfit call it that and follow the rule, (3) resolve quickly all still open issues, (4) initiate effective generic reviews, and (5) issue final official clear standards soon.

Cohen then reviewed the status of the breeder program from General Electric's viewpoint. He presented a number of slides demonstrating that the incentive for the LMFBR justifies the high cost of the initial demonstration plant. Data were provided showing enough plutonium would be available by 1985 to support 15,000 MWe in fast breeders.

A chart was presented showing that even slight delays in availability of a fast breeder by 1985 would result in very large new capital investment requirements for enrichment plants to support light water reactors (i.e., $11 billion by the year 2000).

Data were presented showing the first demonstration plant would cost on the order of $300-$350 million which for a 340 MWe plant would be about $1,000 per kilowatt.

Schubert summarized the discussion at this point by a very conscientious plea for alerting government, utility and other national officials to the very serious need for development of the breeder reactor on the 1985 time schedule. He noted that ESADA and General Electric have agreed to proceed with a fifty-fifty sharing of a $5 million effort for the initial phase for a

demonstration plant without any commitment that it would proceed beyond this stage. Their target is to obtain a firm go-ahead by January 1, 1972.

The Commissioners and General Electric people generally discussed the problems of financing one demo plant and the further complications of financing additional demo plants. The difficulty of the manufacturer and utility and the government justifying and providing the large funds necessary was discussed. The absence of an industry crusader on the utility side was particularly noted by Schubert.

A direct question was raised on the place for the Fermi Reactor in the LMFBR program. Cohen for General Electric stated that Fermi could not substitute for the demonstration plant, would provide only experimental irradiation capacity beyond EBR-II and implied but did not clearly state it is not worth supporting. Cohen and Schubert indicated that they have received considerable pressure from Detroit Edison, as one of their principal customers, to support continued operation of Fermi. A specific comment by Cohen was made that the Fermi design is the last breeder with a square lattice and the present need is for data for a hex lattice that could not be provided by Fermi.

Schubert suggested one possible way to proceed would be the SST financing route. It was not clear to either General Electric or the Commissioners who would be the group that provides the repayment to the Federal Government for money expended in this situation as there is no clear single manufacturer or customer as in the case of the SST.

Bob Hollingsworth raised a question about the next step in the demonstration plant program. The normal course would be to invite proposals from the three manufacturers but General Electric confirmed that this would not result in firm commitments at this particular time. Hollingsworth indicated a willingness to open the issue with the Administration on additional government support for the first demo plant but only if there is a clear commitment for a project with firm utility and manufacturer support that requires a specific additional government contribution.

There was some discussion of the position of General Electric if they do not receive the first demo plant commitment. The issue is whether they could bid on a 600 MWe second demo plant based on the information generated by another manufacturer in the first demonstration plant. Cohen seemed very reluctant to reject the idea but expressed great concern about any company's ability to build an initial breeder plant at a 600 MWe size. It was halfway suggested that a more feasible route would be to repeat a 350 MWe plant by the second manufacturer in order to prepare him to make a more logical jump to the 1,000 MWe size that would be commercially required.

Abe Friedman and I had lunch with Harrison Brown of the National Academy of Sciences (in his office at 21st and pennsylvania, N.W.) to discuss follow-up items relating to my visit to Africa and the response to my trip report as published in Science magazine. Victor Rabinowtich and W. Murray Todd of Brown's staff were also present. I reviewed some of the results of the visit and publication of the trip report and indicated that the Commission is prepared to work with the NAS in further assisting the African countries in the development and application of science and technology. I said that the AEC could assist the Africans, if funds were made available to it, in several ways: (1) Provide experts to make short visits to Africa, especially in medicine, biology, as well as in other fields; (2) Attempt to locate experts for longer term assignments for African institutions; (3) Accept African Ph.D. candidates at PRNC and post-doctoral fellows at AEC national laboratories for research activities; and

(4) Develop sister laboratory arrangements between one or more of our national laboratories and African institutions. I stressed that in view of the ceiling imposed on our foreign travel funds, we could only do some of these things if funds from another source were available.

Another topic I brought up was the problems facing Science Service and the importance I attribute to being able to continue some of the important work they are doing in developing countries. I noted that I have discussed with Phil Handler the possibility that the National Academy of Sciences might take on some of the programs which Science Service has been carrying out and is not financially able to continue. Brown asked whether the AAAS would not be a more appropriate organization and I said that the AAAS had been asked to consider this and they determined that since it is not financially profitable they are not prepared to take on this program.

Brown then talked about some of the National Academy's workshops that they have carried out in the past in some of the developing countries and which they have plans for carrying out in Ghana, Kenya, and the Congo (Kinshasa). The workshop in Ghana is planned for January and the one in the Congo is planned for the latter part of March. Brown asked me if I would be interested in participating in one or the other of these workshops. I said it probably is not feasible to plan to participate in one or the other of these workshops. I said it probably is not feasible to plan to participate in the one in Ghana since it is so soon, but I would like to think more about the one in the Congo since I had planned to accept an invitation from the Congolese to return to the Congo on the occasion of their reactor dedication. I said I would think about it. Brown said that if I could not participate personally, he would appreciate receiving suggested names of experts who could make a contribution by participating in such a science workshop.

After my return to the office Commissioner Larson dropped in to discuss the matter of patent compensation to Dunning, Nier, Grosse and Booth. They have offered a settlement in which for a nominal payment ($25,000 each) they offer non-exclusive governmental rights to the U.S. but would retain private rights to the gaseous diffusion process for enriching uranium. We agreed that it wouldn't be feasible to settle in a manner which leaves so much ownership with the inventors and that we would go back to them with our original proposal, that is, $20,000 to each inventor for which we would receive all the rights to their inventions.

I then discussed planning for the Fourth Geneva Conference on the Peaceful Uses of Atomic Energy with Ed Brunenkant. With respect to a paper that I might give, I indicated that I would prefer the subject of the transuranium elements over a broader USAEC policy type paper. Forty-five papers will be allocated to the United States, which raises the question of whether it would be proper for each of the five Commissioners to give a paper. In answer to a request by Brunenkant for a decision I indicated that the U.S. Delegation should give a reception. Also, I expressed a preference for being housed in the Intercontinental Hotel, as opposed to the DuRhone Hotel, in view of the advantage of being closer to the Palais des Nations. We also discussed progress on the Voices of the Past presentation record and on my book with Corliss, Man and Atom--these might both be presentation items for the U.S. Delegation to give to all the other delegates.

Commissioners Ramey, Johnson, Thompson, Larson and I met from 3:10 to 6:05 p.m. with Hal Price, Algie Wells and key Regulatory staff for a serious, heart to heart discussion of means of speeding up and improving the regulatory process. We met first in the Chairman's Conference Room, and then moved into the Commission Meeting Room (1115) for an expanded session. We reviewed in detail

the internal procedures and mechanisms that are now used for safety review by the Director of Regulation and discussed ways of improving them.

I received a letter from Cap Weinberger (copy attached) thanking me for the arrangements made for his trip to Oak Ridge last Friday.

I received a memorandum from President Nixon, addressed to the Heads of Departments and Agencies (copy attached), announcing a new safety program for all Federal personnel.

Suki and I took a hike in the Reno Park area.

Rickover called me at home to ask that I support his nomination of William Wegner and David T. Leighton for the Lawrence Award.

Wednesday, October 28, 1970 - D.C. - New York

At 9:10 a.m. I presided over Commission Meeting 2440 (action summary attached). We reviewed the latest version of the report on NSSM 101 concerning the need for classification of gaseous diffusion plant technology. An evaluation of the report was presented by Howard Brown and Chuck Reichardt and a suggested Commission position was approved. I encouraged a more liberal approach to the need for long-range classification of this technology than was initially presented.

I then presided at 10:05 a.m. over Information Meeting 1072 (notes attached). We decided to investigate seriously the possibility of moving the D.C. and Bethesda offices to L'Enfant Plaza. Mr. Vinciguerra will investigate this further with General Quesada and the GSA. This is a follow-up to the discussion that Quesada and I had during lunch on Tuesday, October 20.

Commissioners Ramey, Johnson, Thompson, Larson and I met with Gulf General Atomic officials from 11:05 a.m. until 12:05 p.m. Present were B. R. Dorsey (President, Gulf Oil Corporation), Z. Q. Johnson (Executive Vice President, Gulf Oil Corporation), C. C. Wild, Jr. (Vice President, GOC), J. W. Landis (President, GGA), E. B. Walker (President, Gulf Mineral Resources Co.), C. A. Rolander (President, Gulf Energy & Environmental Systems, Inc.) and N. Carey (Director, East Coast Operations, GEESI). Ed Bloch, Ed Ferguson, George Kavanagh, George Quinn, Milt Shaw, Ernie Tremmel, Julie Rubin and other AEC staff were also present.

Dorsey opened the meeting with some general remarks on what they have learned and accomplished in the three years since GGA has been in the nuclear field. Some of the earlier Commission warnings about the need for a full commitment by Gulf have proven to be correct and Dorsey stated that GGA has accomplished more than maybe we both expected. In answer to a specific question by Commissioner Thompson, Dorsey stated that present U.S. reserves of petroleum are now at a point where the demand will reduce their availability until they are completely exhausted. About 70 percent of the total world reserves are in the Far East and under Arab control. Our only recourse is recovery of oil shales which would provide 30-200 years of additional reserves depending on the level of economical recovery one assumes. Another possibility is the liquefaction of coal to satisfy certain energy demands.

Zane Johnson, in his new capacity in the Pittsburgh office, had little to say and the remainder of the presentation was made by Rolander, Landis and Walker.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

UNCL. BY DOE
NOV 86

October 24, 1970

Dear Dr. Seaborg:

I enjoyed very much the trip to Oak Ridge and all the fine arrangements you made for us, particularly with the schedule in order that I might be back in Washington on time for my afternoon meeting.

It was especially good for me to have instructions in physics from the inventor of plutonium, and I greatly appreciated it!

Thank you again for a most informative visit.

With kind personal regards,

Sincerely,

Caspar W. Weinberger
Deputy Director

Honorable Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington, D. C. 20545

UNCL. BY DOE
NOV 86

THE WHITE HOUSE

WASHINGTON

October 23, 1970

MEMORANDUM FOR THE HEADS OF
DEPARTMENTS AND AGENCIES

It is most important that the men and women who serve our Nation in the Federal service be fully safeguarded from injury in the performance of their tasks. They must suffer no avoidable risk.

At the end of this year, we shall complete Mission SAFETY-70 which has averted over 22 thousand disabling injuries since 1964. Nonetheless the 43,000 such injuries sustained last year are of deep continuing concern. They show the need for renewed effort.

Mission SAFETY-70 provided a broad, overall approach to Federal work safety. Now we need a specific approach. Accordingly, I am today announcing a new safety program for all Federal personnel.

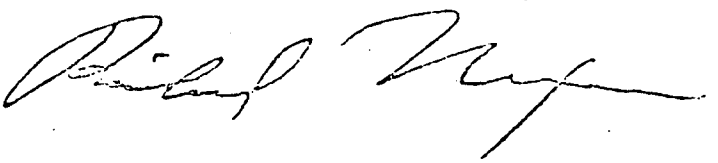
"ZERO IN on Federal Safety" will start January 1st and continue for two years.

Under this program, each Federal agency must find ways to locate the specific work hazards which injure its employees -- and remove them. For example, handling materials causes over one-quarter of our job injuries, slips and falls over one-fifth.

Whether the agency's chief problems stem from these or other causes, it is evident that job injuries can be prevented only where they occur -- by the agency at the place of work. Tested techniques exist to prevent them.

At my request, Secretary of Labor Hodgson has today written all agency heads detailing the new program.

I have proposed many programs to improve the quality of life in America. That quality in the workplaces of the Federal service must be the best -- both for the protection of our employees and as an example to the Nation.



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

913180

October 28, 1970

Approved EJB

E. J. Bloch, Acting General Manager

Date

ACTION SUMMARY OF MEETING 2440, WEDNESDAY, OCTOBER 28, 1970, 9:10 A.M., CHAIRMAN'S CONFERENCE ROOM, D. C. OFFICE

Commission Business

1. International Cooperation in the Uranium Enrichment Field - Report on NSSM 10

   Approved as discussed. (AGM/I)

2. Classification of Reactor Production Rates

   An early report is requested. (C/P)

3. Mr. Brown's Oral Report on the "Nuclear Bomb" Hoax at Orlando, Florida

OFFICE DIARY
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W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

CLASSIFICATION CANCELLED *
BY AUTHORITY OF DOE/OC
J. Diaz 2/28/89
BY (NAME) DATE
* Ltr. NSC Graboske To DOE, OCRP Sieber dated 2/10/89
John 3/1/89

UNITED STAT 913181
ATOMIC ENERGY CC
WASHINGTON. D.C. 20545

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COPY NO. 3
October 28, 1970

# INFORMATION MEETING 1072

10:05 a.m., Wednesday, October 28, 1970, Chairman's Conference Room, D. C.

1. Commissioners' Speeches at Geneva IV

   Commissioner Ramey and possibly Commissioner Larson will plan to speak at the Conference. (SECY)

2. Possible D.C. Office Relocation

   A staff report is requested. (AGMA-SECY)

3. SECY-553 - Draft Letter to OST re Nuclear Power Forecast

   Approved. (AGMP)

4. SECY-562 - German National: Proposed Assignment to LASL

   Approved. (AGMIA)

5. SECY-558 - Additional U.S.-Euratom Agreement for Cooperation

   Noted. (AGMIA-AGMP)

6. SECY-542 - PCM #379 - Proposed Contracts on Reactor Physics Tasks

   Noted with Commissioner Thompson dissenting. (DC-SECY)

CLASSIFICATION CANCELLED
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BY AUTHORITY OF DOE/OC
L.E. Bl 7/28/86
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J Diaz 7/30/86

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7. SECY-552 - Correspondence on Sandia Participation in Space Electric Power Programs

Noted. A report on the Sandia comments re the SNS Program is requested. Commissioner Thompson also requested additional information. (AGMR-SNS)

8. Mr. Rubin's Oral Report on the [redacted] Event at NTS

DE[redacted]D

9. Mr. Beck's October 22 Memorandum re Signing of Contract with Pennsylvani for Joint AEC-State Collaboration in Environmental Monitoring Program

The Commissioners requested Mr. Beck attend. (DDR)

W. B. McCool
Secretary of the Commission

10:55 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Bloch | Commissioners |
| Commissioner Ramey | Mr. Brown | General Manager |
| Commissioner Johnson | Mr. Ferguson | General Counsel |
| Commissioner Thompson | Mr. Rubin | Secretary |
| Commissioner Larson | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Klein* | |
| | Mr. Vinciguerra* | |
| | Mr. Flaherty* | |
| | Mr. Nelson* | |
| | Mr. Kavanagh* | |
| | Mr. Shaw* | |
| | Mr. Hannum* | |
| | Mr. Beck* | |
| | Mr. Buck* | |

*Attendance by Topic (s)

Walker reviewed the uranium exploration program by Gulf and gave some interesting data on their very large uranium discovery in Canada. Landis reported on the progress at Fort St. Vrain, the thermionic project and the CTR work. A projection was offered that the feasibility of a controlled thermonuclear reaction will be demonstrated by 1978, but it is anyone's guess as to when a commercial reactor might be available after that time. Rolander reviewed the present attempt at selling an HTGR. WHile no specific utility customer is available, there seems to be some encouraging prospects. Assistance by the Commission in the buyback of U-233, chemical processing, and favorable responses to utilities of the potential of an HTGR have been very helpful in the past, and a plea was made for continuing support.

The benefits of the HTGR were noted by me and other Commissioners, particularly in the environmental field, and as an economical power producer. Interest in the HTGR aboard, and particularly the possibility of a closed cycle gas turbine, was highlighted.

Lester Rogers and I had lunch at the Washington Post (1515 L Street, N.W.) with senior staff of the Post in order to enlighten them on some of the difficult problems facing the AEC, including Howard Simons (Assistant Managing Editor), Vic Cohn and Tom O'Toole (science writers), Stu Auerbach (medical writer), Hal Willard (Potomac Panorama, magazine section) and Colman McCarthy (editorial writer). The Post staff was well informed and covered a broad spectrum of topics which included the controversy on radiation protection standards; the need for national energy policies which take into account the total energy resource picture; the status of the breeder reactor development program; the status of the Plowshare program; space applications of nuclear energy for rocket propulsion; promising uses of Cf-252; AEC policies and procedures on the management of high level radioactive wastes; the Shoreham Plant and the broad spectrum of issues raised by intervenors; the status of the Monticello Plant; the implications of the gas centrifuge to nuclear proliferation and the Commission's policy with respect to classification of the gas centrifuge; the future of the Nuclear Test Ban Treaty in view of the attitude of nations such as France, Israel and Red China; the progress of Red China in developing nuclear weapons; the capabilities of countries such as Israel, Egypt, and India to develop nuclear weapons; improvements in nuclear weapons by the U.S. and U.S.S.R.; and the future of Amchitka as a weapons testing facility.

I took the 3 p.m. Eastern shuttle to New York, leaving about 3:10 and arriving about 4. I was met by Mike Merola of the AEC New York Operations Office, who drove me to the University Club (1 West 54th Street), where I checked into room 514. I took a swim in the Club pool. Pete and Jane came by and, while Jane waited in the ladies waiting room downstairs, Pete and I changed into our tuxedos, Pete using my spare tux which I had brought to New York with me.

Pete, Jane and I then walked to the New York University Club (123 W. 43rd Street) where we attended the reception and dinner for the members of the Electoral College of the Hall of Fame for Great Americans at New York University. At the reception we talked to Lewis Hyde (Provost of the Brooklyn campus of New York University and President of the American Optical Society), Deane Malott, Herman Wells, Dr. and Mrs. Grayson Kirk, and in the reception line, President and Mrs. James Hester, Dr. and Mrs. Russell Niles, and Chancellor and Mrs. Allan M. Carter. At dinner I sat at a table with Mrs. Hester, Mr. and Mrs. Walter J. Kohler (he was formerly governor of Wisconsin), Dr. and Mrs. Deane W. Malott and the Kirks and between Mrs. Hester and Mrs. Kohler. During the dinner each guest received a bronze medallion cast in the likeness of a Hall of Fame member; mine was James Kent.

After the dinner President Hester gave a greeting and Certificates of Appreciation were presented by Vice President Miguel de Capriles. This was followed by an explanatory address by Dr. Niles (Director of the Hall of Fame for Great Americans), who announced the election to the Hall of Fame of Albert Michelson and Lillian Wald. Albert Michelson received the most votes with Lillian Wald second. In third place was Franklin D. Roosevelt and the candidates ranking next in order by the number of votes they received were John Philip Sousa, George Washington Carver, Louis D. Brandeis, Andrew Carnegie and William Henry Welch.

After the program we talked to a number of people, including Roy Wilkins. As we were about to leave the third floor of the New York University Club, Pete and Jane motioned me over to the side of the foyer, saying they had something to tell me. They wanted me to know that they had just become engaged to be married, he having popped the question to Jane last Sunday. They wanted Pete's mother to know almost simultaneously, so he called Helen in Washington immediately to give her the good news. We talked about various possibilities for the wedding and reception, to be held in New York, perhaps next June but also perhaps as early as Christmas or Easter.

We then walked by Times Square and on back to the University Club where Pete changed back to his civilian clothes in my room, while I talked to Jane in the waiting room below. I then said goodbye to them.

A meeting on energy was held in Ed David's office at 4 p.m. today, which John Flaherty attended in my absence. Attached is his memorandum concerning this meeting. Attached also is a copy of a memorandum sent by John Harris to the White House covering past and future AEC activities in the public information area.

Thursday, October 29, 1970 - New York - Washington

I had a breakfast meeting at the University Club with Charlie Robbins, Bob Gleason (Counsel for AIF), Donald G. Allen (Vice President, New England Electric System), Bob Lowenstein (private attorney) and Julie Rubin from 8:15 to 9:40 a.m. The purpose of the meeting was to discuss the possibility of AIF having input into anticipated new rules by the Commission in the environmental field that will be a part of our reactor licensing process. Robbins, speaking in general for the AIF and specifically for Allen and Lowenstein, as spokesman for utilities, expressed considerable concern over AEC's publishing new procedures covering environmental matters that would further extend the present lengthy time required to obtain a power reactor license. They made it clear that this concern includes the Commission's habit of postponing comment until new procedures are published in the Federal Register, as at this stage it is difficult to cause any retreat from a firm position; also they feel that pending adoption of the new procedures our Regulatory staff has a tendency to place them in effect as a firm replacement. Rubin noted that AEC staff anticipates that the needed environmental reviews could be carried out in parallel with the existing technical licensing program and anticipates that in the end the environmental procedures would not be limiting in the final granting of nuclear power plant licenses. This was not rejected by the AIF people but the concern remained over raising new issues in the licensing process for intervenors to use, and the unknown of what might be involved in obtaining approval to proceed when differences exist between the AEC and another organization that comments on the environmental effects of a nuclear power plant.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Chairman Seaborg

THRU: General Manager

MEETING AT OST

In accordance with your request I represented you at a meeting in Dr. David's office last evening on the energy situation. Those attending the meeting were: Dr. David, Dr. Donald Dunlop, Science Advisor to the Secretary of Interior; Dr. William D. McElroy, Director, National Science Foundation; and David Freeman, Director of the Energy Policy Staff, Office of Science and Technology.

Dr. David requested that our group develop as soon as possible a report indicating where the Nation should be in five, ten and twenty years in meeting its energy requirements and to answer the question of whether the present research and development programs in energy would get us there.

The point was made that the only well organized energy development program in government is that of the Atomic Energy Commission. By contrast the efforts on fossil fuels and other energy sources are fragmented and minuscule. It was also suggested the group give some attention to such further out energy sources as controlled thermonuclear reactors and solar energy devices and to such subjects as transmission line developments. It was also requested that the assessment attempt to include a look at research sponsored by industry as well as that sponsored by the government.

Dr. Dunlop was designated as the Chairman of the Study Group and Dave Freeman will serve as the principal contact point in OST. It was requested that the report be prepared as soon as possible for presentation to the FCST.

John J. Flaherty
Assistant General Manager
for Plans

October 28, 1970

UNCL: BY DOE
NOV 86

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Here's a rundown on our activities:

Monday, November 2 -- The AEC and the Commonwealth of Pennsylvania are planning to sign a contract for a cooperative program of environmental radiation monitoring of nuclear power plants in Pennsylvania. The agreement is the first of several which the Commission plans to enter into for state cooperation in collecting and evaluating environmental radiation data.

Wednesday, November 4 -- We expect to announce plans for a public hearing by an AEC Licensing Board to consider the application of Toledo Edison Company and the Cleveland Electric Illuminating Company for a permit to build the proposed Davis-Besse Nuclear Power Station about 21 miles east of Toledo. The hearing is planned for December 8 in Port Clinton, Ohio.

On Thursday, November 5 Commissioner Thompson will speak at a banquet of the American Physical Society in Washington, D. C.

On Friday, November 6 Chairman Seaborg will attend a meeting of the American Scandinavian Board of Trustees in New York City.

Tomorrow we will announce that the Commission has scheduled a public hearing, to begin December 1 in Midland, Michigan, on the application of Consumers Power Company for permits to build a two-unit nuclear power plant near Midland. The proposed dual purpose facility would be used both for generation of electricity and for the generation of process steam for the Midland Chemical Plant complex of Dow Chemical Company.

Our invitation to newsmen to sit in last week on a review of the AEC's Hanford, Washington, environmental research program by AEC and outside scientists has resulted in several newspaper stories, including two by

Gladwin Hill in the New York Times (October 25 and October 26). We believe this low-key approach of taking newsmen along on such a working review is very effective in getting factual information across.

Production testing of the Project Rulison well in Colorado, stimulated by an underground nuclear explosion in September 1969, was initiated on Monday of this week. Testing of the well is expected to take about five to six months. On Tuesday Austral Oil Company, Inc., the industrial partner in the experiment, flew a group of newsmen from the Denver area to the site. We are advised that media reports on the visit are favorable.

Our Nevada Operations Office is planning to invite newsmen and business officials in the area to "observe" an upcoming underground nuclear test at the Nevada Test Site via closed-circuit TV at the Las Vegas AEC office. The group will get a general briefing and a tour of a computer facility.

U. S. News & World Report is still working on a story which we understand will deal with world-wide capabilities for building nuclear weapons. The article is now planned for next week's edition.

The on-again-off-again Newsweek article on atomic energy, mentioned in our recent weekly reports, now will likely be held up until January for use in connection with the AEC's 24th anniversary.

On October 22 we responded to charges the previous day by Dr. Ernest Sternglass, Professor at the University of Pittsburgh, that the nuclear power plant at Dresden, Illinois, has been the cause of an increase in infant mortality downwind from the plant. Our studies and one by Public Health Service indicate that exposure from the plant is only a small fraction of natural radiation background. We now understand that Dr. Sternglass has been invited to testify December 7 at state hearings in Illinois on the issuance of a permit for the Dresden III reactor.

We announced this week that we are considering proposed amendments to our licensing regulations concerning initial reactor fuel loading and low power testing. The amendments, if adopted, should expedite the licensing process without adversely affecting public health and safety.

We understand that the book "Population Control Through Nuclear Pollution" by Drs. John Cofman and Arthur Tamplin, due for publication in mid-November, is being promoted by the public relations firm of Ruder and Finn, Inc.

Sincerely,

Signed John A. Harris

John A. Harris, Director
Division of Public Information

| OFFICE ▶ | PI | PI | | | |
|---|---|---|---|---|---|
| SURNAME ▶ | RNewlin:ak | JHarris | | | |
| DATE ▶ | 10/28/70 | 10/28/70 | | | |

Form AEC-318 (Rev. 9-53) AECM 0240

I explained that the possibility of talking to a Forum group about any new procedures in this field has been discussed with the Commission and there is some reluctance due to the question of the propriety of doing this. Also the additional time that this would require causes the staff to have doubts about this procedure.

The group recognized both of these problems but thought a meeting could be arranged with sufficient low visibility and that comments could be provided in an expeditious manner. Lowenstein suggested that comparable representatives from environmental groups could be provided the same degree of access as the Forum group.

I did not provide any firm commitment to arrange for advance review of AEC procedures as requested by the group, but did indicate that every avenue would be explored to see if a mutually agreeable solution to the problem could be found.

In separate conversations during the breakfast I mentioned my recent meetings with the Washington Post and Evening Star writers in which considerable ground work was laid for favorable acceptance of nuclear power. Charlie Robbins also mentioned two books of current interest for reading, Future Shock and Sexual Politics.

Rubin and I then went to 30 Rockefeller Plaza to attend a meeting of AEC Commissioners with Laurance S. Rockefeller. Besides Rockefeller, those present included Fred Smith, Lawrence N. Stevens (Executive Director, Citizens' Advisory Committee on Environmental Quality), Ted F. Walkowicz, Commissioners Larson, Thompson and I, Howard Brown, Joe DiNunno and Julie Rubin. I started the meeting by offering some general remarks about the increasing power requirements in our country and the critical need to overcome some of the public misunderstanding and opposition to nuclear power in satisfying this increasing demand. Laurance Rockefeller seemed very sympathetic to this objective and commented that a clear way to destroy a democratic society is to deprive it of its basic needs such as power.

Early in the conversation I had to refute Laurance Rockefeller's understanding that nuclear power is about five years behind its projected use and growth. This position seems to have stemmed from statements made by Lee DuBridge before President Nixon with Rockefeller present. Later in the discussion, as a result of his recalling a similar reaction from Under Secretary Russell of Interior, Rockefeller suggested that we should provide a list of agencies and influential officials that might be adversely influencing acceptance of nuclear power so that Rockefeller could take appropriate steps to try to change their views or influence. In a somewhat unrelated context, Rockefeller informed me that Ralph Bunche is opposed to nuclear power on an island site in New York City on emotional grounds not necessarily related to the state of technology.

From Rockefeller's experience as Chairman of the Citizens' Advisory Committee on Environmental Quality, he appeared well aware of the advantages of nuclear power in reducing air pollution. He volunteered to try and arrange for a Reader's Digest article to relieve some of the public apprehension concerning nuclear power. Based on my inquiry, Rockefeller also agreed that a meeting could be arranged with influential groups in the New York area and his Citizens' Committee on Environmental Quality in order for AEC representatives to clarify some of the misconceptions and clearly present the advantages of nuclear power.

Rockefeller stated that there would be a meeting of Dr. Edward David on November 12 with his Citizens' Committee on Environmental Quality and that he hopes we

would brief Dr. David beforehand to make certain he does not damage our cause as DuBridge apparently did in his meeting with the President.

The group then went over a handout prepared by Joe DiNunno to review in further detail some of the areas where public misunderstanding has been encountered. Major attention was placed on radiation standards, why they are not lower, thermal effects from nuclear plants, use of cooling towers and cooling pools, etc. Thompson also made a strong plea for understanding and support of developing the fast breeder reactor to assure a necessary source of power beyond the next 30-40 years.

Stevens suggested that the AEC mount a major public relations effort to better inform the public about nuclear power. Something patterned after NASA's efforts in the space field was recommended. DiNunno questioned whether this is possible with nuclear power due to lack of congressional support and other opposing forces.

Rockefeller's interests in aesthetics surfaced through inquiries about how we plan to manage extensive transmission lines throughout the country as our power system grows. He also urged elimination of high stacks near nuclear power plants to make them more attractive. A brief explanation of the early need for stacks at BWR plants versus no stacks at PWR plants was provided.

At the conclusion of the meeting all agreed it had been very constructive and worthwhile. I expressed great appreciation for Mr. Rockefeller and his staff taking the time to meet with our group.

I then rode with Merola to the United Nations Secretariat Building and went to Sigvard Eklund's office (room 2265). Here I joined the conference being held between Eklund and Keith Glennan. They were discussing the implementation of the U.S. offer (also offered by the U.K.) to put U.S. civilian nuclear power activities under IAEA safeguards. We suggested that we would draw up a list of U.S. activities, not to exceed five percent of the IAEA safeguards activities, to be put under IAEA safeguards for use by Eklund to constitute an IAEA proposal, and Eklund agreed to this procedure. Eklund suggested that the U.S. stand firmly behind its proposal that the financing of IAEA safeguards under the NPT be on the basis of proportional contributions by all IAEA members (i.e., in the regular budget)--he doesn't want us to go too quickly to a fallback position in which small developing countries become less involved in the financing of IAEA safeguards.

Eklund, Glennan, B. H. Hasani (of Iraq, former chairman of IAEA Board of Governors, now on a six month assignment as Eklund's special assistant) and I rode to Le Manoir (120 East 56th Street) for lunch. Here we joined Alexei Roshkin (U.S.S.R. representative to the Conference Committee on Disarmament, the counterpart of James Leonard of the U.S.), Arno Halusa (Austrian Director of the Political Division of the Foreign Office), L. Petri (Swedish Ambassador to Austria) and Rober Najar (Deputy Director of the IAEA New York office). Hasani also suggested that the U.S. maintain its position on financing of IAEA safeguards under the NPT.

I then went to the Ford Foundation (320 East 43rd Street) to the office of McGeorge Bundy. Here I met with Ted Sherburne, Bundy, Gordon Harrison (Officer in charge of Research and Environmental programs) and William Fellin (Program Officer with Harrison). Sherburne and I explained the need of Science Service for a grant from the Ford Foundation. Bundy turned us down on the basis that this is outside of the province of the Ford Foundation. He suggested that we see Gerry Piel and try to sell Science News to Scientific American.

I met Rubin at the Ford Foundation and we rode to LaGuardia Airport with Merola. We flew to Washington on the Eastern shuttle, leaving New York about 4:30 p.m. and arriving about 5:20.

On the shuttle Joe Alsop approached me and said he would like to have lunch with me some day next week to try out some important ideas, and I indicated that I would do so.

Friday, October 30, 1970 - D.C.

I presided over Information Meeting 1073 (notes attached) from 9:55 to 11:30 a.m. We discussed the thorny problem of Dr. Friedwardt L. Winterberg's (Professor of Physics, University of Nevada) papers on laser-induced fusion without any conclusion. This is similar to the KMS case where someone working independently of the AEC has come up with important ideas that have a bearing on weapons and, hence, presents another aspect of this difficult problem. We approved a letter to the Office of Management and Budget on the legislative program for CY 1971. We viewed a Russian film on the creation of a huge water reservoir and the putting out of a gas well fire by the use of nuclear explosives. This film demonstrates that the Soviets have made substantial progress in the peaceful uses of nuclear explosion projects, perhaps surpassing the United States.

At 11:40 a.m. I presided over Commission Meeting 2441 (action summary attached).

Justin Bloom and I went to the National Science Foundation for a meeting with Bill McElroy (Director), Dr. Edward C. Creutz (Assistant Director for Research), Dr. Arthur Roe (Head, Office of International Science Activities), Thomas B. Owen (Assistant Director for National and International Programs), and Clarence C. Ohlke (Government and Public Programs Director). Upon our arrival in Bill McElroy's office, pictures were taken of McElroy and me and of the two of us with Creutz and Owen. (See picture.)

We began our discussions with my review of the problem of maintaining Science Service as a growing organization, and McElroy indicated that NSF might be able to help in a non-sustaining way. He pointed out that it would be unlikely that any continuing support by NSF could be arranged due to objections from the Office of Management and Budget. He also suggested that he, Phil Handler and I ought to get together to discuss the Science Service problem and that jointly we might be able to come up with some plan. To follow up on this NSF interest in assistance, Ohlke will invite Ted Sherburne to visit NSF.

The third subject we discussed was relationships that exist between AEC and NSF on several projects, among them the environmental work at Oak Ridge funded by NSF, proposals to NSF from Brookhaven and Argonne, and the proposal submitted by Norman Milleron of Berkeley on a new ultra-sensitive mass spectrometer for the analysis of breath.

I mentioned that the CHEM Study program is coming to an end and that NSF should be receiving a letter soon, requesting voluntary termination of Federal support, with any further revenues received from the distribution of the course material to be applied to the administration of the project or to the Lawrence Hall of Science.

The meeting broke up about 1 p.m., and then Justin, Bill McElroy and I went downstairs to the Longworth Cafeteria for lunch. McElroy and I discussed several subjects. He said that the Office of Management and Budget is taking a

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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COPY NO. 3
October 30, 1970

# INFORMATION MEETING 1073

9:55 a.m., Friday, October 30, 1970, Chairman's Conference Room, D. C.

1. Commissioners' October 29 Meeting with Mr. Laurance Rockefeller in New York City

2. Possible Article by the Chairman for the National Geographic Magazine

3. Agenda for the Weeks of November 2, 9, 16 and 23, 1970

   Approved. (SECY)

4. NTS Events (See General Giller's October 27 Memorandum)

   Noted. (AGMMA)

5. SECY-569 - Proposed Responses to Dr. Paul McCracken, Chairman, CEA

   Approved with revisions. (RDT-SECY)

6. SECY-566 - Proposed Letter to NASA on Viking Program Funding

   Approved. (SNS)

7. SECY-568 - Pure Fusion Reaction Explosions: Winterberg Research

   Noted. (C-SECY)

8. SECY-560 - Underground Test Program Data for a Portion of Emery II

Approved. (AGMMA)

9. General Giller's Report on LRL Sampling of NTS Offsite Readings

10. Report on the Return of Natives to Bikini Atoll

Requested. (BM)

11. SECY-572 - Eighth Inter-American Nuclear Energy Commission Meeting

Approved. (AGMIA)

12. Mr. Harris' October 28 Memorandum re Invitation to Dr. Sternglass to Testify in Illinois

A briefing for the Board is requested. (PI-SECY)

13. Forthcoming Book

A staff analysis is requested. (PI)

W. B. McCool
Secretary of the Commission

11:30 a.m.

(Action on items 5, 7, and 12 will be checked with Commissioner Larson.)

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson

STAFF:

Mr. Bbch
Mr. Brown
Mr. Rubin
Mr. Ferguson
Mr. Kull
Mr. Griffin
Mr. McCool
Mr. Jackson*
Mr. Hanrahan*
Mr. Bauer*
Mr. Shaw*
Mr. Kavanagh*
Mr. Marshall*
Mr. Tardiff*
Gen. Giller*
Mr. DiNunno*
Mr. Harris*
Mr. F. Johnson*
Mr. Henderson*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 2, 1970
Approved EJB
Date

E. J. Bloch, Deputy General Manager

ACTION SUMMARY OF MEETING 2441, FRIDAY, OCTOBER 30, 1970, 11:40 A.M., ROOM 1115, D. C. OFFICE

SECY: LGH

Commission Business

1. SECY-554 - Legislative Program for CY 1971

Approved, subject to comments by Commissioner Larson.

The Commission:

a. Requested staff include the following items in the letter to OMB listing, in Enclosure 2, legislative proposals under consideration by the Commission:

1. Legislation protecting the Government's international economic interests in advanced industrial technology in the atomic energy field developed for the Commission, without retention of Restricted Data controls;
2. Legislation to provide an orderly transition period for implementation of the National Environmental Protection Act of 1969 in AEC licensing proceedings; and
3. Amendment of the Atomic Energy Act to provide for a mandatory hearing on site suitability, to eliminate the present mandatory construction permit hearing, and to eliminate the present opportunity for an operating license hearing in the licensing of nuclear power plants.

b. Noted Commissioner Johnson's recommendation that staff ascertain whether a rationale existed to justify reducing the Government's indemnity limit under the Price-Anderson Act; and

c. Noted Commissioner Thompson's request that staff consider broadly based legislation designed to cover the social impact of any major disaster, including a reactor accident and natural phenomena.

(GC)

2. Soviet Films on USSR Peaceful Nuclear Explosion Projects

The Commission:

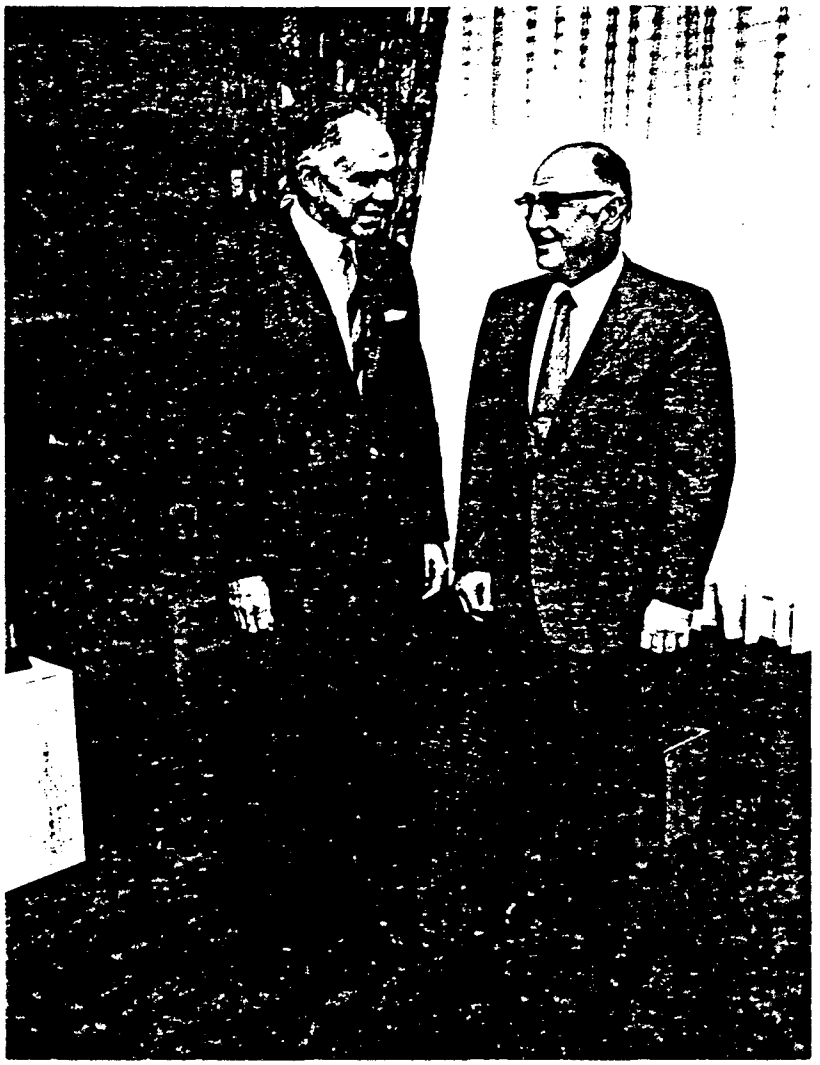
a. Noted the two Soviet films on nuclear devices to excavate an artificial lake and to halt a gas well blaze; and

b. Requested additional information on future showings of the films in the U.S.

(PNE)

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson



National Science Foundation; October 30, 1970.
L to R: Seaborg, William D. McElroy.

very tough attitude toward the NSF budget which has a ceiling of $550 million, $30 million of which is for assumption of responsibility for materials laboratories which were formerly supported by ARPA. McElroy questioned me about the temperatures that could be achieved with lasers, and I explained the relationship of high powered lasers to controlled thermonuclear fusion and, in a general way, to weapons. We also discussed the need for the fast breeder reactor. We concluded by agreeing that we should get together at intervals to maintain a close working relationship.

As we left the restaurant we stopped to say hello to Art Buchwald and exchanged a few words with him.

At 3:15 p.m. I met with Donald Jones, a private consultant, along with John Harris and Stan Schneider. Jones recalled that he met me some eighteen or nineteen years ago in my home where we had a conference that included Don Cooksey [in later correspondence he said it was William Jenkins] and at which was developed some of the background for what evolved as the Bell Telephone Science Series on TV. Jones is investigating the possibility of a TV science series that would help counteract today's negative attitudes toward science. We indicated that programs directed to counteract today's anti-intellectual attitude and to relate science to the practical welfare of the average TV viewer would be a good basis.

I met with Dr. Donald Dunlop (Science Advisor to the Secretary of the Interior) and John J. Flaherty from 4:15 until 5 p.m. to discuss plans for the preparation of the energy policy statement and proposed energy research and development program requested by Ed David at the FCST meeting on October 21. As a result of the meeting attended by John Flaherty on October 28, Bill McElroy has been added as a participant in this project. We concluded that Dunlop and Flaherty will prepare an outline for the projected manuscript, which I will look over in order to make suggestions preparatory to work on the manuscript itself.

I sent two letters to Paul McCracken (CEA) summarizing, at his request, proposals on nuclear explosive stimulation of natural gas fields and the lifting of the embargo on uranium importation in one (copy without enclosure attached), and a proposal and analysis of a program to establish and implement a national goal of completing in this decade a successful demonstration fast breeder reactor in the other (copy attached). Also attached is a copy of a letter from Japanese Minister of State Yasuhiro Nakasone in response to my letter of October 24 regarding uranium enrichment technology.

Suki and I took a hike in the Reno Park (Fort Reno) area.

Saturday, October 31, 1970- D.C.

I worked in the office until 12:45 p.m. and then had lunch at the World Buttery with Justin Bloom.

I received a letter from Peter Flanigan (copy attached) telling me the President was pleased to receive the report of my recent trip to Europe.

I sent a letter to Chet Holifield (copy without enclosures attached) concerning the appropriateness of revising the current pattern of assessing the safeguard costs of the IAEA.

Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

I worked on the final draft of Man and Atom.

We had a birthday dinner for Dianne which was attended by Allyne Snyder and Dianne's friend Amy Ballou, as well as members of the family.

I then took Dianne and her friends, Amy and Kathy Ballou and Laura and Ann Dodd, on a Trick or Treat safari. We covered Garrison, Gramercy and Harrison Streets.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

UNCL. BY DOE
NOV 86

OCT 3 0 1970

Honorable Paul W. McCracken, Chairman
Council of Economic Advisers
Executive Office of the President
Washington, D.C. 20506

Dear Mr. Chairman:

This responds to your letter of October 8, 1970, requesting our submission of proposals on nuclear explosive stimulation of natural gas fields and the lifting of the embargo on uranium importation. Our proposal on the development of the fast breeder reactor is being submitted by separate letter. We will summarize below our proposals on these two topics and more complete program descriptions are enclosed as separate attachments.

Under its Plowshare program, the AEC has supported a modest activity in gas stimulation for the last six years. The rationale for this program has been an estimate by the Bureau of Mines that more than 300 trillion cu. ft. of gas is potentially recoverable from the Rocky Mountain area alone, if the program proves successful. It has been estimated that the nation's gas supplies can be extended for a period of 10 to 20 years through this program. In Project Gasbuggy our flow tests indicated a five to eight-fold increase in gas production in the nuclear stimulated well over nearby conventional wells. We have just begun production testing of our second experiment, Project Rulison. Results from this testing should be available early in the new year. As indicated in the attached proposal for a Plowshare gas program, the Fiscal Year 1972 Budget outlays would require an upward revision of $10.2 million in order to accommodate the new activity. Of this increase, $2.75 million is for device testing, $5.0 million for basic phonomenology experiments, $.9 million is for a joint industrial project and a $1.4 million increase in R&D. These involve three nuclear detonations.

With respect to the question of removing or modifying existing restrictions on the enrichment of foreign uranium for domestic use, the AEC has not announced any specific proposal. We have, however, after consultation with the Department of State and the Office of Management and Budget, developed a plan proposing the removal of the restriction on a graduated basis in a manner which would assure United States producers of a portion of new uranium sales. Details of this plan are set out in Enclosure 3, together with the principal arguments for and against it. This plan was submitted to the OMB by letter of December 22, 1969, to Mr. Robert P. Mayo. Action is still pending.

Our proposed plan also dealt with the question of disposal of uranium stocks surplus to AEC needs. These two matters are closely related because their implementation could affect the viability of the domestic uranium industry. In this connection, the Atomic Energy Act of 1954, as amended by the Private Ownership of Special Nuclear Materials Act of 1964, requires the Commission to impose a prohibition on the enrichment of foreign uranium for domestic use to the extent necessary for the maintenance of a viable domestic uranium industry.

Procedurally, the proposed plan would in any event be issued for public comment before final approval. Any proposed change in the existing restrictions regarding foreign uranium must be submitted to the Joint Committee on Atomic Energy 45 days prior to adoption. It would be expected that the JCAE would hold public hearings on the plan. The proposed plan has no impact on the FY 1972 Budget.

Over the next several years the supply of uranium will not inhibit the development of nuclear power regardless of whether or not action is taken to permit enrichment of foreign uranium for domestic use. A more likely limit to the growth of nuclear power seems to be the ability of existing enrichment plants to meet projected nuclear power requirements unless there is an early implementation of our proposals to increase their production capability by equipment improvement and uprating, and to restore full production levels by contracting for additional supplies of electric power. Proposals for implementing this cascade improvement program are contained in the AEC's FY 71 and FY 72 Budget requests.

The nuclear gas stimulation program can make a major contribution in overcoming the shortage of natural gas which is already beginning to affect some parts of the country. The energy made available by this program can play a key role in meeting the nation's fuel requirements for the next decade. The technology of nuclear gas stimulation is needed now and the benefits to the nation's economy will be received in the near term.

Cordially,

Chairman

Enclosures:
1. Plowshare Gas Program
2. Modification of Restriction of Foreign Uranium

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 3 0 1970

UNCL. BY DOE
NOV 86

Honorable Paul W. McCracken, Chairman
Council of Economic Advisors
Executive Office of the President
Washington, D. C. 20506

Dear Mr. Chairman:

The Commission has analyzed each of the three programs referred to in your letter of October 8, 1970, as you requested. This letter responds to your request that we propose and analyze a program to establish and implement a national goal of completing a successful demonstration of a commercial size fast breeder reactor in this decade. Our proposals on the other two programs will be submitted to you by a separate letter.

We are in full agreement with you on the need to begin at once the vital task of dealing with the longer term aspects of the energy supply problem. We believe the development of the breeder reactor on an urgent basis is essential to assure an adequate supply of energy, the very lifeblood of our national strength and well being. The breeder reactor holds the key to providing a world, rapidly growing in population and energy needs, with an abundant and economic source of useful energy for a thousand years or more. Therefore, we wholeheartedly urge that the President promulgate the development of the breeder reactor system in this decade as a priority national goal. Such action by the President would be the most decisive single step that could be taken now toward assuring an essentially unlimited energy supply, free from problems of fuel resources and atmospheric contamination. It would build on the Atoms for Peace program as a landmark in progress toward beneficial use of the atom.

The urgency for developing the breeder is heightened by the increasing awareness of a number of deteriorating aspects of energy supply and environment, and more realistic assessments of their extremely adverse implications. We are rapidly depleting our fossil fuel supplies and thereby both increasing our dependence on foreign sources and disregarding the needs of future generations. In fifty years, if we proceed as now, we will have used up essentially all the world's oil reserves. Domestic oil production is near its peak level; domestic gas reserves are being rapidly depleted; the utilization of coal for power generation is encountering increasing opposition because of the serious concern over air pollution and the need to conserve coal as a raw material for chemical uses. Thus, we have no alternative but to use our nuclear fuel reserves to their fullest potential by introducing the breeder, with its thirty-fold increase in uranium utilization over the present generation of commercial light water reactors.

The goal of demonstrating the breeder in this decade is fully attainable. This goal will provide a strong focus for action toward providing abundant and economic energy to meet all foreseeable future requirements with maximum conservation of resources and minimal environmental effects. In so doing, it will:

- Produce massive quantities of electric energy at lower cost than by any other means.
- Contribute significantly to reduce atmospheric and thermal pollution by electric generating plants and other energy producing systems.
- Serve to unify and conserve the technical capabilities and financial resources of the energy community, both in industry and in Government, and so provide for their most efficient and effective utilization.
- Provide a premium market for the large supplies of plutonium which will be generated in the rapidly increasing number of light water reactors.
- Assist in resolving power plant siting and fuel supply problems.
- Reinforce the massive commitments by U. S. industry in personnel and facilities, and the multi-billion dollar investments already made by the utility industry in nuclear power plants.
- Serve as an incentive for private industry and the utilities to increase their financial and other commitments to the breeder program.
- Maintain U. S. leadership in the peaceful use of the atom, in nuclear power development and in the world energy market.

In all these respects the implementation of this national goal would provide a challenge of such vision and scope as to furnish inspiration to the energy industry, to the scientific and engineering communities, and to the public, which is now seeking evidence of decisive leadership and action on the problems of energy and environment.

The Liquid Metal Fast Breeder Reactor (LMFBR) has been selected by the AEC as its highest priority civilian power development program because of its favorable performance and economics, the interest of the reactor manufacturers and electric utilities, and the technology base already available. The LMFBR is the logical follow-on to the light water reactors being built

today in large numbers because it also operates on the uranium-plutonium cycle. More than twenty years of research and development have led to the conclusion that the LMFBR is the system on which this country must concentrate its development efforts.

The entire thrust of the LMFBR program is directed toward the vital national objective of satisfying rapidly increasing energy requirements in a way that minimizes environmental and economic effects. This high performance type of nuclear reactor will create about 30% more plutonium fuel than it consumes. It will operate at substantially higher thermal efficiencies than light water reactors and thus reduce waste heat to the environment by approximately 30%. Because it is an hermetically sealed system, it inherently tends towards eliminating radioactivity release to its surroundings.

This is an especially appropriate time to take those strengthening actions needed to implement the national goal established for the Liquid Metal Fast Breeder Reactor. While strong support for the breeder reactor program has existed for many years, recent environmental, energy and fuel supply problems have reinforced the importance of expeditiously completing its development and commercial introduction. Thus, there is today a clear consensus among cognizant agencies of the Government, the Congress, and the energy community as to the need for reinforcing the priority and obtaining the support for proceeding vigorously with the development of the breeder reactor as the major long-term answer to the energy supply problem. Clearly all the considerations - technical, economic, and political - have converged in a most timely and mutually reinforcing manner so as to impel us to move forward aggressively with development of the breeder system.

The urgency of obtaining the great potential economic, environmental and resource-conserving benefits of this reactor type, which go beyond those of any other energy producing system, has been confirmed by key energy community leaders in this country and by other major industrial nations. Each of these nations has made the LMFBR its highest priority energy development program and has committed significant resources to test facilities and demonstration plants. For example, the Soviet Union is well along in construction of the world's two largest LMFBR's of 350 and 600 megawatts electric (MWe) capacity, and the United Kingdom and France are scheduled to begin operation of 250 MWe plants in 1972 and 1973, respectively. West Germany and Japan have also announced plans to construct commercial size demonstration plants for operation in this decade.

Current Status

The national LMFBR Program Plan, which was developed with the extensive cooperation of industrial and utility organizations, has as its objective the establishment of the breeder reactor system on a broad technical and engineering basis with sufficiently comprehensive industry involvement to assure a strong and competitive industrial capability in the early 1980's.

However, despite mounting pressures to develop the breeder on a priority basis, budgetary stringencies in recent years have made it necessary to cancel, postpone or stretch out many of the activities planned for its development and introduction. Notwithstanding such curtailing actions, we have been able to bring about significant improvement in program performance by strengthening professional and managerial capabilities in the remaining participating organizations. We have reorganized and consolidated activities around a position of strength centered in a few Commission-owned facilities and in a few experienced industrial organizations. Further, we have converted the effort from a research orientation to one which stresses engineering application. These efforts have helped develop a closer working relationship among the AEC, our laboratories, the reactor industry and the utilities. The principal reactor manufacturers and utilities have endorsed the AEC's selection of the LMFBR as the highest priority energy development program. Their endorsement is evidenced by financial contributions from more than 100 private and public utility organizations in cooperative development and design studies with the reactor manufacturers involving expenditures of about $25 million per year.

For these reasons, although we are behind the schedule of the national Program Plan as originally published, adequate funding at this time can increase program momentum and assure that a national goal of demonstrating a commercial fast breeder reactor in this decade can be met. Moreover, such actions can eliminate the frequent criticism which has been registered for failure to accelerate this Nation's highest priority energy program in light of the U. S. energy and environmental crises, and the strong commitments to this program by other nations.

While full development of the LMFBR system is recognized to be complex, difficult and costly, its practicality has already been established in this country and abroad. Research and development over the past two decades, intensified during the last five years, has established a sound technology base and identified the remaining tasks to be completed; the transition into the design, engineering and proof-testing of commercial sized components has begun. Assurance that commercial reactor plants of this type, when properly designed and constructed, will achieve the benefits inherent in this system is provided in many ways: by prior experience in carrying forward such large complex development programs, by recent management and technical strengthening actions in all participating organizations, and by the successful operation of a number of LMFBR experimental and test reactors and other related liquid metal non-nuclear test facilities in this country and abroad.

Such favorable factors have helped provide program momentum and a substantive foundation for further actions. The prerequisite bases are now well established for moving rapidly into hardware oriented programs in fuel, fuel handling, safety and physics work, and most importantly, into the engineering design, construction and proof-testing of prototypic large power plant components and equipment. Concurrently, actions must be taken to establish and train management and technical staffs and industry-utility teams to conduct design and manufacturing efforts associated with the construction, operation and maintenance of commercial size demonstration plants.

Proposed Program and Funding

The essential next step toward demonstrating commercial breeder capability by the end of the decade is to promptly and effectively implement a program to build two, and preferably three, demonstration plants to verify individual component and system designs in commercial size plants (300-500 MWe), owned, operated and maintained by the utilities on their networks. Each of these demonstration plants would be a cooperative undertaking among industrial contractors, the utilities, and the Government.

A further mandatory step, complementing this augmented demonstration plant program, is to increase efforts on hardware oriented programs in fuel, fuel handling, safety, physics, and most importantly, on the design, development, fabrication and proof-testing of major plant components including reactor vessels, steam generators, pumps, valves, refueling machines, heat exchangers, and instrumentation and control equipment. Additional work must be carried out to further confirm design approaches being followed to assure safety. These efforts will all require heavy involvement by the industrial sector.

As summarized in Table I of the enclosure, the base technology, engineering and facility operating and construction programs would continue to be funded over the FY 1972-1980 period at about the revised FY 1972 estimate, and would require Government outlays of about $1.9 billion. Funding for the demonstration plants, and for the larger plants referred to below, would require total Government outlays up to $484 million over the FY 1972-1980 period. Thus, Government budgetary outlays total about $2.4 billion over the FY 1972-1980 period. This is a sum comparable to that previously projected for the LMFBR program over a like period of time.

To proceed with the LMFBR program on the basis noted above, necessary changes must be made to the current Commission's FY 1972 budget request.* As summarized in Table II of the enclosure, the research and development

* Dr. Seaborg to Mr. Shultz (OMB), AEC FY 1972 Budget Submission, September 15, 1970

costs must be increased by $15 million (noting that this increase would be $36 million over the OMB ceiling budget). In addition, support of this proposed demonstration plant program will require that the Commission's FY 1972 outlay estimate be supplemented by $2 million to a total of $12 million (noting that this $12 million figure compares with the latest FY 1972 OMB ceiling of $6 million for the demonstration plant program). The total increase to the Commission budget authority from the OMB ceiling would be $72 million including increases for plant and equipment and demonstration plants.

As these complementary efforts on demonstration plants and supporting technology go forward, and as additional technical knowledge and engineering capability accumulate, it will be possible by about 1975 to initiate design of larger plants in the 800 to 1000 MWe size, the size range of most of the large commercial light water reactor plants now being constructed. By that time we will have substantial further experience from the light water reactor industry; from the design, construction and operation of the Fast Flux Test Facility; from continued operation of EBR-II, FERMI and SEFOR; from the design, engineering and development associated with the initial demonstration plants; and from LMFBR programs of other nations.

Although the proposed program will result in increased costs in the near term, the prompt initiation of multiple demonstration plant projects will immediately strengthen and add impetus to the entire breeder program, and provide the essential reinforcement and competitive capability. In this regard, we are working aggressively with the reactor manufacturers and the utilities to increase their participation in the program so as to significantly reduce the Government funding requirements, the eventual total cost, and the technical and financial risks. Thus, forceful Government leadership now could assure the initial operation of the first two plants by 1978 and 1979.

The completion of the program outlined above will bring the breeder system to fruition with a degree of assurance commensurate with its overwhelming importance. Moreover, it will provide total cost savings of major proportions to the Government, the industry, and the public. Not only will total development costs be reduced, but the potential savings from cheaper energy supplies over the remainder of this century alone have been estimated to be approximately $1 billion for each year by which commercial introduction of the breeder system is advanced. This estimate and other relevant information on costs and benefits were developed in the "Cost-Benefit Analysis of the U. S. Breeder Program" (WASH 1126), completed one and one-half years ago. That analysis strongly supported the position that the planned

breeder program justified the required investment of national resources many times over and presented strong arguments for its acceleration. Recent events have confirmed the importance and outlook for the breeder; it is apparent that the many benefits of early introduction of the LMFBR are far greater than those evident before. Consequently, this analysis is being updated to reflect important changes such as increased fossil fuel prices and heightened environmental problems.

During the 1970's it is estimated that the reactor and component manufacturers and the utility industry will make outlays of over $1 billion and commitments of many additional billions of dollars, as have been made in developing the light water reactor industry. In this regard, the Government outlays could be materially reduced and the overall plan importantly benefited by forceful actions on the part of the Government which would in turn serve to strengthen the willingness of the utilities to commit funds to energy research and development. Favorable action on legislation, such as that currently being discussed by the Interagency Power Plant Siting Group to enable utilities to obtain funds for research and development through their rate structures, also would assist in obtaining increased utility participation and thereby permit phasing down Government funding in future years.

The principal arguments against the program outlined herein are its requirements for significant advanced funding on a continuing basis, and for commitment of experienced personnel and other resources in the participating laboratories, the manufacturing industries, and the utilities. In this regard, it has long been recognized that the development of any breeder reactor concept would require large scale investments over a long period, with returns on the investment accruing at a late date. The investments required to successfully develop the light water reactors for commercial use provide a sound precedent for making such commitments. Developing the light water reactors required the investment of about $2 billion of Government funds; industry has made commitments thus far for plant and initial fuel in the amount of about $18 billion.

Proposed Legislation

Special legislation will not be required to implement this plan beyond that normally involved in AEC annual Congressional authorization and appropriation actions.

Summary

The early introduction of the breeder reactor is an urgent national need. Implementation of the proposed plan will meet this need and by 1980 will provide operation of a sufficient number of LMFBR plants of commercial size to demonstrate the technical capability and potential economics of the breeder system. Knowledge and experience gained from the demonstration plant program and from the concurrent base technology programs will provide the technical and economic justification for the manufacturing and utility industry to commit on a self-sustaining competitive basis to an increasing number of large breeder power plants. During this period, the implications of increases in electric power generating and other energy requirements, the environmental limitations on fossil fueled energy generating devices, the logistics problems of fossil fuels in a rapidly growing energy market, and the economics of large light water reactors (particularly relating to plutonium availability and use) will even more strongly reinforce the need for the Government to exert the leadership to achieve success in this decade.

We believe that implementing a national goal to develop and demonstrate the breeder reactor to a degree of maturity sufficient for broad, large scale commercial application by the end of the decade is technically sound, is economically justified, and is the decisive way to provide this Nation with a means for meeting its needs for abundant inexpensive energy with acceptable effects on the environment.

We will be pleased to provide you other available more detailed analyses of direct interest and importance to this subject, and look forward to discussing this vital matter further with you at any time you desire.

Sincerely,

Chairman

Enclosure:
Summary of LMFBR Estimated Outlay

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LMFBR Program Funding
($ in millions)

TABLE I

Total Program - FY 1972 thru FY 1980

| | |
|---|---|
| Research and Development | $ 1,505 |
| Plant and Equipment Obligations | 356 |
| Total Base Program | $ 1,861 |
| Demonstration Plants | 484 |
| Total | $ 2,345 |

TABLE II

FY 1972 Budgets for LMFBR Program

| | AEC Budget | OMB Ceiling Budget | Revised Program |
|---|---|---|---|
| Operating Costs | | | |
| Research & Development | $ 155 | $ 134 | $ 170 |
| Demonstration Plant Costs | 10 | 6 | 12* |
| Total Operating Costs | $ 165 | $ 140 | $ 182 |
| Demonstration Plant Obligations | $ 36 | $ 4 | $ 16* |
| Plant & Capital Equipment Obligations | $ 49 | $ 49 | $ 61 |
| Revised Program Change from OMB Ceiling: | | | |
| Budget Authority | | | $ +72 |
| Budget Outlays | | | $ +57 |

* Includes 2nd Demonstration Plant

Enclosure

UNCL. BY DOE
NOV 86

YASUHIRO NAKASONE

Member of
The House of Representatives

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Dr. Glenn T. Seaborg,
Chairman,
the United States Atomic Energy Commission
Washington D.C. 20545 USA

24th Oct. 70

Dear Dr. Seaborg,

I wish to thank you very much for letter dated 14th October 1970.

It is my greatest pleasure to know that your Commission is now reviewing the present policy regarding enrichment technology. Although it was your personal letter I took liberty to send copies of your letter to Minister of Foreign Affairs and to Director General of Science and Technology.

I hope that we would be in close contact with each on this question for the promotion of peaceful uses of atomic energy.

Yours Sincerely,

Yasuhiro Nakasone

Minister of States
Director General of
Defence Agency

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NOV 86

THE WHITE HOUSE

WASHINGTON

October 28, 1970

Hon. Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington, D. C. 20545

Dear Glenn:

The President has asked me to thank you for the report of your trip to Europe and the 14th general conference of the IAEA as the United States representative.

He was pleased, as I am, to learn that the French, Germans and British are making significant progress in the use of nuclear power for civilian energy production. In addition, your brief contacts with the Romanians and Soviets provide an opportunity for establishing better international understanding through science. This is encouraging and I know you will make every effort to keep open this important channel of communications.

With best regards,

Sincerely,

Peter M. Flanigan
Assistant to the
President

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

OCT 31 1974

Honorable Chet Holifield
Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

Over the past several weeks the State Department and the AEC have been reviewing the question of whether it would be appropriate to revise the current pattern of assessing the safeguard costs of the International Atomic Energy Agency, in view of the anticipated increase in IAEA safeguard costs associated with the NPT. As you are aware, it has long been the policy of the IAEA that the costs of safeguards should be shared by all of the IAEA member states, as part of the IAEA regular budget, in accordance with their normal rates of assessment. The rates of assessment of the IAEA are patterned after the UN scale and the U.S. currently contributes 31.5 percent of the IAEA budget.

We have supported this policy on the rationale that the application of IAEA safeguards is of benefit to the IAEA membership at large, and that all Agency member states, therefore, should share in the expense in accordance with the normal UN criteria for determining "ability to pay".

While supporting the present approach of covering safeguards costs under the Agency's regular budget, we have recognized from the outset that a strong argument could be made that the cost of safeguarding commercial nuclear power facilities should be borne, as have safeguards against other risks such as reactor hazards, by the member states which conduct these activities.

In recent months, the existing policy has come under serious attack, most notably from the developing countries, and there are strong pressures now in Vienna to change the arrangements. Moreover, it is quite clear that our ability to resolve this issue satisfactorily may affect the success of the safeguard negotiations called for by Article III of the NPT.

In summary, a substantial number of IAEA member states have expressed serious concern that the costs of IAEA safeguards will rise sharply and at the expense of other IAEA activities (including technical assistance) in which they have greater interest. It is also contended that the more

advanced states will account for the greatest portion of the IAEA safeguards workload and thus, should absorb the greatest share of the expenses. The developing countries, in particular, including some of our close allies, wish to be assured that their own assessments will not be greatly increased to pay for safeguard expenses, largely administered elsewhere. China, for example, which contributes 3.63 percent of the budget was among those strongly favoring a change in the regime.

I am enclosing with this letter the IAEA staff estimates for the costs of IAEA safeguards between now and 1980. These estimates, which probably are overstated, assume that IAEA safeguards will be applied to all non-nuclear weapon states. Additional application of Agency safeguards to all of the activities covered by the U.S.-U.K. voluntary offers of December 1967 would approximately double these costs. While experience suggests that actual expenses frequently lag behind such estimates and while it is probable that the IAEA may elect to safeguard only a representative sample of facilities in the U.S., these estimates are the ones most frequently cited in Vienna and they coincide with our own calculations of the most extreme case that has to be taken into account.

Proposals to change the system have been tabled in the Safeguards Committee, which has been meeting in Vienna; the most notable example being a joint Brazilian, Indian, Chilean and Philippine formulation which has received the strong support of several other delegations. This proposal (which is enclosed) contemplates that all of the IAEA member states would share, in accordance with their normal assessments, the costs of safeguarding R&D facilities, as well as the Agency's R&D expenses designed to improve and perfect safeguard procedures. The IAEA, however, would be fully reimbursed by the safeguarded country for the costs of applying safeguards to commercial operations (such as nuclear power plants, fabrication, and reprocessing facilities). Other proposals, favoring a change, also have been put forward but the Brazilian-Indian initiative appears to have the greatest support.

During the recent July meetings, the U.S. reiterated its support of the existing policy of assessing safeguards costs in accordance with the existing UN formula. We were joined in this connection by several advanced countries including the U.K., Japan, and the Netherlands. We indicated that the Indian formulation would be unacceptable to the U.S. since it departed from the principle of general sharing of the costs of safeguards by the world at large, and might discourage adherence to the NPT by countries with large nuclear programs. The Soviet delegation also endorsed the concept that all IAEA member states should contribute

to the costs of applying safeguards in the non-nuclear weapon states, but expressed the view that the U.S. and the U.K. should pay for their own voluntary offers. Canada appears to favor the Soviet approach.

Prompt resolution of the issue is important since the conclusion of any NPT safeguards agreement is dependent upon the inclusion of an appropriate financial provision in the agreement and the debate in Vienna will concern itself with the nature of this provision.

In our view, a great number of IAEA member states may vote in favor of the Brazilian-Indian proposal. We also believe that the majority of the developing countries will continue to challenge, with increasing vigor, the proposition that their own IAEA assessments should be increased significantly over the next few years to pay the costs for applying safeguards in a relatively limited number of industrialized states. While the actual dollar amounts that these states contribute to the budget in some cases are small, it is known that many have scarce foreign exchange resources, and that even a doubling or tripling of such modest contributions can be viewed by them as very serious.

In view of this critical situation, the State Department and the AEC have been considering whether there are any ways in which this issue might be resolved without creating a regime that would place an unfair burden either on the U.S. or advanced industrialized countries like Germany and Japan. In signing the NPT, both Germany and Japan made it clear, as part of their accompanying statements, that they would not expect the arrangements for financing NPT safeguards to place them at any unfair disadvantage.

As a result of our studies, we believe we have devised a formula that is sufficiently attractive to warrant our testing it out - first on other like-minded countries, and if they find it acceptable, then on a wider group of nations. We would propose to use this formula only as a fallback in the event our continued efforts to preserve the existing system prove unsuccessful. This formula, which is described more fully in the third enclosure to this letter, would provide that all IAEA member states would continue to contribute to the non-safeguards expenses, in accordance with their normal-scale of IAEA assessments. All member states also would continue to contribute to the safeguards portion of the budget on their normal assessed basis, until the costs of implementing safeguards exceeded a fixed percentage (e.g., 20 percent) of the non-safeguards budget. Thus, all states would continue to pay not only their current contribution to the cost of safeguards, but a similar share of the increased expenses to essentially twice their current level.

After this percentage is reached, however (and assuming 20 percent - this might take three to five years), the financing would be on the following basis. First, all members would continue to be assessed, in the normal fashion, for a portion of the safeguards budget totaling 20 percent of the non-safeguards budget. Second, the remainder of the safeguards budget (that is, the portion over 20 percent) would be financed among those states whose normal assessment to the budget exceeded a certain percentage. We would expect this percentage to be 0.1 percent but would be prepared to concede to 0.2 percent if that proved necessary in the negotiations. This formula, therefore, in our view would guarantee to the lesser developed countries that their own contributions to safeguards would not go beyond a fixed percentage of the non-safeguards budget and that any increases above this fixed percentage would have to be distributed among the more advanced states whose assessments exceed 0.1 percent (or, if necessary, 0.2 percent). This obviously would have a political appeal to many of the smaller states since 53 states have assessments of 0.1 percent or less. At the same time, it would not deprive the IAEA of significant revenues since these same states in toto contribute only 2.56 percent of the IAEA budget. (If one assumes a 0.2 percent cut-off point, the comparable figures are 63 states contributing 4.13 percent of the budget.) Everyone would be compelled to contribute to the Agency's safeguards costs up to a fixed percentage, but the contributions of the smaller nations, who generally will make no use of nuclear power, would be limited to perhaps a two fold increase above their present levels.

We believe this would be a far more attractive and equitable formulation than the Indian-Brazilian proposal since it would require advanced countries, not subjected to IAEA safeguards, like France and the USSR, to continue to contribute to the total safeguards budget whereas under the Indian-Brazilian formula such countries would have to contribute only to safeguards R&D and safeguarding R&D facilities. To put this point in perspective, the USSR (13.25 percent) and France (5.44 percent) combined contribute 18.69 percent of the total safeguards budget.

The proposal outlined above, however, would undoubtedly encounter some opposition since it may not correct any major discrepancies between the safeguards workload in some advanced IAEA member states and their assessed contributions to the safeguards budget. If one assumes, for example, a close correlation between installed nuclear power and the demand for safeguards, the U.S. (43 percent), Japan (6.3 percent), and the U.K. (6 percent) may (assuming full implementation of the U.S. and U.K. offers) account for 55.3 percent of the demand for safeguards in 1980 but based on the proposed revised formula only contribute 41.23 percent to the safeguards budget.

We will continue to make every effort to maintain the current safeguards financing policy under which the safeguards costs are included in the IAEA's regular budget. If it eventually appears necessary to go to a fallback position, we would move toward the position outlined above. Should this prove unsuccessful, it will, of course, be necessary for us to review the situation in order to seek to develop some alternative approach.

To facilitate the Committee's review of this proposal, we have prepared tables showing how this revised approach would affect the U.S. as compared to the current formula, where we contribute 31.5 percent of the budget for 1970. These tables indicate that even under the revised approach, the U.S. assessed contribution will not exceed 33 1/3 percent of the entire budget, which as you know, is the current Congressional limitation. Moreover, as reflected in the third enclosure to this letter, we would expect to have any such revised mode of assessments stipulate that no member would be expected to contribute as part of its regular assessment, more than one-third of the Agency's total regular budget.

As you know, the funds for the U.S. contributions to the IAEA assessed budget are budgeted by the Department of State. In view, however, of the Joint Committee's interest in this subject, I am also calling this matter to your attention.

I would be pleased to meet with the Committee personally to discuss this approach further should you desire.

Cordially,

(Signed) Glenn T. Seaborg

Chairman

Enclosures:
1. Cost Estimates for Safeguards
2. The Financing of Safeguards, GOV/COM.22/43
3. Proposed Safeguards Financing Formula
4. Tables

Distribution to Seaborg ltr to Holifield re safeguards financing

bcc:
Chairman (2)
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson
General Manager (2)
Secretariat (2)
OGC
OCR
AGMIA
IA:DD
A/AGMIA
IAEA Br:IA
AD/A&L:IA

Ambassador Glennan, US Rep to IAEA

Ward Allen, State

Sunday, November 1, 1970

I spent most of the day working on our book, Man and Atom.

I went for a hike in Rock Creek Park with Suki. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

I watched on TV the Washington Redskins beat the Denver Broncos, 19-3.

Monday, November 2, 1970 - Germantown

At 9:50 a.m. I presided over Regulatory Information Meeting 429 (notes attached). We discussed proposed rule changes in regard to the production of AEC Compliance Inspection Reports in AEC adjudicatory proceedings and evolved a tentative plan which will be brought back for further consideration. We learned that Vance Cooper has not been able to arrange for a satisfactory retirement plan with General Electric and thus feels he cannot accept the position of Director of the Division of Nuclear Materials Safeguards in the Office of Regulation. We discussed the draft answer to Senator Mike Gravel on the questions that he posed in his September 21, 1970 letter to Commissioner Larson and, in particular, the difficult question of his request for a copy of the famous Brookhaven (catastrophic accident) reactor analysis report, WASH-740; discussion of this will be continued on Wednesday.

At 11:30 a.m. the other Commissioners and I had a short stocktake meeting with Algie Wells, John Buck and Lawrence Quarles of the Atomic Safety and Licensing Appeal Board in order to hear a summary of their problems and progress. (A copy of the agenda is attached.)

I had lunch with Bob Hollingsworth, Ed Bloch and Julie Rubin. We discussed a number of current items, including the question of AEC advice to the National Security Council on DELETED Participation in this has been held up until now because of fear by the Administration that AEC involvement in this touchy question would result in a leak to the JCAE.

At 2:10 p.m. we continued the Regulatory Information Meeting 429. We discussed the amendments to 10 CFR Parts 20 and 50: Control of Releases of Radioactivity to the Environment, drafted in such a manner as to make these releases as small as practicable. We finally adopted these amendments for publication in the Federal Register, with a dissenting vote by Commissioner Thompson.

I then presided at 3:10 p.m. over Information Meeting 1074 (notes attached). We decided to pursue further the matter of moving the D.C. office to L'Enfant Plaza and should this not be possible, decided to press for such a move to another, better downtown site in the FY 1972 or 1973 budget.

I presided over Commission Meeting 2442 at 4 p.m. (action summary attached). We approved a draft response to IAEA Director General Eklund's letter of October 7, 1970 to Dwight Porter in Vienna (copy attached), suggesting items under which the U.S. agreement with the IAEA for safeguards development at selected U.S. facilities might be extended; our draft response (copy attached), to be signed by Ambassador Glennan, will accept Sigvard's suggested conditions.

We heard a briefing by Martin Biles on radioactive releases from various AEC production plants around the country. These are higher than we would like in

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 2, 1970

# REGULATORY INFORMATION MEETING 429

9:50 a.m., Monday, November 2, 1970, Room A-458, Germantown Headquarters

1. Senator Gravel's September 21 Letter to Commissioner Larson re Testimony before the Subcommittee on Air and Water Pollution Regarding S. 3042 (See also SECY-573 - Proposed Letter to Senator Gravel on S. 3042)

   Staff is to proceed as discussed. This item will be rescheduled for reconsideration on Wednesday, November 4. (DGM-ADRA-SECY)

2. Executive Personnel Item

   Commissioner Ramey will consider a telephone call. (SECY)

3. Dr. Beck's October 29 Memorandum re Reply to Mr. Morgan B. Huntington's Letter Transmitted by Senator Bible

   Approved with revisions. (DDR)

4. Nominees for the Advisory Committee on Reactor Safeguards

   Discussed and to be rescheduled. (SECY)

5. Nominees for the General Advisory Committee

   Discussed and to be rescheduled. (SECY)

6. Mr. Price's and Mr. Wells' October 23 Memoranda re Possible Rule Changes: Production of AEC Compliance Inspection Reports in AEC Adjudicatory Proceedings

   The staff recommendations are approved as revised. (ADRA-GC-SECY)

7. SECY-R 52 - Amendments to 10 CFR Parts 20 and 50: Control of Releases of Radioactivity to the Environment (See also SECY-R 53 and Mr. Price's October 23 Memorandum)

Rescheduled to the afternoon meeting. (SECY)

11:50 a. m.

**********

2:10 p. m.

8. SECY-R 52 - Amendments to 10 CFR Parts 20 and 50: Control of Releases of Radioactivity to the Environment (See also SECY-R 53 and Mr. Price's October 23 Memorandum)

Approved. Comments will be invited and discussion with industry and the Joint Committee staff is requested. Commissioner Thompson dissents. (ADRA-Congr.)

9. Chairman's Discussion with Mr. Charles Robbins, AIF, re Consultations on Environmental Statements

Noted. (Rubin-ADRA)

W. B. McCool
Secretary of the Commission

3:10 p. m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Price
Mr. Hennessey
Mr. Brown
Mr. Rubin
Mr. McCool
Mr. Bloch*
Mr. Beck*
Mr. Henderson*
Mr. Hanauer*
Mr. Shapar*
Mr. Low*
Mr. Giambusso*
Mr. Schur*
Mr. Wells*
Mr. Buck*
Mr. Rogers*

DISTRIBUTION:

Commissioners
Dir/Regulation
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

MEETING OF THE COMMISSION

WITH THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

MONDAY, NOVEMBER 2, 1970 11:30 AM G.T.

I. Summary of First Year's Work

A. Method of Work

B. Number of cases - types of action

II. Review of Problems Anticipated at Future Hearings

A. Substantive Matters

1. Research and Development

2. Monitoring

3. Codes and Criteria

4. Topical Reports

B. Problems of the Hearing

1. Breadth of issues, at operating stage particularly

2. Need for clarification - in various areas

III. Relationship to ACRS and Regulatory Staff

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 2, 1970

# INFORMATION MEETING 1074

3:10 p.m., Monday, November 2, 1970, Room A-458, Germantown Headquarters

1. Proposed Letter to Representative Dawson, Committee on Government Operations, re Report on FFTF

   Approved. (Rubin) Dispatched

2. SECY-578 - H.R. 18242 - National Environmental Policy Act Amendment

   Approved. (Rubin) Dispatched

3. SECY-573 - Proposed Letter to Senator Gravel on S. 3042

   Revisions and reconsideration on Wednesday, November 4 are requested. (Congr.-SECY)

4. Mr. Vinciguerra's October 30 Memorandum re D. C. Office Space

   Staff is to proceed as requested. (AGMA)

5. SECY-574 - Leasing of AEC Uranium Lands

   Noted. (RM)

W. B. McCool
Secretary of the Commission

3:50 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Brown
Mr. Rubin
Mr. Abbadessa
Mr. Kull
Mr. Price
Mr. Beck
Mr. Henderson
Mr. Buck
Mr. Wells
Mr. Rogers
Mr. McCool
Mr. DiNunno*
Mr. Erlewine*
Mr. Vinciguerra*
Mr. Quinn*
Mr. O'Neill*
Mr. Burr*
Mr. Hobbs*

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Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 3, 1970
Approved REH
Date

R. E. Hollingsworth, General Manager

ACTION SUMMARY OF MEETING 2442, MONDAY, NOVEMBER 2, 1970 , 4:00 P.M., ROOM A-410, GERMANTOWN, MARYLAND

SECY:RDL

Commission Business

1. Minutes of Meetings 2431, 2432 and 2433

   Approved, subject to Commissioner Thompson's request re Meeting 2433. (SECY)

2. SECY-556 - Agreement with IAEA on Safeguards Development at Selected U.S. Facilities

   Approved. (AGMIA/SMM)

3. SECY-527 - Report of Division of Inspection - July-September 1970

   Noted.

   The Commission requested:

   a. the Division of Biology & Medicine evaluate the credibility of a claim arising from the "Eazor" incident of 1963; and
   b. staff determine whether AEC's rules and regulations were compromised in the "Eazor" incident.

   (B&M/INS)

4. Briefing on Release of Radioactive Effluents

   The Commission:

   a. Requested companies interested in commercial reprccessing facilities be informed that preliminary fuel reprocessing plant designs should provide for limiting radioac-ive releases to the environment well below levels indicated in their license applications; and
   b. Noted the briefing would be presented to JCAE staff.

   (OS)

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

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INTERNATIONAL ATOMIC ENERGY AGENCY
AGENCE INTERNATIONALE DE L'ENERGIE ATOMIQUE
МЕЖДУНАРОДНОЕ АГЕНТСТВО ПО АТОМНОЙ ЭНЕРГИИ
ORGANISMO INTERNACIONAL DE ENERGIA ATOMICA

TELEPHONE: 52 45 11
52 45 25
TELEX: 01-2645
CABLE: INATOM VIENNA

KÄRNTNER RING 11, P.O. BOX 590, A-1011 VIENNA, AUSTRIA

IN REPLY PLEASE REFER TO
PRIERE DE RAPPELER LA RÉFÉRENCE:

7 October 1970

Sir,

I have the honour to refer to recent discussions between the United States and the Agency with respect to arrangements that might be concluded between your Government and the Agency to continue their co-operation in the development of safeguards after the expiration of the Agreement for the Application of Safeguards to United States Reactor Facilities of 15 June 1964.

During these discussions it was agreed that the main purpose of any such arrangements would be to assist the Agency in increasing the effectiveness of its safeguards through support of its present work in developing safeguards practices in respect of all parts of the fuel cycle, and in elaborating and testing new methods and techniques of applying safeguards. It was recognized that it would be desirable for the Agency that its safeguards staff should have the opportunity to familiarize itself with a wide range of facilities and particularly to concentrate its activities from time to time in areas of special interest to it.

In the view of the Agency and in accordance with the stated intentions of your Government, conditions for meeting this purpose could be created if your Government, in agreement with the Agency, would from time to time specify nuclear material and facilities associated with peaceful nuclear activities, in respect of which the Agency could apply its safeguards procedures and test its safeguards methods and devices for an agreed period of time. It would be understood that for that period the United States would allow the Agency to apply its safeguards procedures and/or its methods and devices in respect of such material and such facility.

The Honourable Dwight J. Porter
Resident Representative of the
United States of America to the
International Atomic Energy Agency
Permanent Mission of the United States of America
Schmidgasse 14
Vienna VIII

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It would be understood, moreover, that within the agreed period the United States could effect the termination of the Agency's activities in respect of specified nuclear material or a specified facility by giving the Agency two months' written notice. Equally, the Agency could, by written notice, terminate the application of its safeguards procedures in respect of specified nuclear material or a specified facility.

In applying its safeguards procedures and testing safeguards methods and devices the Agency would observe the principles set forth in Paragraphs 9 to 14 of the Safeguards Document (INFCIRC/66, Rev.2).

The basic safeguards procedures to be applied by the Agency pursuant to these arrangements would be those of the Safeguards Document. Particular understandings would be reached between the United States and the Agency concerning details of the safeguards procedures to be applied or tested in respect of specified nuclear material or a specified facility; these understandings could also include the records and reports systems that would be maintained pursuant to Paragraphs 33 and 37 of the Safeguards Document. The Agency would have the right to request the information referred to in Paragraph 41 of the Safeguards Document and to make visits as referred to in Paragraphs 51 and 52 of that Document.

The provisions of Paragraphs 1 through 7 and Paragraph 9 of the Inspectors' Document would apply, mutatis mutandis, to Agency staff applying safeguards inspection procedures or testing methods and devices, pursuant to these arrangements. It is proposed that the United States and the Agency would consult on the timing of visits to be made for the purpose of applying safeguards procedures or testing methods or devices, to take account both of the interests of the operator concerned and of the Agency's interest in meeting the purposes mentioned above. In order to create, to the extent possible, operational conditions, it would be understood that, in accordance with Paragraph 50 of the Safeguards Document, no notice need be given of visits for the purpose of applying safeguards procedures or testing methods or devices in respect of any specified principal nuclear facility or nuclear material to which the Agency would have access at all times in accordance with the Safeguards Document. The Agency would also be authorised to apply continuous inspection procedures in respect of a specified principal nuclear facility or of specified nuclear material to which it would have inspection access at all times in accordance with the Safeguards Document.

The provisions of the International Organizations Immunities Act of the United States would apply to Agency staff performing functions in the United States under these arrangements and to any property of the Agency used by them.

Each party to these arrangements would bear any expenses incurred by it in their implementation. The Agency would be ready to reimburse special expenses incurred by the United States or persons under its jurisdiction if they resulted from a written request by the Agency or its officials and if the United States notified the Agency in writing before the expenses were incurred that reimbursement will be required.

In carrying out its functions under these arrangements within the United States, the Agency and its personnel would be covered to the same extent as United States nationals by any protection against third-party liability provided under the Price-Anderson Act, including insurance or other indemnity coverage that may be required by the Price-Anderson Act with respect to nuclear incidents within the United States.

It is suggested that these arrangements remain valid for an initial period of two years from the date they are concluded and that they could be renewed by further exchange of letters.

If the foregoing proposals are acceptable to your Government, your written confirmation thereof and the present letter would constitute the arrangements, to take effect upon the date of such reply.

Accept, Sir, the assurances of my highest consideration.

Sigvard Eklund
Director General

APPENDIX B

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DRAFT RESPONSE

Dr. Sigvard Eklund
Director General
International Atomic Energy Agency
Kaerntnerring 11
Vienna 1, Austria

Dear Dr. Eklund:

I have the honor to refer to your letter of October 7, 1970, regarding proposed arrangements which would enable the Agency to apply its safeguards procedures and test its safeguards methods and devices with respect to certain specified nuclear material and facilities associated with peaceful nuclear activities in the United States of America.

The Government of the United States of America is pleased to cooperate with the IAEA in increasing the effectiveness of its safeguards, and confirms that the arrangements proposed in the aforementioned letter are acceptable. It is understood that these arrangements shall take effect as of the date of this reply and shall remain valid for an initial period of two years, and that they may be renewed by a further exchange of letters.

Accept, Sir, the assurances of my highest consideration.

U. S. Representative
to the IAEA

order to meet our responsibilities and in today's increasing climate of awareness of detrimental environmental factors, and we are taking steps to reduce the quantity of these releases.

I met with Bob Hollingsworth, Ed Giller and Julie Rubin to discuss methods of handling our participation in the NSSM 100 study; the problem here is the need to assure that there is no leak to the JCAE, and this is difficult to guarantee if all the Commissioners are informed.

I met with John Vinciguerra, Bill Riley, Sid Kingsley and Julie Rubin to discuss their interview with the person for whom Walter Lowery (President of Kawecki Berylco Industries, Inc.) has asked for a "Q" clearance for work on nuclear weapons in his plant. The individual has been interviewed by Riley and Kingsley with inconclusive results. The question of whether he should go through a Board hearing depends on the availability of evidence controlled by the Justice Department; I will call Attorney General Mitchell concerning this.

Suki and I took a hike in the Reno park area.

Dianne had her official birthday dinner with cake and candles and presents. Amy Ballou was her guest and had dinner with us.

Tuesday, November 3, 1970 - Germantown

I was visited by Bentley Glass (President-Elect, AAAS) from 10:40 until 11:25 a.m. He said he is representing a number of members of the Board of Directors of AAAS, who are concerned that my responsibilities as Chairman of the AEC might conflict with my responsibilities as president of the AAAS. He referred to such matters as the request by Muskie and Gravel to the AAAS to investigate the manner in which the AEC has handled the complaints of Gofman and Tamplin. He also mentioned the concern of younger members and students about the so-called "Establishment," of which the AEC is an outstanding example. I told him that, under the circumstances, I am inclined to withdraw my candidacy and to do so by writing a forthright letter explaining the reasons, which would be made public. We also discussed the refusal of the AAAS Board to approve a merger with Science Service and the Board's offer of management services to Science Service. I said that this would be carefully discussed at the meeting of the Science Service Board of Trustees next Saturday. I told Glass about the discussions that are underway concerning a possible merger of Science Service with the National Academy of Sciences, which I would regard as a much more satisfactory solution to the problem.

At noon I met with John Irwin (Under Secretary of State), Nicholas Veliotes (of Irwin's staff), David E. Biltchick (Member, Planning and Coordination Staff), Donovan Q. Zook (Director, Office of Atomic Energy Affairs, Bureau of International Scientific and Technical Affairs) and J. T. Kendrick (Acting Director, Office of Atomic Energy and Aero-Space, Bureau of Politico-Military Affairs) of the Department of State. Also present were Commissioners Ramey, Johnson, Thompson and Larson, Ed Bloch, Howard Brown, Abe Friedman, Ed Giller and Julius Rubin. The purpose of the meeting was to acquaint Under Secretary Irwin with the responsibilities and operations of the AEC, particularly as they involve cooperation with the Department of State. General Giller briefed the group on our nuclear weapons design testing and production program, including a description of a number of problem areas.

We then proceeded to lunch in the Commissioners' Dining Room (fourth floor), where we continued the discussion. In addition to those listed above, Bob Hollingsworth and Colonel Hudgins were present for the luncheon. I described

the overall organization and operations of the Commission, after which we went into a description of our plans to share our gaseous diffusion technology for the enrichment of uranium with European countries, Japan and Australia; our program and plans with respect to our gas centrifuge technology; the critical need to obtain funding for the Cascade Improvement Program and the Cascade Upgrading Program; and the need to come to some conclusions regarding policy to use in connection with our meeting with representatives of the Soviet Union on Plowshare, namely, the interpretation of the Limited Test Ban Treaty and the implementation of Article V of the Non-Proliferation Treaty.

I called Attorney General John Mitchell in order to bring him up-to-date on the latest development in the case involving the man I discussed with him on February 25, 1969. That individual has now come up for security clearance in view of fact that he has taken a new position where he would have access to weapons information. I told John that John Doherty and Benjamin Flanigan of the Justice Department are familiar with the case. John said that he had not been told about the new situation. I indicated that this has raised the question of whether this individual shouldn't go through a hearing process. We have sent to the Justice Department a draft of a proposed letter of notification that would be sent to the individual, provided Justice would be willing to release the information contained in the FBI reports- without the FBI information, a meaningful hearing could not be developed, of course, release of these data would involve the names of people in the Israeli Embassy. I said I am not at all sure that we should hold a hearing; alternatively, we could grant him clearance, but keep close surveillance over his activities involving the weapons aspects. John said he would take a reading on the case and would be back in touch with me. I offered to go over and talk to him after he has looked at the case, and he felt that that would probably be worthwhile.

I called both Phil Abelson and Dael Wolfle to tell them about Bentley Glass' visit this morning and that I plan to withdraw my candidacy in the race for the presidency of AAAS. I wanted each of them to know this because it was largely at their urging that I agreed to run for the office. I said I would write a simple letter of withdrawal which could be made public. However, I told Abelson I would hope that none of the writers of Science would play it up in any way; he assured me that this would not happen. Both Abelson and Wolfle were sorry to hear of this turn of events, but both understood my reasons for the withdrawal.

Fred Tesche dropped in to remind me that his tour of duty as Deputy Director, Division of Military Application, will come to an end next summer. He and Mrs. Tesche have decided they would rather not return to Los Alamos, and he would like to be kept in mind for assignment to one of our foreign offices that might be open at that time.

I sent my biweekly report to the White House (copy attached).

I received a letter from Under Secretary of State Irwin thanking me, in Secretary Rogers' absence, for sending the Secretary a copy of my report on my recent trip to Europe.

Suki and I took a hike in the Fort Reno area.

Before I went to bed I watched the election returns on TV. It was already apparent that Republican William Brock has beaten Albert Gore in Tennessee, that Republican Nelson Rockefeller has beaten Arthur Goldberg in New York, Stephenson has beaten Smith in Illinois and that Republican Glenn Beall has beaten Joseph Tydings in Maryland. It was also apparent that the Republicans have made slight gains in the Senate. The Democrats gained in the House and substantially in state governorships.

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# AEC BIWEEKLY STATUS REPORT FOR NOVEMBER 3, 1970

1. Chairman Seaborg and two other Commissioners met with Laurance Rockefeller in New York City on October 29 to discuss nuclear power and the environment. An AEC staff specialist appeared on a local TV program in Denver on October 28 to discuss criticism of AEC activities in Colorado, which were previously aired on that same program. An invitation to newsmen to attend a review of AEC's environmental research program at the Hanford Works (in Richland, Washington) resulted in several favorable news stories, including two by Gladwin Hill in the New York Times on October 25 and 26.

2. The AEC and the Pennsylvania State Government have agreed on a cooperative program of environmental radiation monitoring of nuclear power plants in that State. This is the first of several agreements that the Commission plans to enter into for state cooperation in collecting and evaluating environmental radiation data.

3. AEC is proposing to resume leasing uranium lands under its control in western Colorado. In many separate tracts, these lands comprise a total of about forty square miles. They were withdrawn from the public domain in the late 1940's and early 1950's, and some were previously leased under a program that expired in 1962. Because of a decline in productivity of mines in the area, a number of governmental and industrial groups requested AEC to make these lands available for exploration and mining. The proposal will be published in the Federal Register on November 10, and the public will have sixty days to comment.

4. The anti-nuclear book by Drs. Gofman and Tamplin, scheduled to be published November 16, is being promoted by a public relations firm, Ruder and Finn. There have been news reports that the firm is arranging a press conference in New York City during the week of the 16th. The book, entitled "Population Control Through Nuclear Pollution," is being published by Nelson-Hall, a small Chicago company. In addition, a major article about AEC in the January issue of Atlantic by Paul Jacobs reportedly will be quite critical.

5. In California, a group called the People's Lobby plans a campaign to collect enough signatures through the

initiative process to have a popular referendum in June 1972 on a proposal for a five-year state-wide moratorium on building nuclear generating plants. The nuclear plant moratorium is one part of a proposal consisting of about ten different measures concerning pollution. The People's Lobby, headquartered in Los Angeles, is reported to have 650 paid members in thirty-five California counties. Simultaneously with their California drive, the People's Lobby expects to launch similar efforts in three other states that have the initiative process - Oregon, Nevada, and Arizona.

6. The Argentine Atomic Energy Commission Chairman, Admiral Oscar A. Quihillalt, will meet with the Commission and staff on November 4 to discuss the growth of nuclear power in the United States and the AEC's fast breeder reactor program.

7. The twentieth anniversary of the AEC's Savannah River Plant (near Aiken, South Carolina, and the Georgia border) will be observed at a dinner given on December 7 in Augusta, Georgia. Chairman Seaborg will be the principal speaker.

Wednesday, November 4, 1970 - D.C.

Bob Hollingsworth, John Abbadessa and Vic Corso dropped in at 9:15 a.m. to tell me about the meeting that Abbadessa and Corso had yesterday with Jack Young of the OMB. The indications are that OMB will recommend shutting down the N reactor in order to save the $20 million in our budget which was identified in my telephone conversations with Cap Weinberger on September 14th. Also, Fred Schuldt has identified a more serious problem. OMB has noted that about $50 million of the payments for toll enriching, originally scheduled for receipt in FY 1972, will actually be received in FY 1971 because utilities are buying early in order to avoid our recent price increase for separative work. The extra $50 million in FY 1971 will go back to OMB and be lost to us, while the shortfall in revenues, amounting to $50 million in FY 1972, will have to be made up by corresponding budget cuts. The only way of avoiding this will be for me to talk to Weinberger to see if I can convince him that such a cut should not be made; I agreed to do this.

At 9:55 a.m. I presided over Information Meeting 1075 (notes attached). Abbadessa presented the problem posed by the $50 million shortfall of revenue from toll enriching in FY 1972. As the result of discussion with Abe Friedman, we identified the possibility of Germany increasing their pre-purchase of separative work, under our offset agreement with them, to add some $60 million that would be payable in FY 1972. This is a long shot, but a possible way out of our $50 million dilemma. Cutting our FY 1972 budget by $50 million will have an almost devastating impact on our program. We also approved a letter to Senator Gravel in response to his letter to Commissioner Larson of September 21, 1970; we didn't offer to furnish the working papers connected with the aborted 1965 revision of WASH-740, but did say that we will consider undertaking an entirely new revision of WASH-740 in view of the impending need to consider the extension of the Price-Anderson Act, which expires in 1977.

I then presided at 11:35 a.m. over Regulatory Information Meeting 430 (notes attached). We discussed the policy statement which we will publish in connection with the implementation of the National Environmental Policy Act of 1969 for AEC regulatory activities. We decided to consider this further in order to determine whether a grandfather clause is needed which would exclude reactors which are already undergoing the hearing process for a construction permit or an operating license.

This morning I received from Senator Coudé du Foresto (Chairman of the Information Mission on Nuclear Energy, France), with whom I met last July in Washington, a medal engraved in my name in testimony of gratitude for the reception given to the French Senate delegation at that time.

Commissioners Ramey, Johnson, Larson, Thompson and I met with Admiral Oscar Quihillalt, Chairman of the Argentina Nuclear Energy Commission. Others present were Donovan Zook (State Department), Bob Hollingsworth, Ed Bloch, Abe Friedman, Milt Shaw and Julius Rubin. We discussed generally the civilian nuclear power program in the United States and Argentina and the mounting activities of environmental groups in opposition to nuclear power plants.

Admiral Quihillalt, as well as Commissioner Thompson and Julius Rubin, rode with me to the Mayflower Hotel where I hosted a luncheon for him in the Virginia Room. Others present were Ambassador Pedro E. Real (Argentina), Commissioners Ramey, Johnson, Thompson and Larson, Dr. Jesse Perkinson (Organization of American States), Donovan Zook (State Department), Henry Kearns (Export-Import Bank); Bob Hollingsworth, Ed Bloch, Abe Friedman, Allan Dalton, W. Munster,

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 5, 1970
Revised

# INFORMATION MEETING 1075

9:55 a.m., Wednesday, November 4, 1970, Chairman's Conference Room, D.C.

1. Chairman's October 31 Letter to Chairman Chet Holifield, JCAE re Financing IAEA Safeguards

2. Mr. Abbadessa's Report on the Fiscal Year 1972 Budget Problems

   Staff will prepare material for the Chairman's discussion with Mr. Weinberger, OMB. (Rubin-OC)

3. Commissioners' November 11 Meeting with the General Advisory Committee

   To be rescheduled. (SECY)

4. SECY-584 - Columbia River Public Access

   Discussed and to be rescheduled. (SECY)

5. Report on N Reactor

   (AGMD&P-SECY)

6. SECY-590 - German Offset Agreement

   The proposed AEC position is to be drafted for early consideration. (AGMIA-GC-OC)

7. SECY-583 - Management of Source and Special Nuclear Materials

Noted. (SAGM)

8. Early Briefings or Discussions with Senator-Elect Humphrey and Others

Consideration is requested. (AGM-Congr.)

9. SECY-573 - Proposed Letter to Senator Gravel on S. 3042

Approved with changes. (Griffin-SECY)

10. AIF Speeches by Commissioners Ramey and Johnson

To be circulated for the Commissioners' comments. (SECY)

11. SECY-491 - Comments on H.R. 18214: Office of Consumer Affairs and Consumer Projection Agency; and,
SECY-581 - Supplement to SECY-491

Approved. (EAGM)

12. Mr. Hennessey's November 3 Memorandum re Letter to OMB on Legislative Program, CY 1971

Approved with Item 5, Page 3 of Enclosure 2 deleted. (GC-Rubin-SECY)

W. B. McCool
Secretary of the Commission

11:35 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Abbadessa
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. Corso*
Mr. Quinn*
Mr. Keto*
Mr. Hoyle*
Mr. Friedman*
Mr. Flaherty*
Mr. Price*
Mr. Henderson*
Mr. Ryan*

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General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 20
November 4, 1970

# REGULATORY INFORMATION MEETING 430

11:35 a.m., Wednesday, November 4, 1970, Chairman's Conference Room, D.C.

1. Mr. Price's October 30 Memorandum re Safety Guides

   Approved. (ADRA)

2. SECY-R 72 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

   Alternatives for consideration tomorrow are requested. (GC-ADRA-SECY)

3. Draft Rule

   Scheduled for consideration tomorrow. (GC-ADRA-SECY)

W. B. McCool
Secretary of the Commission

12:00 N

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Price
Mr. Henderson
Mr. Beck
Mr. Hennessey
Mr. Shapar
Mr. Hanauer
Mr. McCool
Mr. Hollingsworth*
Mr. Bloch*
Mr. Kull*
Mr. Wells*
Mr. Buck*
Mr. DiNunno*
Mr. O'Neill*
Mr. Bibb*
Mr. O'Neill*
Mr. Case*

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General Manager
General Counsel
Secretary

*Attendance by Topic (s)

Julius Rubin, Milt Shaw, Lester Rogers, and Merrill Whitman (AEC). During luncheon Admiral Quihillalt told me that many people in Argentina, including himself, are frightened by the new regime of the Marxist President Allende in Chile. They feel this could lead to collaboration with the Soviet Union in the installation of weapons of war in Chile that could be a threat to Argentina. He said he has received many letters from scientists in the Chilean nuclear energy program and other programs asking for employment and asylum in Argentina.

After the lunch I made some welcoming remarks. I emphasized my long relationship with Admiral Quihillalt, dating back to our first meeting in Vienna in September 1961, and the AEC's long relationship with him and the Argentine atomic energy program. I noted particular pleasure at having Henry Kearns present, recalling that we have known each other for 25 years, since we met in Chicago. I recalled with pleasure my trip to Argentina in July 1967 and also recalled subsequent trips by Commissioners Johnson and Thompson and the many trips of Admiral Quihillalt to the United States. I made note of the fact that there are some 30 Argentine nationals on assignment to AEC and AEC contractor laboratories and that the total over the years amounts to much more than this. After the lunch Admiral Quihillalt presented me with a glass ashtray, colored yellow with uranium nitrate.

Keith Glennan called to say that Eklund asked him to pass on to me that he would propose that since I will be President of GENEVA IV, a Russian would be named to sum up the Conference. I said this is perfectly satisfactory to me, and Glennan will pass this word back to Eklund.

Roger Batzel called me with respect to Gofman's October 29th letter to me. He saw Gofman on November 2nd, and Gofman mentioned that he has written to me and gave Batzel a copy of the letter. Gofman objects to this "further reprisal" against him, and he went on at some length about the fact that Myron Bender had been previously hostile toward him and that Patau had reviewed a paper of his in a very negative way. Gofman then went on to name people whom he thought would be able to review his work on chromosomes objectively: Dr. Mortimer Mendelsohn (University of Pennsylvania), James German (Rockefeller University), Victor McKusick (head of medical genetics at Johns Hopkins), Samuel Epstein (Children's Cancer Institute in Boston) and Charles Legatur (head of cytology and genetics at U.S. Food & Drug Administration). This is a regular review of everybody's work at the Laboratory in the field of ecology studies. Bender, Patau and about a half-dozen others will conduct the review. Gofman is objecting to having his work reviewed by Bender and Patau. Batzel said they could add someone to the group who would be considered friendly by Gofman in order to soften the situation, or they could reconstitute the review group completely, if either of these alternatives seems desirable.

Batzel said that Gofman, when not travelling, spends essentially all of his time at the Laboratory. I said I understand Gofman has quite a book coming out soon. Batzel said that Gofman told him there will be a press conference on November 16th to introduce the book. I asked Batzel to pass on to Gofman that I expressed curiosity about the book and that I hoped he wouldn't misquote me, as he has in the past. I said I'm not neglecting Gofman's letter but I am swamped with other problems at the moment. Batzel said he is seeing Commissioner Thompson at 2 p.m. on Friday, November 6th and we agreed that he would come in to see me at 1:45 p.m.

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In the course of his conversation with Tape, David asked: suppose one did change things like having declassification or classified exchanges, how this would affect Congress. Tape told him that Congress would very definitely be involved in the necessary agreements. He said that David "groaned." Tape went on to suggest that they should explore ways to reach the members of Congress; for instance, Holifield wants progress in the fast breeder field so badly that he would do almost anything to get it. Likewise, everyone on the Hill has some facet of a program that he would like to see moved, and although he might be obstinate, he would not be impossible. Tape said I may remember a conversation of Harold Agnew's last August 30th when Holifield talked to me. I said I certainly do. I said I don't know how much he's followed up, but there are some things that are very important to him. I said I would try to remember it when I talk to him again. Tape thinks David is getting better rapport with the staff, with Weinberger, etc. I said we had a letter from McCracken asking how we could speed up the breeder program. I don't think it will reach Shultz and Weinberger in a form they will embrace, but I may send a copy of the letter to David.

Tape also mentioned to David that he, Heffner and Moe should see the Soviet films on Plowshare. Tape thinks there will be some follow-up on that. Gordon Moe, a former Sandia man, now works in OST; he works closely with John Kelly, and he is very much pro-Plowshare. Tape thinks that the attitude in OST now is not quite as negative on Plowshare as it used to be.

I received a letter from Donovan Zook enclosing copies of three letters they have sent to the White House (copies of all four attached) to express their concern on the foreign policy aspects of the problem on U.S. fuel enrichment capacity to supply civilian power reactors in other countries.

The Commission today reported an apparent new Soviet underground nuclear test at the Semipaltinsk test site. Signals indicated an explosion of a force equal to 20,000 to 200,000 tons of TNT.

Attached is a memorandum of conversation between Keith Glennan and Robert McNamara (President of the World Bank) that took place today on possible modification in the World Bank's attitude on nuclear power projects.

Thursday, November 5, 1970- D.C.

At 10 a.m. Commissioners Ramey, Thompson, Larson and I met with lawyer members of the Atomic Safety and Licensing Board Paenl in Room 1027. They were: J. D. Bond, Samuel W. Jensch, Valentine B. Deale, Arthur W. Murphy, Robert N. Lazo, Walter T. Skallerup and Algie A. Wells. Others present were John Buck, Joe Hennessey, Marc Rowden and William Parler. I made a few welcoming remarks, describing my pleasure at seeing them in person after reading many memoranda covering their decisions, etc., and even seeing their pictures in the news media since I met with them at Airlie House last spring. I emphasized to them that the hearing process is assuming increasing importance and can be considered to be on trial because of the many interventions now under way. I said that it is important that the hearings be conducted in such a way as to be fair to the applicants and intervenors, but they must also bear in mind that in the present critical situation the hearings must be conducted in such a way that the process

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DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF INTERNATIONAL SCIENTIFIC
AND TECHNOLOGICAL AFFAIRS

November 3, 1970

Dear Mr. Chairman:

As a follow-up on our discussion with Acting Secretary Irwin at lunch this noon concerning the problem on U.S. fuel enrichment capacity you may be interested in seeing three letters which the Department has sent to the White House to express our concern on the foreign policy aspects of this question. On September 1, 1970, Alexis Johnson, as Acting Secretary of State, wrote to Dr. Kissinger in the White House soliciting his support in enabling the U.S. to continue discussions with other governments on the future availability of enriched nuclear fuel. On the same day he sent a copy of this letter to Mr. George Shultz, Director of the new Office of Management and Budget.

I have followed up on this matter with Colonel Behr in Dr. Kissinger's office and with OMB, reinforcing with both of them our keen interest in this problem and the handicaps which continued uncertainty would present in our relations with the countries concerned. At Colonel Behr's request I sent him some of the pertinent information regarding the new Swiss proposal and once again asked the NSC to lend their support toward some constructive resolution to the problem. Copies of all three of these letters are enclosed for your information.

Honorable Glenn T. Seaborg,
Chairman,
U.S. Atomic Energy Commission.

In talking with the NSC and OMB staffs I have emphasized that the State Department concern on this subject was a spontaneous one related to our assessment of the foreign policy consequences which could be anticipated if the U.S. cannot enter into additional agreements for enriched nuclear fuel. I did not want the other people concerned to assume that we were simply echoing an AEC position regarding a difficult budgetary problem.

Herman Pollack plans to talk with Donald Rice at OMB on this, but has not yet reached him. Under Secretary Irwin now plans to raise the issue again with Dr. Kissinger in one of their regular conversations and we shall consider the possibility of a letter from the Secretary of State to the President to register the importance which we attach to this problem.

I thought the Commission's briefing for Mr. Irwin went exceedingly well. We all benefited from it. Thank you for the pleasant luncheon.

Most cordially,

Donovan Zook

Donovan Q. Zook
Director
Office of Atomic Energy Affairs

P.S. (added 11/4/70) I had an unexpected opportunity last night at a State Department social function to have a rather lengthy discussion of the CIP/CUP question with Dr. David, the President's new Science Adviser. He appears to be very much involved in the decision, and was commenting that he had never seen a comprehensive study of the total long range picture: i.e., CIP/CUP, tails assay, pre-production, fourth plant in U.S., additional major production abroad, diffusion vs. centrifuge, and the emergence of commercial-scale

breeder technology--all interrelated. I tried to emphasize that (from our State Department standpoint) the commitment to increase the production of present plants could not be deferred until final decisions had been reached on all the other factors he had enumerated--at least not if we were to maintain our posture as dependable suppliers of fuel for American-type reactors. He also wondered whether it might not be better to let countries such as Switzerland, Sweden, and Japan go ahead with independent centrifuge capacity to meet their own enrichment needs. I explained why I did not think this would be a desirable solution.

Enclosures:

1. Letter to Dr. Kissinger, 9/1/70.
2. Letter to Mr. Shultz, 9/1/70.
3. Letter to Col. Behr, 10/30/70.

DEPARTMENT OF STATE
WASHINGTON

10880

September 1, 1970

Dear Henry:

We are concerned about foreign policy aspects of the approaching exhaustion of U.S. uranium enrichment capacity available for supplying civilian power reactors in other countries. We believe these aspects should be carefully weighed when the Administration reviews, in connection with the Fiscal Year 1972 Budget, proposals for improving the output of the AEC's gaseous diffusion facilities.

Although these facilities are currently operating below full capacity, it is anticipated that future commitments to supply enriched fuel for reactors firmly scheduled for construction here and abroad by 1973 will commit our total capacity. Accordingly, in negotiating bilateral nuclear cooperation agreements, we are committing ourselves to provide fuel only for reactors on which construction can be scheduled to start before the end of that year.

Since this is a long lead-time industry, our inability to enter into discussions on a realistic basis for long-term advance planning of power needs of other countries threatens both to limit our influence in civil reactor programs abroad and to become a serious deterrent to U.S. exports in this field.

The Honorable
Henry A. Kissinger,
Assistant to the President
for National Security Affairs,
The White House.

This situation could lead to major losses from a balance of payments standpoint. Moreover, it could adversely affect our non-proliferation objectives. Other countries would have increased incentive to proceed with wholly independent uranium enrichment capabilities, whereas we may hope to limit or influence this by improving our own capacity and by proceeding with the cooperative steps outlined in the Under Secretaries Committee's memorandum of February 26, 1970, for the President. Other countries could also be encouraged to turn to natural uranium reactors, which are more troublesome from the standpoint of proliferation.

We are not, of course, in a position to endorse specific budgetary requests that the AEC may submit. However, for the foregoing reasons, it is important that the U.S. make a firm commitment to enhance our capacity to meet constantly increasing requirements, and it is on this basic point that we are soliciting your support.

I am sending a copy of this letter to George Shultz so that the Office of Management and Budget may also be aware of the Department's interest in this matter.

With all best wishes,

Sincerely,

Acting Secretary

cc: Mr. Shultz

DEPARTMENT OF STATE
WASHINGTON

September 1, 1970

Dear George:

I am enclosing for your information a copy of my letter to Henry Kissinger on the subject of inadequacy of US uranium enrichment capacity. I hope it will be possible for the Department's views to be taken into consideration in the decisions made regarding the US uranium enrichment plants.

With all best wishes,

Sincerely,

Acting Secretary

Enclosure:

Copy of letter to
Dr. Kissinger.

The Honorable
George P. Shultz,
Director,
Office of Management and Budget.

BUREAU OF INTERNATIONAL SCIENTIFIC
AND TECHNOLOGICAL AFFAIRS

October 30, 1970

Dear Bob:

In connection with our telephone conversation yesterday on the foreign policy problems stemming from the imminent exhaustion of U.S. enrichment capacity for prospective foreign purchasers, let me jot down some of the key figures in the Swiss case which prompted my call to you.

The Swiss now have one 350 megawatt reactor in action; two others will be completed within the next two years, bringing their total nuclear capacity to 1006 megawatts by 1972.

With their present reactor they produced 8% of their total electrical energy from nuclear sources in 1970. By 1980 they anticipate that between 35 and 40% of their total power production will be nuclear.

This increase will be achieved through construction of three large new 850 megawatt reactors which would be scheduled to start operation in 1974, 1976, and 1978. The long-term fuel requirements for these three projects are estimated by the Swiss to necessitate an increase in the quantity authorized for sale in our bilateral agreement from the present level of 30,000 kilograms of U-235 to 80,000 kilograms.

Colonel Robert M. Behr,
National Security Council,
Washington, D.C. 20506.

As I understand it from AEC this increase would carry us beyond the limit of U.S. plant capacity unless something is done to modernize and upgrade the present plants.

Of course Switzerland is only one country of many which will be presenting us with this dilemma as the months go on. We will naturally start talking with them but under present conditions I would not want to initial an international agreement incorporating these new figures until we have some more concrete assurance that U.S. plant capacity will enable us to deliver the goods when the enriched fuel is needed.

I hope that we can continue to count on your office to lean in the right direction with sufficient weight to obtain some constructive resolution to this problem. Otherwise we risk substantial losses both from the balance of payments standpoint and the maintenance of U.S. influence in the civil nuclear programs of other countries if they conclude that they cannot depend upon us as a reliable source of supply for enriched nuclear fuel. We make such sales on terms which reinforce our foreign policy objectives in this field. It would be regretable if we were to lose this leverage.

The Swiss request underscores the urgency of this problem. Unless some prompt solution is found we are in effect telling other governments and American manufacturers that we have no more capacity for fueling US-type reactors in the rest of the world.

Please let me know if there is any more we can do to underscore the importance with which the Department views this from a foreign policy standpoint.

Most cordially,

Donovan Q. Zook
Director
Office of Atomic Energy Affairs

MEMORANDUM FOR THE FILES

November 6, 1970

SUBJECT: IAEA: Discussion between Mr. Robert McNamara and Dr. T. K. Glennan, Wednesday, 4 November 1970

As a result of discussions with representatives of two or three of the lesser developed countries while in Vienna, Dr. Glennan has come to the conviction that it may be time for the Agency to become more active in seeking ways to help LDC's acquire nuclear power plants of a modest size--say 200 to 350 megawatts. Discussions with Agency personnel, including the Director of the Reactor Division and the Director General, have revealed a lack of enthusiasm resulting from a conviction on their part that reactor manufacturers in the advanced nations are not interested in designing, building and selling units of the capacity suggested. Even if they were, the Agency has been unable to convince financial institutions such as the World Bank that development funds should be made available for the underwriting of the higher capital costs associated with nuclear power plants.

Dr. Glennan's reasons for developing an interest in this matter result from the following considerations:

(1) The Agency's understandable preoccupation with Safeguards gives many of the smaller member nations a feeling that other aspects of the Agency's program are being somewhat slighted. It is probable that this is not the case, but the appearance of diversion of effort remains.

(2) NPT Safeguards activities will require a steadily increasing share of the Agency's regular budget, with the result that, although there may be a small increase in the non-safeguards portion of the budget, Safeguards costs will represent an increasing fraction of the

total budget in the years ahead. Today, the Agency is able to respond to less than one-third of the valid requests made by member states for technical assistance.

(3) In the opinion of Dr. Glennan, the Agency can use a "shot in the arm" in the form of several new initiatives through which assistance may be provided to developing countries.

(4) The present world-wide shortage of fossil fuels is likely to persist and may be accentuated as concern for environmental pollution becomes a way of life. At the same time, energy demands are likely to accelerate as population increases and more of the small nations move toward a higher degree of industrialization.

(5) Apparently, there does not exist an up-to-date hard-headed study of the probable need for electrical energy developed on a country-by-country basis in the LDC's around the world. Thus, it is difficult, if not impossible, to define the market for nuclear power plants of a modest size in the LDC's over the next ten to fifteen years.

Dr. Glennan had learned from Eklund that McNamara had been unresponsive to suggestions by Eklund that the World Bank provide funds for nuclear power plants in LDC's. Apparently, there have been no recent discussions between Eklund and McNamara on this matter, and Eklund has been quite discouraged about pursuing this subject in the recent past.

On Wednesday, 4 November, Glennan met with McNamara at the World Bank for 45 minutes. After describing the Agency's operations, Dr. Glennan discussed the possible need for nuclear power plants of a modest capacity in many countries during the next ten to fifteen years. He recalled Dr. Eklund's statement that the World Bank had seemed to have a negative attitude toward financing nuclear

plants. McNamara broke in to say that he had come to the conclusion that a good many developing nations could justify "going nuclear;" that it was possible to differentiate between those situations where nuclear plants were being proposed largely for prestige reasons and those where the country's economy and electrical power grids could utilize nuclear plants of modest capacity. McNamara seemed to believe that "going nuclear," where reasonably justified, would provide a catalytic effect on the technological, educational and economic development of a nation. He compared the nuclear and space fields to the detriment of the latter. His earlier question concerning appropriate Bank policy resided partially in his uncertainty as to the quality capability of foreign reactor producers to match US capabilities in this field.

Some months ago, McNamara had asked his engineering people to study the capability of other than US companies to design and produce nuclear power plants at costs and of a standard of quality and reliability that would assure across-the-board competition with US companies. During the meeting, McNamara spoke to his Chief Engineer and found that the study should be ready by 1 January, and that present indications are that findings will be positive. The Bank then will consider requests for developmental assistance for the building of power plants in developing nations giving nuclear plants consideration equivalent to that given to conventional plants.

Mr. McNamara stated that the Bank will be undertaking in depth studies in an effort to develop world development strategies in a number of fields--education, population control, agriculture, energy, etc.--but believes that it is not possible to explore all of the areas needing attention at the same time. Apparently, an energy strategy is not included in the immediate priorities of the Bank even though at least 20% of their funds are devoted to the underwriting of generating plants at the present time. He would welcome--the Bank would welcome--the undertaking of a world-wide survey of energy needs in the developing countries. But he emphasized the necessity for hard-headed, realistic, professional studies. It is possible, though

not discussed with McNamara, that the Bank would cooperate in any such study, but that that cooperation would be conditioned on the professional competence evidenced in the design and manning of the study.

It would appear that there is a real opportunity for the IAEA and the nuclear industry to take a look at the developing market for nuclear plants in the 200 to 350 megawatt range in the next 15 years. It is suggested that the stakes are high, the international scene is in need of leadership in an approach to realism in the satisfaction of energy needs in developing countries, and several indicators suggest that nuclear technology can provide a catalytic effect in furthering economic development in many LDC's.

The question remains--how to get on with this task? Is it worth the effort? Who will ride herd on the study, if any? Basically, what is the US interest in an effort of this kind?

cc: SCI - Mr. Pollack
SCI/AE - Mr. Zook
- Dr. Loftness
USAEC - Mr. Kratzer
IO - Mr. DePalma

TKGlennan:fej

will remain viable in order to assure the future proper development of nuclear power in the United States.

The ABEYTAS event was conducted at the Nevada Test Site at 10 a.m. this morning. This test was in the yield range between 20 and 200 kilotons.

I was interviewed and filmed for the documentary, "Projection '70- Medicine," which is being done by Cinecraft for Standard Oil of Ohio. Present were: William Buckeley (Director), and members of the crew Morton L. Miller, James M. Mullen, Harry G. Horrock and Jerome K. Woodard. Stan Schneider was also present.

I received a call from Athelstan Spilhaus (returning my call to him yesterday). I told him I have sent in the letter supporting him for his fellowship and have received an acknowledgement; he thanked me. I then told him of the peculiar session I had on Tuesday with Bentley Glass. I said Bentley was nervous (certainly not comfortable) and said a lot of things that didn't make sense, such as (1) the Board was unaware that I would be continuing as Chairman of the AEC, (2) the nominating committee was separate from the Board, although he did say later that Mina Rees was on the committee, and (3) that the vote to turn down the merger with Science Service was unanimous except for Spilhaus. I said Glass apparently did not know that AAAS has been offering me the presidential nomination for years. Spilhaus said he was on the nominating committee and to his knowledge the question of whether I was continuing as Chairman of the AEC never came up. Spilhaus said the whole thing is nonsense. He said it was started by Barry Commoner, who wrote a letter to the Board members and Bentley followed it up. He said he doesn't think I should withdraw on any account- for one thing, it would foul things up at this late date; also, it is not a Board view. When I mentioned a possible conflict regarding the Tamplin-Gofman matter, he said the Board has not yet discussed a policy to follow concerning grievance cases of scientists; this will be done at the December 12th meeting of the Board. He said he is against AAAS getting into any evaluations of this sort; he doesn't think this is the Board's function.

Spilhaus said he thinks it would be a mistake for me to withdraw now. Instead I should run, and if I were elected and a conflict did arise, I could resign at that time. I asked if he thought Bill Golden had a role in this; he said he didn't know, although it is his feeling that Commoner is the only one behind it. I said I would think about it some more, even though I did indicate to Bentley that I would do as he suggested. I asked him if he would call Bentley and check out the things that are confusing to me, especially the ones I previously enumerated. He said he would call him about it and would also advise him that he (Spilhaus) advised me not to withdraw. I asked him to ask Glass to call me, as I feel he owes me an explanation on some of these statements.

I had lunch with Joe Alsop at the Rive Gauche Restaurant. Joe opened the conversation by saying he wanted to discuss with me our country's fast breeder program on the basis of the article by Bloom and myself in Scientific American. He is a regular reader of this magazine and had a reprint with him. I explained to him the nature of the fast breeder, the USAEC development program for it, the time scale and the reason for the rather long time scale. I described for him the difference between the U.S. approach and the U.K. and Soviet approaches to the development of the fast breeder.

He then went on to give me his views on the possession of the atomic bomb by Israel. He said that he has definitely concluded that Israel has the capability and has actually manufactured some atomic bombs and implied that he has checked this out with Dick Helms, who apparently did not disagree. I indicated I don't feel he was necessarily correct in this conclusion. He then went on to say that

he had discussed this with a rather high official in Israel during a recent visit there. He confronted this official with the direct statement that he knew that Israel had the atomic bomb and that the discussion ought to proceed from that point of reference. The official seemed to be persuaded to accept this as a basis for discussion and even went on to say that if Alsop knew this, he knew more than Abba Eban. The official then seemed to loosen up a little and indicated that this information is fairly well spread throughout the officials in Israel. He said that in fact this is part of a philosophy that states that if Israel is not allowed to exist, then it doesn't matter whether the rest of the world continues to exist.

Alsop said that he had passed all of this information on to Dick Helms and that he is going to see Henry Kissinger tomorrow in order to apprise him of it. Alsop conjectured as to whether Israel might have some terrible weapon based on the atomic bomb, such as the cobalt bomb. I explained to him that there has been a good deal of misunderstanding about this particular concept and such a weapon would, in fact, not be so much more effective than an atomic bomb. He wanted to know what kind of a nuclear weapon I think Israel would be capable of building; I said that I consider them capable of building an atomic bomb but not a hydrogen bomb at this time. In answer to a question I also expressed the opinion that I doubt that they have missile capability to deliver such a bomb onto the Soviet Union. I reiterated that I am not convinced that Israel actually has the atomic bomb at this time and said that I was merely answering his hypothetical questions. Toward the end of the luncheon he indicated, with respect to the elections held the day before yesterday, that he thinks these were a much greater victory for President Nixon than has been generally thought, and that his column tomorrow will be on this theme. Following the luncheon he rode with me to his home at 2720 Dumbarton Avenue, N.W., where we said goodbye.

Shermer L. Sibley (President, Pacific Gas & Electric Company) called me regarding the timing of a decision on their DIABLO No. 2 Unit. They are deeply concerned because this decision, if delayed, would be affected by the Practical Value Bill which passed the House, is now before the Senate, and could become law within seven days after Congress returns on November 16th. The bill has some built-in delays, including an eight weeks posting, which the opposition will certainly seize upon to force reopening of the case, with untold delays. Sibley said this would force them into a desperate situation with regard to power supply as well as added cost. He said Hennessey is completely familiar with this. Also, Holifield is aware of this situation, and, confidentially, he thinks that Holifield may be talking to Ramey to do something to get this going. Sibley said this case needs a good boost. I said I would look into the situation.

From 3:15 p.m. to 5 p.m. I attended a meeting that President Nixon, George Shultz and Caspar Weinberger had with heads of agencies in the Roosevelt Room of the White House. The purpose of the meeting was to brief the heads of government agencies that have substantial or appreciable budgets on the FY 1971 and FY 1972 budget situation. The briefing was conducted by the President, Shultz and Weinberger.

The President entered the room at 3:32 p.m. He began his remarks after a friendly greeting by saying that he had spoken to the members of the Cabinet this morning along the same lines as he was now about to talk to the heads of agencies. He said that last year, being the first year in which his Administration had put together a budget, was a sloppy one. He said that he heard oral arguments by the Cabinet officers and the heads of agencies on the one hand, and the Director of the budget on the other, and he has concluded that this is not a good system. This year they are doing it differently. He and the

budget people have been digging into this matter for some three months now and he has himself decided on the budget and the individual figures for the departments and agencies. The President said it is his budget and it is up to Cap to carry it out. He said he doesn't mean by this that no changes at all can be made. If a department or agency head wants a change, he can prepare a memo stating concisely the case for his request. The President said that he will then take a look at it and may sometimes determine that a discussion with the Cabinet officer or agency head should be held or, in rare instances, that a discussion with a broader group, like the Cabinet, should be held. Such a conference can only be held on the basis of new evidence which will determine the need for an oral hearing and such a request means that the department or agency head wants to convince the President to change his mind on a decision he has already made.

The President then went on to say that he would talk next about overall matters. He said his Administration could, of course, adopt the Samuelson theory of spending to fill the unemployment gap and added that this, however, would be inconsistent with his philosophy. He rejects that philosophy. He made it clear that he wants an improved budget situation in FY 1972. He added that far more than monetary policy affects our economy. As an example, he said the Federal Reserve Board could further tighten up on money, which he thought would be a disaster, indicating that, if anything, monetary policy could be more liberal. However, if we want the Federal Reserve Board to continue an expansive monetary policy, we simply must balance the budget.

The President said that he thinks things are looking up. We have cut the rate of inflation in half and he feels that the monetary and fiscal policy is being played at just about the right level now. He said he feels that we are moving toward a heavy growth in the economy in FY 1972. He recalled that the monetary slowdowns in 1954, 1958, and 1960 came, unfortunately, in election years. This year we had a somewhat similar situation but survived the election much better than had been the case for the Republicans on those three previous occasions. He made it clear that he is aiming for 1972. He said that some people think that this or that program is essential to the 1972 elections and gave as examples, federal contracts in local areas, etc. He said he estimates that these affect a national election (like that in 1972) by about half a point, but the economy can affect it by about five points.

The President asked each of us to put himself in his place as help in determining how we will react. He said that many of those present in the room had gone out and made speeches in the recent campaign and indicated that this had shown it to be very worthwhile. The President emphasized that he feels his efforts during the last two weeks have been very much worthwhile. He said that five weeks ago the Administration's own private polls, in which he has great faith, showed that it was about to lose three seats in the Senate and that it was essential to avoid this. The needed presidential leadership in the foreign policy area is now possible as a result of the election. The results are not nearly as bad as they were in 1958, and he said he thinks all have done extremely well. The gain of two in the Senate is really more than that because of such changes as Lloyd Bentsen for Ralph Yarborough in Texas and James Buckley for Charles Goodell in New York. These will aid in the foreign policy area. He indicated that the loss of state governorships was not all that important, and he alluded to that in his Cabinet meeting this morning, bearing in mind that he didn't want to make the former governors in his Cabinet feel not too important. However, he thinks that we can forget it- in 1960 the Republicans had only 14 governors. He said again that governors don't matter; results on elections for governor are usually determined by personal things. On the national level we are able to brook the economic tide. He mentioned again the matter of local

contacts and said these don't affect national elections. It is the issue of peace and pocketbook that count in national elections.

The President then called on George Shultz to make a more detailed presentation and he left the room at about 4 p.m. Shultz began by emphasizing that the President had already had an input into the FY 1972 budget and, thus, the budget decisions transmitted by Cap have been and will be decisions with which the President has been personally involved. Thus, if we want to appeal such decisions, it will be a matter of getting the President to change his mind. Therefore, the quality of our input will be extremely important. He said that the second general point he wants to make will be in the way of a presentation of a general view of the budget for FY 1971 and FY 1972. He said this has not yet been put out to the press but it will be in the future.

Shultz then went to the chart easel and spoke from a number of charts. He said that he had given this same presentation to the Cabinet in their meeting this morning. The first chart showed a number of bar graphs year by year from 1961 to 1970, inclusive, giving the surplus or deficit in each year on a unified budget basis. Each year showed a deficit except 1969 and there was a huge deficit in 1968. He then put an overview on the graph placing it on a full employment basis. He went on to show the situation for FY 1971 and FY 1972, indicating receipts of $212 billion in 1971 and $230 billion in 1972 on a full employment basis. The graphs indicated actual receipts of $197 billion to $200 billion for FY 1971 and $212 billion to $225 billion for FY 1972.

Shultz then called on Cap to continue the presentation in more detail. Cap indicated (with the help of graphs) that the FY 1971 budget had shown a surplus of $2.3 billion in January, a deficit of $1.3 billion in May, a deficit of $15.6 billion in July, and $16.9 billion now. These deficits are due to Congress not enacting the revenue laws requested by the Administration, new additions to the budget by the White House and Congress, a slowing economy and, more recently, the impact of the General Motors strike. Thus, it is necessary to reduce spending in FY 1971 by about $4 billion to reach the full employment level, and the President has directed that this be done.

Weinberger went on to say that the estimated spending for FY 1972 is $233.3 billion, whereas the President has set a ceiling of $225 billion in order to approximate the full employment receipts level. Thus, it will be necessary to make a cut of $8 billion. He indicated that he estimates revenues of $212 billion for FY 1972.

He showed a number of other charts, including one in which the departments and agencies were listed, showing columns for the FY 1971 budgets, the FY 1972 OMB ceiling, the correction applied by the OMB and the amount by which the agency was over the ceiling. For the AEC the chart showed $2.4 billion for FY 1971, $2.3 billion for the FY 1972 ceiling, $2.5 billion for the agency estimate for FY 1972, no change by the OMB, and an over-ceiling figure of $0.2 billion for FY 1972. The similar figures for NASA were: $3.4 billion, $3.2 billion, $3.4 billion, no change, and $0.2 billion. The total over the ceiling for all agencies was $9.3 billion.

After Weinberger finished his briefing, Shultz made a few wind-up remarks. He said that some people say that the only way to solve our budgetary problem is by increasing taxes, that it is otherwise hopeless. He said there is no evidence that the people in general or industry want this. He emphasized that this isn't an OMB problem, it is a problem for all of us and they want to share this problem with us. We need to work together- the Domestic Council, the OMB, the President, all of us. We should work on our budgets in the knowledge of this

situation but we should not reveal the actual numbers of deficit in working with our staffs.

Before the above meeting I talked with Weinberger, who referred to my pending phone call and expressed regret that his schedule hadn't allowed him to answer it yet. I said that it had to do with the subject of a letter, which I handed to him (copy attached). He read my letter during the meeting (at which time we were sitting next to each other) and after the meeting. He indicated that he understood our problem and was sympathetic to it and thought we had a good case. He quickly added, of course, that any budgetary additions to FY 1972, no matter what their merits, created a problem. I said that our problem, however, was a very unusual situation, and he agreed.

After the meeting Shultz also approached me with a friendly word of greeting.

Upon my return to the office I went into Regulatory Information Meeting 431 (notes attached), which had been in progress since 4:10 p.m. We reviewed again the Commission's implementation in its regulatory program of NEPA requirements. Particular emphasis was placed on Ramey's interest in grandfather clauses for AEC procedures to avoid any new requirements on existing plants. Thompson is still resisting any new regulatory procedure that will further complicate and delay licensing of nuclear power plants. A second item discussed was a possible rule covering requests for access to Commission work papers and internal instructions. Staff favors protection of all internal work papers, but Hennessey cautions that too strict a position will eventually result in the courts requiring AEC to reveal all information not clearly identified as opinions and proprietary. The use of the in camera technique with Atomic Safety and Licensing Boards was considered. Thompson strongly urged that we protect all internal work papers of the Commission from public access.

Attached is a copy of a memorandum we received from John Vinciguerra concerning the meeting between AEC staff and GSA representatives to discuss the possibility of securing new quarters for our D.C. office.

I took a hike with Suki in the Reno Park area.

Friday, November 6, 1970- D.C.

At 9:55 a.m. we received the following message from Henry Kissinger's office:

> "In view of the continued Soviet detention of the crew and passengers of the light plane carrying three U.S. Army officers, which inadvertently landed in Soviet territory last month, it is inappropriate for any Presidential appointee, or other member of the Executive Branch or equivalent rank, to attend parties at Soviet embassies observing the anniversary of the October revolution (usually held on November 6). Attendance for subordinates should be limited in number and confined to middle level rank. No members of departments or agencies which do not normally have business with the Soviet Government should attend such parties. If the Soviets release the crew and passengers of the U.S. aircraft before the parties occur, these restrictions will not apply."

On the basis of this, Helen and I will not attend Ambassador Dobrynin's reception commemorating the anniversary of the revolution despite having previously accepted the invitation. I think this is a very foolish move and that it would be much better to maintain normal relations on social occasions such as this.

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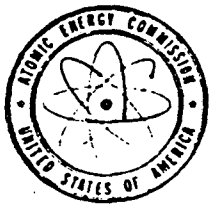

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 5 1970

Honorable Caspar W. Weinberger
Deputy Director
Office of Management and Budget

Dear Cap:

Expanding on my telephone conversation, let me briefly outline our problem with respect to FY 1972 revenue estimates.

Last August 25 the Commission issued a Federal Register Notice increasing the price for toll enriching services from $26.00 to $28.70 per unit of separative work to be effective February 22, 1971. The AEC FY 1972 budget submitted to the Office of Management and Budget last September 15 assumed the $28.70 price in estimating toll enriching revenues of $203 million for FY 1972.

Toll enriching customers are advancing their orders into FY 1971 and, in some instances, are increasing the amount of their orders for the purpose of taking advantage of the $26.00 price. Because of these actions, it is estimated that FY 1971 revenues will increase by about $52 million and FY 1972 revenues will decrease by about $45 million. If a further price increase to $30.50 (effective October 1971) is assumed, the additional estimated revenues of $7 million in FY 1972 would result in a net loss of $38 million in presently budgeted FY 1972 revenues.

It is important to emphasize that:

1. the $38 million reduction in FY 1972 revenues is more than fully offset by an increase of $52 million in FY 1971 revenues so that there is a net benefit in outlays to the Federal Government of $14 million plus one year's interest on $52 million.

2. since the FY 1971 revenues of $52 million are available as carryover to reduce the FY 1972 appropriation request, there is also a net budget authority benefit in the FY 1972 budget of $14 million.

In view of these benefits, we strongly believe it is only equitable to have our FY 1972 outlay ceiling increased by $38 million. Not to do so would mean a pricing action that results in a net economic gain to the Federal Government would cause severe programmatic penalties to the AEC. Stated another way, AEC's programs would be punished because the Commission took an action to advance and increase the cash flow into the United States Treasury.

We would appreciate an opportunity to discuss this further with you at your earliest convenience.

Cordially,

Signed
Glenn T. Seaborg

Chairman

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COPY NO. 3
November 5, 1970

# REGULATORY INFORMATION MEETING 431

:10 ] m., Thursday, November 5, 1970, Chairman's Conference Room, D. C.

1. Revised Schedule for Friday, November 6

2. Mr. Hennessey's November 5 Memorandum re Supplement to SECY-R 72

   Discussed and to be rescheduled for early reconsideration. (GC-ADRA-SECY)

3. Mr. Price's November 4 Memorandum re Proposed Rule Changes Dealing with Production of Documents

   Discussed and to be rescheduled for early reconsideration. Item 2 will be scheduled for consideration separately. (GC-ADRA-Chm. AS&LBP-SECY)

4. Discussion of Pending Cases

   Staff is to proceed as suggested. (ADRA-GC)

W. B. McCool
Secretary of the Commission

6:15 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Henderson
Mr. Hennessey
Mr. Rubin
Mr. McCool
Mr. Mann*
Mr. Schroeder*
Mr. Case*
Mr. Low*
Mr. Schur*
Mr. Rowden*
Mr. Buck*
Mr. Wells*
Mrs. Becker*

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WASHINGTON, D.C. 20545

NOV 4 1970

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

for THRU: General Manager

MEETING WITH GSA REPRESENTATIVES

Pursuant to the Commission's request at Information Meeting 1074, November 2, 1970, Ed Glade and I met on November 4 with the following from the Public Buildings Service, GSA to follow up on Dr. Seaborg's call to Rod Kreger, Deputy Administrator, GSA; namely, to explore the possibility of moving from our 1717 H Street Office to other suitable space in the District of Columbia:

Wilbur H. Sanders, Deputy Commissioner

Ray I. Nixon, Assistant Commissioner
Office of Operational Planning

Richard H. Gaskins, Acting Director
Space Management Division
Office of Operating Programs

We stated that the Commission was very much interested in obtaining other space within defined boundaries in the District of Columbia for our downtown offices indicating the dissatisfaction with the Matomic Building. Further, we indicated that it was our understanding that the L'Enfant Plaza Corporation was in the process of reaching some agreement with GSA to lease the entire West Building of the L'Enfant Plaza to GSA. We stated that if this were so the Commission wishes to be considered as a possible tenant for such space.

The GSA representatives made it very clear that there is no agreement as of this date but that it is possible that a new proposal might be submitted by the L'Enfant Plaza Corporation at some future date. It was agreed that if GSA should lease the West wing of the L'Enfant Plaza or any other space in the L'Enfant Plaza complex GSA would give due consideration to AEC's needs. Similarly, GSA representatives advised

that should any other space become available within the geographical boundaries established by the Commission that AEC would be advised.

The GSA representatives raised the question as to whether the Commission is still interested in consolidating all of AEC's employees into one location downtown, noting that such a possibility was still very remote at this time. I advised that the Commission is concerned with the move of our D.C. Office at this time. However, if GSA should develop any location which might be suitable for consolidation of all of AEC's employees that I would appreciate being advised.

We left with the GSA representatives the necessary data to accommodate our D.C. Office needs.

John V. Vinciguerra
Assistant General Manager
for Administration

At 10:15 a.m. I presided over Commission Meeting 2443 (action summary attached). We finally approved a plan to allow U.S. industry to have access to our uranium enrichment technology (gaseous diffusion and gas centrifuge). This would apply to companies desiring to carry out independent development work with the view toward their involvement in the future manufacture of equipment for enriching systems and their possible ultimate involvement in the ownership and operation of uranium enrichment facilities. Ramey registered a vigorous dissent and indicated that he will fight this all the way which will include energetic attempts to enlist the opposition of the Joint Committee on Atomic Energy, other members of Congress and the public power people. The next step will be to explore this with the JCAE. We obtained an enthusiastic White House approval of the plan last week.

I then presided at 11:10 a.m. over Information Meeting 1076 (notes attached). We heard a report on the IAEA Safeguards Committee in Vienna by Myron Kratzer, who has attended the three and a half week meeting in Vienna. Keith Glennan was also present and told us about his meeting with Eklund last Thursday (October 29th), part of which I attended. We also discussed the problems we are having convincing GSA that they shouldn't take large parts of AEC land at Brookhaven, Savannah River and Argonne. Kratzer and Friedman told us about some progress they have made in exploring the possibility that Germany might purchase an additional $50 million of enrichment services under the U.S.-German offset agreement, with payment of the money in FY 1972 when it will be sorely needed. We approved the award of AEC Citations to Cy Betts and Dodd Starbird.

Athelstan Spilhaus called to say that he has been unable to contact Bentley Glass, but he has been in touch with Bill Bevan. Bevan did not know of the two previous occasions when I was asked by AAAS to run for the presidency, but a check of their files turned up the correspondence. He reminded Bevan that they knew on June 29th that I would continue at the AEC. The present problem came up only two or three weeks ago, at the end of the Board meeting, which was months after my reappointment. The vote on Science Service was 6-3, with Spilhaus, Blackwell and Branscomb voting in the minority. He said that Glass is quite wrong about the committee on nominations; Spilhaus (as chairman of the committee), Mina Rees and David Blackwell were members of the committee and they were all there when my nomination was discussed.

Bevan had the Commoner letter at the time of the cocktail party for him (Bevan) on October 17th, and he went to each of the Board members to ask how they felt--he took a "cocktail party vote." Spilhaus and Blackwell felt there was no conflict. Kenneth Thimann was not worried about any conflict, although he felt that it wouldn't hurt for Bentley Glass to talk to me. Mina Rees was on the fence, and she didn't object to a completely unemotional visit to me, but she did point out that the Board cannot overrule the Nominating Committee. Apart from those four, the others felt (some more strongly than others) that Glass should talk to me, but that's as far as they went. Commoner was not there. Phyllis Parkins said it was my option, and she felt there was no harm in Glass talking to me. According to Bevan, Lewis Branscomb felt that the conflict was with my association with Science Service.

Spilhaus pointed out that others were just as vulnerable from the conflict of interest standpoint. Branscomb is in an important position and he could be vulnerable if there were another "bad battery" case. Commoner's stand on the environment is well-known. Glass tried many times to get AAAS into the business of adjudicating academic freedom, but he has always been voted down. Spilhaus does not think I should consider these new ventures as pressures to withdraw. He will continue trying to reach Bentley Glass and reiterated that almost everybody agreed that Bentley's talk with me should be simply an unemotional

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 6, 1970
Approved REH
Date

R. E. Hollingsworth, General Manager

ACTION SUMMARY OF MEETING 2443, FRIDAY, NOVEMBER 6, 1970, 10:15 A.M., ROOM 1115, D. C. OFFICE

SECY:RDL

Commission Business

SECY-586 - Uranium Enrichment Technology; and
SECY-443 - Industry Participation in Uranium Enrichment (See also SECY-270, General Manager's August 3 Draft Staff Proposal, SECY-107, SECY-106, AEC 610/218, Commissioners Johnson & Larson's May 21 Memoranda, AEC 610/212 & Commissioner Ramey's November 5 Memorandum)

The Commission:

a. Approved, in principle, with Commissioner Ramey dissenting, proceeding with the plan for industry participation in uranium enrichment as outlined in SECY-586 and SECY-443;

b. Requested staff revise the last paragraph of page 11 of SECY-586, to be certain that claims for awards under "section 157", or any other section of the Act, are included in item (2) of that paragraph;

c. Requested staff revise paragraph 4 of the press release contained on page 5 of SECY-586, to eliminate reference to the University of Virginia;

d. Noted Commissioner Ramey's dissenting statement would be attached to the letter to the JCAE; and

e. Noted staff would conduct informal discussions with the JCAE staff and Representatives Holifield and Hosmer as soon as possible to convey the Commission's decision to proceed with the proposal contained in SECY-586 and SECY-443, prior to formal transmittal of the letter to the JCAE.

(AGMP)

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

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UNITED STATES
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WASHINGTON, D.C. 20545

COPY NO. 3
November 6, 1970

# INFORMATION MEETING 1076

11:10 a.m., Friday, November 6, 1970, Room 1115, D. C. Office

1. Declination of Invitations to the Soviet Embassy Reception Today

2. Chairman's Report on the White House Briefing Yesterday re the Fiscal Year 1972 Budget

3. Status of the KMS Matter

   In response to the Chairman's request, Mr. Bloch said staff recommendations would be circulated for consideration on Monday, November 9. (SECY)

4. Proposed Letter to Congressman Karth re AEC Implementation of National Environmental Policy Act of 1969

   Approved. (Rubin)

5. Commissioner Johnson's Report on NSSM 101

6. Agenda for the Weeks of November 9, 16, 23 and 30, 1970

   Approved. (SECY)

7. NTS Events for the Week of November 9, 1970

   Noted. (AGMMA)

8. Nominees for the AEC Citation (See SECY-600)

Approved. (SECY)

9. Staff Report on Discussions with GSA re Brookhaven Land

10. SECY-582 - GSA Survey of Real Property at SR

Discussed. Staff may proceed. (AGMO)

11. SECY-589 - GSA Survey Report - Argonne Land

Discussed. Staff may proceed. (AGMO)

12. Mr. Kratzer's Report on Safeguards Discussions in Vienna

13. SECY-606 - Possible Additional FRG Purchases of Enrichment Services Under Offset Agreement (See also SECY-590)

Staff is to proceed. (AGMIA)

14. SECY-602 - Alien Students: Proposed Assignment in Nuclear Agreement Training Activities at Sandia Corporation

Approved. (AGMIA)

15. SECY-587 - Revision of Fees for ORAU Special Training Courses

Noted. (NET)

16. SECY-588 - Japanese National: Generation of RD

Noted. (C)

17. SECY-599 - Tracer Experiment with Gasbuggy Gas

Noted. (PNE)

18. Pending Contractual Matters Report No. 380

Noted. (PAR)

W. B. McCool
Secretary of the Commission

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Abbadessa
Mr. Hennessey
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. T. Keith Glennan, U.S. Representative to the IAEA*
Mr. Donovan Q Zook, Director, Office of Atomic Energy Affairs, Department of State*
Mr. Brown*
Mr. Erlewine*
Mr. Swindle*
Mr. Mahy*
Mr. Kratzer*
Mr. Haycock*
Mr. Flaherty*
Mr. Friedman*

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*Attendance by Topic (s)

personal conversation and not as Chairman of the Board of AAAS because the Board cannot overrule the Nominating Committee. He considers the cocktail party poll completely invalidated by events because that took place prior to the Board meeting at which the decision was made to turn down Science Service. As to the Tamplin matter, Spilhaus feels that it is an invalid consideration because it hasn't even been discussed by the Board yet and it won't be discussed until December 12th. All in all, Spilhaus says he really sees no reason for me to withdraw. If, eventually, a conflict should develop and I wish to resign, that would be another matter.

I had lunch at the Longworth Cafeteria with Commissioner Thompson and Julie Rubin. We discussed the impending problems with this morning's decision on making uranium enrichment technology available to industry and also Thompson's strong desire that we provide support for the Fermi reactor near Detroit as a part of our fast breeder program.

Roger Batzel came in after lunch and he, Julie Rubin and I discussed the problems created by Gofman's letter to me of October 29th and possible ways of answering it. We also discussed the manner in which Gofman and Tamplin are misquoting me, Batzel and others in their forthcoming book, Population Control Through Nuclear Pollution.

At 2 p.m. I met with John Flaherty, along with Julie Rubin to be brought up-to-date on Flaherty and Commissioner Johnson's meeting with Kriegsman and Rice this morning. They gave indications that the Office of Management and Budget has not yet decided to approve our CIP program and conveyed the impression that the White House has not yet decided on their position on the JCAE omnibus bill which covers radiation standards, practical value, uranium enrichment criteria, etc.

I sent a letter to George Shultz (Director, OMB) as a follow-on to my letter of September 15th concerning our ability to enter into additional commitments to supply uranium enrichment services (copy without enclosures attached).

I sent a letter to George F. Boyd (Tri-State Motor Transit Company, Joplin, Missouri), advising him that we are removing restrictions on the use of their vehicles to ship radioactive cargo provided they agree to certain precautions until the danger from violence has subsided.

It was announced today that President Nixon has selected William D. Ruckelshaus (an Assistant Attorney General) to head the new Environmental Protection Agency. The agency, which comes into being on December 2nd, will handle all federal environmental programs, including anti-pollution efforts now handled by the Department of the Interior; Health, Education and Welfare; and Agriculture.

Helen and I attended a reception at the Swedish Embassy given by Ambassador de Besche in honor of Swedish Nobel Prize in Physics winner Hannes Alfven and the Scandinavian professors of the South Atlantic Modern Languages Association. We talked to Dr. and Mrs. Alfven, Dr. Julius Axelrod (this year's Nobel Prize in Medicine winner) and Mrs. Axelrod. (Attached are copies of articles appearing in the Washington Post and the Evening Star concerning this reception.) Among the other guests with whom Helen and I talked were Mr. and Mrs. Milton Crane (parents of Peter's friend Peter Crane), Mr. and Mrs. Robert Walker (parents of Dianne's friend Matthew) and Ed David. I explained to David the letter I sent him this week and the problem that has arisen in our FY 1972 budget because of advancing sales of separative work in uranium enrichment.



Alfven sought me out to express his opinion that great progress is being made in

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NOV 6 1970

Honorable George P. Shultz
Director
Office of Management and Budget

Dear Mr. Shultz:

This is in further reference to the issue of our ability to enter into additional commitments to supply uranium enrichment services, which was discussed in my letter of September 15, 1970. As stated in that letter, our ability to commit to supply enrichment services is limited to our available capability. Without some assurance that our planned program of gaseous diffusion plant improvement and uprating (CIP/CUP) will be undertaken on a schedule which would, as a minimum, be consistent with the anticipated growth in requirements for enrichment services, we are now at the point where serious questions can be raised on any proposal to enter into additional foreign commitments.

Our recent reviews of enrichment capability relative to requirements indicate a much tighter capability position than previously foreseen, largely as a result of increased Government requirements and decreased production. The latter stems from reductions and slippages in diffusion plant power schedules and delays in initiation of cascade improvements. As a matter of fact, with other variables held constant, these reviews show that new plant capacity will be needed about two years earlier than we previously had projected. This is shown by the enclosed Figures 1 and 2, which compare our 1969 and 1970 projections.

Some or all of this indicated change in timing for new plant capacity can be offset by changing cascade operating conditions to a higher tails assay so that more enriched uranium would be produced from the same amount of separative work. We are actively studying the extent to which the tails assay can be increased with economic justification, but it appears from optimization studies that our overall capability vs. demand picture with increased tails assay would end up not much different than that we were projecting earlier, as indicated in the enclosed Figure 3. The comparison in Figure 3 is based on an optimized tails assay schedule which increases from 0.23% U-235 in FY 1972 to about 0.25% in FY 1980. Thus, even with the higher tails assay, there would be no lessening in the urgency for prompt initiation of the large-scale plant improvement program.

It should be noted that in each case illustrated in Figures 1, 2 and 3, the projection of requirements is conservative in that it assumes 100% plutonium recycle beginning in 1974 and the installation of significant foreign enriching capacity in the latter half of the decade, thereby reducing the need for enriching services which might otherwise be met by the U.S. Without these assumptions, we estimate that new plant would be required in FY 1979, even with CIP/CUP and the higher tails assay.

Substantial additional foreign commitments are embodied in amendments to existing or in new agreements for cooperation now under negotiation. These negotiations were undertaken on the basis of our 1969 review of capability relative to requirements. Such additional commitments would cover the fuel requirements of a number of foreign nuclear power reactors which are planned to start operation by 1978. We had planned to complete our negotiations on most of these agreements, together with our foreign partners, within the near future. After completion of negotiations, these agreements, which are prerequisite to our contracting for the supply of enrichment services abroad, must be submitted for review by the Joint Committee on Atomic Energy (JCAE) for 30 days, pursuant to the Atomic Energy Act, before they can be brought into force. Through this procedure, the JCAE maintains close surveillance over our agreements for cooperation and the commitments for enrichment services which they contain.

The JCAE already has challenged our plans to make further foreign commitments for the supply of enrichment services until the issue of the adequacy of our diffusion plant capacity is clarified. The Committee has been pressing increasingly for categoric assurances that these new undertakings would not in any way interfere with our ability to meet domestic requirements. Further, the Committee has been skeptical of any such assurances developed on the basis of other than conservative assumptions regarding future operating conditions in power reactors (e.g., no plutonium recycle) and of diffusion plant output (e.g., no cascade improvement program). In this connection, the enclosed table illustrates the amounts of nuclear power reactor capacity which can be maintained in operation by our existing diffusion plants under various assumed conditions of steady-state operation. It will be noted from the table that the domestic reactors expected to be in operation by 1978, together with the foreign reactors for which we already have made commitments or are in the process of negotiating additional commitments, represent 158,000 MWe. The existing enrichment plants cannot support such a level, even at the postulated higher tails assay, unless either plutonium recycle or plant improvements, or both, are assumed. While

we consider that plutonium recycle will likely be developed, we cannot be sure of the timing or extent of its application. In this connection, it should be noted that to date all of our long-term enrichment services contracts are on the basis of no plutonium recycle.

As pointed out in my September 15 letter, our inability to agree to meet foreign requests to supply additional enriching services for the nuclear power programs of cooperating foreign governments would lose for the United States many important advantages, one of the most significant of which would be the important contribution which such sales would make toward redressing the U.S. balance-of-payments deficit. To illustrate the magnitude of this contribution, the anticipated revenues over the life of toll enriching services contracts now in force with foreign customers is $750 million, which is about 30% of the total of all AEC enrichment contracts. By 1985, it is estimated that the revenues from such foreign contracts could rise to almost $5 billion, making up about 40% of all U.S. sales of enrichment services at that time. In addition, there are expected to be substantial dollar revenues in the U.S. private sector from sales of capital equipment and fuel cycle services, but such sales are strongly dependent upon our continuing ability to provide enrichment services.

We believe a brief comment should be made on the concern which has been expressed by some that the provisions of our enrichment services contracts, particularly that permitting the customer the right to terminate without cost upon giving three and one-half years' advance notice, do not provide sufficient protection against any new capital investment in enriching capacity such as that represented by the cascade improvement and uprating programs. We feel that the termination provision of our existing contracts, which was based largely upon views expressed by U.S. industry representatives, is justifiable to the extent that supply commitments are limited to the capability of the existing facilities built originally to meet defense requirements. On the other hand, we believe that at such time as a decision is made to proceed with the heavy new investments required to implement the cascade improvement and uprating programs, the termination provisions of these contracts should be modified in order to secure a significant commitment by the customer toward the capital investment made to permit our contracting to meet his requirements. We are currently studying a number of alternative revisions to our contracting policies in this regard, including lengthening the three and one-half year period for termination without cost to the customer.

At the present time, several of our agreement negotiations have reached the point where we find it necessary to use delaying tactics with the foreign nation involved pending resolution of this question of capability versus requirements and its impact on our ability to make further foreign commitments. We are concerned that these tactics may soon become so obvious that it will undermine confidence abroad in the U.S. as a reliable supplier of enrichment services. Therefore, we would appreciate your views on this issue at an early date. If it would be helpful to your consideration, we would be pleased to meet with you at your convenience.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Enclosures:
1. Figure 1
2. Figure 2
3. Figure 3
4. Table

Chairman Seaborg (2)
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

WASHINGTON POST, November 7, 1970

# Nobel Scene-Stealers

*By Judith Martin*

The guests of honor at Swedish Ambassador Hubert de Besche's party yesterday arrived late to find themselves hopelessly outranked and overshadowed.

The reception was supposed to be in honor of South Atlantic Modern Language Association members who specialize in Scandinavian languages and literature. But the teachers had stayed late at their meeting hearing papers like, "Ibsen and the Japanese Feminist Movement," and found that a couple of more dazzling academic stars had taken over in their absence.

These were two of this year's Nobel laureates, Julius Axelrod of the National Institutes of Health, a winner in the field of medicine, and Hannes Olof Alfven, a Swedish citizen who is professor in residence at the University of California at San Diego. He won in the field of physics.

Dr. Alfven was in town for a meeting of the American Physical Society.

Dr. Axelrod has found the instant stardom of being a Nobel laureate somewhat perplexing.

"Somehow people think you acquire a magical quality, like becoming a saint," he said. He has gotten not only autograph, picture and job requests from all over the world, but "people who are hopelessly sick" write to him figuring that a Nobel prize winner should be able to cure anybody.

But there's been at least one great advantage. Dr. Axelrod is a section chief at NIH—"I don't want to be a lab chief"— and keeps losing his secretaries. The secretary of a section chief can rank no higher than a GS-6, and his would get offers to be GS-7s elsewhere. "But now they seemed to have stretched the rules a bit," and he is getting one of his old secretaries back as a GS-7.

Aside from that, Dr. Axelrod says he's tried, "not to change my lifestyle. You're always being asked to give talks and to pontificate," he said, and he finally had to tell an insistent philanthropic organization that. "I'm painfully shy."

Dr. Alfven says he hasn't had time yet to see if winning the prize will make him an instant celebrity, but he has always been interested in bringing science to the layman and discussing the political implications of science.

He is president of Pugwash, an international organization of scientists, including several Nobel laureates, who are concerned with scientific responsibility. (The organization is named for the town in Canada where it first met). "I hate the ivory tower concept," he said. "Science is much too important to be kept in an ivory tower, and the social implications are such that no responsible scientist can be involved in work without making clear what the implications of it will be."

Dr. Alfven is writing a book with his wife on social implications of science. His wife, a social worker, was with him yesterday. "She stands for the social and I for the science," he said. "We're in different fields, but we're very good friends."

By Ellsworth Davis—The Washington Post

*Swedish Ambassador Hubert de Besche, left, chats with Dr. Glenn Seaborg, 1951 Nobel Prize winner for chemistry, and two 1970 laureates, Dr. Hannes Olof Alfven (for physics) and Dr. Julius Axelrod (medicine), at last night's party at the Swedish embassy.*

—Star Photographer Ray Lustig

Nobel Prize winners (from left to right) Dr. Glenn T. Seaborg, Dr. Hannes Olof Aflven and Dr. Julius Axelrod chat at a reception given for Nobel Prize holders at the Swedish Embassy last night.

# Nobel Prize Elevating

By DUNCAN SPENCER
Star Staff Writer

Dr. Julius Axelrod, the Rockville, Md., scientist who won the 1970 Nobel prize for his work on nerve transmission said last night that getting the prize was "like being made a cardinal."

Far from diffident about the award he shared with an Englishman and a Swede Oct. 15, Axelrod still was on a euphoric plateau, enhanced no doubt by the company of two other Nobel Prize winners, Prof. Hannes Alfven of Sweden, the 1970 winner in physics, and Chairman Glenn Seaborg of the Atomic Energy Commission a 1951 winner, at a reception at the Embassy of Sweden last night.

Axelrod, 58, was dragged by fame from the obscurity of his lab at NIH and now finds everyone in the world wants to be his friend. The whitehaired scientist, whose wife hates parties and did not accompany him, brought along four of his young lab assistants.

He is known as a lively and engaging character and a scientist whose hunches have been uncanny. He worked in obscure positions without a doctorate for much of his career.

"They finally discovered him," one of his co-workers said.

Swedish Ambassador Hubert de Besche was honoring Prof. Alfven, who is visiting Washington (for a conference) from La Jolla, Calif., where he works at the University of California's San Diego branch. Axelrod and Seaborg, who is of Swedish lineage, shared the attention of the guests.

Both Axelrod and Alfven at first refused to believe they were winners of the prize. Axelrod was at his dentist when the news arrived. "It was completely unexpected," he said.

Alfven, asleep at his home in La Jolla when the call came through from Stockholm, did not hear the phone at first, and then told his wife Kirsten, "Don't answer, it's too late."

But his wife persisted: "I am a woman and can't stop answering the phone," She explained.

Mrs. Alfven is herself a sociologist and the two have written a book on the problems of

controlled thermonuclear fusion. I agreed, but added that we still have a long way to go before we can build a large, economical, practical fusion reactor.

Saturday, November 7, 1970- D.C.- Houston

I worked in the office until 12:30 p.m. I wrote letters to Dave, Steve, Pete and Jane and Lynne and Bill (copies enclosed) and to Carol.

I had lunch at the World Buttery with Julie Rubin.

I went to Science Service headquarters (1719 N. Street, N.W.) and presided over a meeting of the Board of Trustees from 1:30 p.m. until 4:15 p.m. Attached is a copy of the minutes of the meeting. Present were: Allen Astin, Bowen Dees, Gordon Fister, O. W. Riegel, Edward W. Scripps and John Troan, as well as Ted Sherburne and Dorothy Schriver.

I described my meeting with the AAAS Board on October 17th, with its negative results. We decided to accept their offer of consultative help. I described the various fundraising and merger activities that Sherburne and I have engaged in since the AAAS turndown- the meeting with Bundy in New York, the phone call and meeting with Nils Wessel of the Sloan Foundation in New York, the meetings with Bill McElroy and principal staff of the National Science Foundation (and its hopeful outcome), the meetings with Phil Handler of the National Academy of Sciences, and the offer of Science/Education Association for a merger to form a combination profit/non-profit corporation. We decided to explore also a merger with the American Philosophical Society. We approved Sherburne's recommendation that we accept the offer of $75,000 for the Science Service property at 1715 N Street and an offer of approximately $50,000 for part of our library.

We discussed a number of possible names to approach with the offer of membership on the Science Service Board of Trustees, such as J. Erik Jonsson (Honorary Chairman of the Board, Texas Instruments), Pat Haggerty (Chairman of the Board, Texas Instruments), Bill Baker (Vice President, Research, Bell Telephone Laboratories), Simon Ramo (TRW), Charles Allen Thomas (Director, Monsanto Company), Frank Stanton (President, CBS), and Joseph C. Wilson (Chairman of the Board, Xerox Corporation).

After the meeting I took a hike with Henry Hinds and Suki in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on the White Horse Trail to Cross Trails 3 and 4 and back to our starting point, passing the police headquarters on the way.

I then rode with Hinds to Dulles Airport, where I caught Eastern Flight No. 551 to Houston. On the mobile lounge I met Mr. and Mrs. Worley. He told me that, as a member of the Court of Customs and Patent Appeals, he voted wih the unanimous Court to overrule the U.S. Patent Office so as to grant me my patents on elements 95 and 96 with their broad claim. (These are the only U.S. patents of chemical elements in all of history.) On the plane I sat next to E. J. Corey, a fellow member of the Welch Foundation Scientific Advisory Board. Our plane left at 6:30 p.m. and arrived in Houston at 8 p.m. We were met at the airport by Dr. Wilfred Doherty, who drove Corey and me to the Rice Hotel.

Immediately after checking into my room (No. 551), I returned a call to Athel Spilhaus at his home in West Palm Beach, Florida. He told me that he has talked to Bill Bevan and confirmed my feeling that Bentley Glass had given me erroneous information during his talk with me last Tuesday. He said my position as AEC Chairman was not in itself a deterrent to my serving as AAAS President and there had, in fact, been three Board members on the Nominating Committee (Rees,

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Dear Dave:

I am sending you the color prints taken with my Minox camera that I mentioned in our phone conversation last night.

We enjoyed very much talking to you, and I'm glad your Mother had a chance to help you put things into perspective. Please believe us when we say that your present troubles are only a tiny ripple in your journey through life and will soon be completely forgotten. All of us have had similar experiences that seemed enormous at the time, but which have always been overtaken by subsequent events in such a manner as to be relegated to the background of our memories.

I hope you will come and bring a friend to the Big Game in Berkeley on Saturday, November 21. It will afford the opportunity for all of us - including Steve, Lynne and Bill - to get together. If you wish you could arrange to arrive just before the game, which starts at 1:30 p.m., and meet me at Memorial Stadium at Stairway 13, Section GG, where I will have your tickets for you. If you wish you could come earlier and we could have lunch someplace and/or you could stay after the game and we could have dinner. I'll be staying at the Durant Hotel Friday night, arriving from Honolulu at the San Francisco Airport at 4:50 p.m.

The enclosed picture of your Mother in her pretty green dress was taken in front of The Old Curiosity Shop in London, and the one of your Mother and me on the hilltop is taken across the Chamonix valley from Mont Blanc in France, during our trip to Europe in September.

I also have for Don Sherman and Jim Saunders prints of the pictures that include them, which I am holding pending your instructions on how you want them forwarded.

With love,

GTS:MJ
Seaborg, David

P.S. I plan to return to Washington Saturday night after the Big Game.

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NOV 86

November 7, 1970

Dear Steve:

I am enclosing some pictures taken with my little Minox camera. I think you will recognize those in which you appear but, in addition, I am enclosing a couple that were taken during our recent trip to Europe. The one of your Mother in her green dress was taken in front of The Old Curiosity Shop in London, and the one of your Mother and me on the hill-top was taken across the Chamonix valley from Mont Blanc in France.

I am looking forward to seeing you at the Big Game in Berkeley on Saturday, November 21. I hope you could arrive early so that we could have lunch together, and that you will be able to stay after the game for dinner. Or, alternatively, you could arrive just before the game, which starts at 1:30 p.m., and meet me at Memorial Stadium at Stairway 13, Section GG, where I will have your tickets for you. I'll be staying at the Durant Hotel Friday night, arriving from Honolulu at the San Francisco Airport at 4:50 p.m.

Last week I took Dianne and her friends, Amy Ballou and Laura and Ann Dodd, Trick-or-Treating in the neighborhood. Their hauls of loot were so good that they didn't have to trick anybody.

Incidentally, I plan to return to Washington Saturday-night after the Big Game.

With love,

Glenn T. Seaborg

P.S. - We hope your studies are going well and that you're keeping up your usual good spirits.

GTS:MJ
Seaborg, Steve

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NOV 86

November 7, 1970

Dear Pete and Jane:

Our household is glowing with happiness over your engagement and everyone is looking forward to participating. Dianne is full of excitement, Eric seems to grunt approval, and Dave called us from Davis last night to further express his delight and anticipation. Mom thinks we should bring Lynne and Bill, Dave, Steve and Bob to New York from California, if that is your desire.

I am enclosing a couple color pictures taken with my Minox camera. The one of Mom in her green dress was taken in front of The Old Curiosity Shop in London, and the one of your Mother and me on the hilltop was taken across the Chamonix valley from Mont Blanc in France, during our trip to Europe in September.

Your Mother and I may go to New York for a dinner to be given at the University Club (the one at One W. 54th Street, for sure) on December 2. You both would be invited also. Charlie Robbins (Executive Director of the Atomic Industrial Forum) and his wife Pauline Frederick (NBC news commentator from the U.N.) are giving a dinner for Edvard Hambro, President of the U. N. General Assembly. If our plans materialize in this direction, we will, of course, let you know promptly.

I am spending this Saturday morning in the "H" Street office, and after a meeting of the Science Service board of trustees this afternoon, I am off for Houston, Texas, to attend a meeting there tomorrow.

Looking forward to the possibility of seeing you soon.

With love,

GTS:MJ
Seaborg, Peter

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November 7, 1970

Dear Lynne and Bill.

We were delighted to learn, indirectly, that you are now living on the Jasaitis premises, and that you may have found an accommodation to your job problem.

I am enclosing some pictures taken with my little Minox camera. I think you will recognize them all except for two that were taken during our trip to Europe in September. The one of your Mother in her pretty green dress was taken in front of The Old Curiosity Shop in London, and the one of your Mother and me on the hilltop was taken across the Chamonix valley from Mont Blanc in France.

I am looking forward to seeing you at the Big Game in Berkeley on Saturday, November 21. If you wish, you could arrive just before the game, which starts at 1:30 p.m., and meet me at Memorial Stadium at Stairway 13, Section GG, where I will have your tickets for you. However, I hope we could get together earlier and have lunch somewhere, and that we could have dinner together after the game.

Last week I took Dianne and her friends, Amy Ballou and Laura and Ann Dodd, Trick-or-Treating in the neighborhood. Their hauls of loot were so good that they didn't have to trick anybody.

Incidentally, I will be staying at the Durant Hotel Friday night, arriving from Honolulu at the San Francisco Airport at 4:50 p.m. I plan to return to Washington Saturday night after the Big Game.

With love,

(Signed) Glenn T. Seaborg

GTS.MJ
Seaborg, Lynne

Mr. & Mrs. William B. Cobb
c/o Z. V. Jasaitis
400 Hillside Avenue
Piedmont, Calif. 94611

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MINUTES

MEETING OF THE BOARD OF TRUSTEES OF SCIENCE SERVICE

Saturday, November 7, 1970

Director's Office, Science Service, 1719 N St., N.W., Washington, D.C.

Pursuant to call, the meeting convened at 1:35 p.m. with President Seaborg in the chair. The Recorder listed the following Trustees present during the meeting: Allen V. Astin, Bowen C. Dees, Gordon B. Fister, O.W. Riegel, Glenn T. Seaborg, Edward W. Scripps II, John Troan. Edward G. Sherburne, Jr., Director, and Dorothy Schriver, Assistant Director, also were present. The following members were present by proxies held by Dr. Seaborg: Wallace R. Brode, Leonard Carmichael, Henry Allen Moe, Harlow Shapley. Athelstan Spilhaus was absent.

Dr. Seaborg reported on the action taken by the Board of the AAAS on October 17-18 concerning the proposed merger of Science Service with the AAAS. He explained that the merger was turned down largely on the basis of financial risk at a time when the AAAS is already feeling financial constraints. The AAAS Board did offer to enter into a one-year contract for consultation and/or management services, without fee to Science Service, if that is desired.

Fund-raising efforts were reported by Dr. Seaborg as follows:

A visit by Dr. Seaborg and Mr. Sherburne to McGeorge Bundy, Ford Foundation, resulted in a negative reply. Ford does not have any provision or area that is concerned with what Science Service is doing. Mr. Bundy did suggest that Science Service might sell Science News to Scientific American or some similar organization.

Mr. Sherburne joined Dr. Seaborg in reporting discussions with Dr. McElroy and senior staff members at the National Science Foundation. A proposal to the Foundation for a one-time general support grant in the amount

or $250,000 is being prepared by the Director. Preliminary discussions have been encouraging. The Foundation is giving a much more prominent organizational position to public understanding of science, a prime purpose of Science Service.

Dr. Seaborg arranged an appointment for Mr. Sherburne with Dr. Wessels of Sloan Foundation at which time it was learned that there is no possibility of emergency funds but the long term prospect seems to be good. Sloan Foundation is reconsidering its public understanding of science program and its direction has not been determined at this time.

Dr. Seaborg explained that his approach to individuals and organizations for financial aid to Science Service has been based on his strong feeling that it is the broad responsibility of all scientists to help this organization that has done so much in the area of public understanding of science over the past fifty years. He reported that he had talked to Dr. Handler about possible help from the National Academy of Sciences - National Research Council. Dr. Astin stated that at the Academy Council Executive Committee meeting on Nov. 7, Dr. Handler had brought up the subject, the Committee was generally sympathetic; there was no mention of a merger or a grant, but there was discussion of the possibility of a loan if it could be repaid.

Dr. Astin continued that he was a bit concerned about the viability of Science Service under the charter of the NAS-NRC, and he suggested exploring the possibility of a merger with the American Philosophical Society, the purpose of which is "promoting useful knowledge." The organization is concerned about doing more in this area than in the past. It was agreed that this possibility would be explored with Dr. Carmichael, the present president. Dr. Astin agreed that he would present this possibility at the fall meeting which will be held the week of Nov. 9.

A letter of intent from William A. Benjamin, Science/Education Associates, exploring the possibility of a joint venture between Science Service and S/EA was submitted by Dr. Seaborg. Mr. Sherburne was directed by the Board to inform Mr. Benjamin of its interest and willingness to receive a detailed proposal by December 20, which would be submitted to the Executive Committee for consideration and action.

There was further discussion of the offer of management services by the AAAS and it was the consensus of the Board that Dr. Seaborg send a letter to Dr. Spilhaus welcoming consultation, but not accepting management services at this time.

Dr. Dees announced that the AAAS does have long range plans for public understanding of science and youth activities, but there are no immediate plans for this expansion.

Mr. Sherburne explained the financial projection and itemized the cutbacks that have been made and those that are planned. He reported that by January the total cutback would be 15% of the total operating budget, and on a break-even 12-month operation, but in spite of this, unless we obtain emergency funds, we will be in very serious financial trouble by late spring.

Mr. Sherburne announced that plans have been made to sell a portion of the Science Service library which the staff no longer uses. This amounts to approximately 7,500 volumes which has been appraised at $40-60,000. Letters announcing the availability of the library have been sent to all state librarians and administrators of State Departments of Higher Education. Gordon Fister moved and Dr. Astin seconded that the unused portion of the Science Service library be sold to the highest bidder. Motion carried.

Dr. Astin asked if it would be appropriate to sell Science News which prompted Mr. Sherburne to explain the options open to Science Service in rank

of priority: 1. Obtain emergency funds. 2. Merger. 3. If one of these do not materialize by early spring we would have to explore the possibility of the sale of Science News and possibly THINGS of science. 4. Loan from AAAS or NAS. 5. Sell buildings. 6. Bankruptcy. He continued, that a $250,000 grant would enable Science Service to: 1. Pay off creditors. 2. Establish Westinghouse Scholarship fund. 3. Pay off the mortgage. 4. Keep some cash in account. 5. Add one staff person for development.

Mr. Sherburne announced that Weaver Bros. had a cash offer of $75,000 less settlement charges, title insurance, etc. from Robert Conklin Associates, Consultants in Education, for the purchase of 1715 N Street. The sale will net $69,750. Mr. Scripps moved that the building (1715 N Street) be sold and that a proportionate amount of the sale price be paid on the mortgage. The motion was seconded by Dr. Dees and passed.

A motion was made by Mr. Scripps, seconded by Dr. Astin, that Harlow Shapley be elevated from membership on the Board of Trustees and the Executive Committee of the Board of Trustees to President Emeritus of Science Service. Motion carried. The Director was asked to inform Dr. Shapley of this action.

During discussion about Board vacancies and new Trustees, it was determined that we should try to get some business men who could be fund raisers and be reasonably close to Washington; a president or chairman of the board of a science or engineering oriented industry.

There are now four vacancies on the Board. Dr. Seaborg indicated that he would contact the following and explore the possibility of their serving on the Board: Frank Stanton, President, CBS: Patrick Haggerty, Chairman of Board, Texas Instruments; Charles A. Thomas, Director, Monsanto Company; Simon Ramo, Executive Committee, Bunker-Ramo Corp.; William O. Baker, Vice President, Research, Bell Telephone Laboratories; and J. Erik Jonsson, Mayor of

Dallas (Texas) and Honorary Chairman of Board, Texas Instruments.

Other possibilities discussed were: Gerard Piel, Publisher, Scientific American; Elmer W. Engstrom, Director, RCA; John R. Pierce, Executive Director, Research, Communication Sciences Division, Bell Telephone Laboratories; Sherwood L. Fawcett, President, Batelle; Luis Alverez, Prof. Physics, Univ. of California (Berkeley); James M. Gavin, Chairman, Arthur D. Little; Robert W. Sarnoff, President, RCA; William Golden, Treasurer, AAAS; and Joseph C. Wilson, Chairman of Board, Xerox Corp.

A motion was made by Dr. Dees, seconded by Mr. Troan, that Messrs. Riegel and Fister be designated the body representing the journalistic profession to nominate a successor to Peter B. Clark. Motion carried.

A motion was made by Mr. Fister, seconded by Mr. Scripps that a letter from the Board expressing sorrow at the death of Ludwell Denny be sent to Mrs. Denny. Motion carried.

The Chair requested that the minutes of this meeting reflect the feeling of confidence held by the Board members in the Director and staff of Science Service. It is felt that they have done and are doing an excellent job in bringing the organization together.

The President announced that the next meeting of the Board would be held at 10:30 a.m., April 25, 1971, in the Director's office, Science Service building.

The meeting adjourned.

Dorothy Schriver
Recorder

Spilhaus and Blackwell). Spilhaus said that he has convinced Glass that it would be very bad for the AAAS if I withdrew as a candidate for the AAAS presidency at this late date, leaving the voters (the AAAS Council) no choice in the voting. He pleaded with me to change my mind and leave my name on the ballot which should go out next week. I finally agreed on the basis that this would be the best course from the standpoint of the good of the AAAS and with the realization that, if elected, I could absent myself or temporarily withdraw, or even resign, if a conflict of interest situation should arise. Spilhaus said he will wire Bevan informing him of my decision to remain a candidate, and he asked me to phone Bevan on Monday to confirm this.

Sunday, November 8, 1970- Houston

I had breakfast in my room and then walked with Henry Eyring to the Southwest Bank Building to attend a meeting of the Welch Foundation Scientific Advisory Board (SAB) at its headquarters on the 20th floor.

The meeting started, as usual, with a session with Doherty. All members of the SAB- Wendell Stanley, Bill Baker, E. J. Corey, Roger Adams, Henry Eyring, W. O. Milligan and I- were present. Doherty brought us up-to-date on the financial condition of the Welch Foundation. The Foundation is now in quite good shape with the lawsuits being settled in a satisfactory manner and the income going up. He told us that Dan Bullard is now very seriously ill.

The SAB then considered the research proposals that are up for renewal, after which we considered the new proposals. We reiterated our recommendation to the Board of Trustees that the Welch Foundation create an International Award in Chemistry.

We walked over to the Houston Club, where we had a buffet lunch, eating together in one of the dining rooms. I asked Baker whether he would be willing to serve on the Board of Trustees of Science Service; he said he would consider it, but he has doubts that he can add this responsibility to his already-heavy schedule.

After lunch we finished our consideration of new research proposals.

I went back to my room for a while. There I saw the exciting Oakland Raiders-Cleveland Browns football game on TV, which Oakland won, 23-20, in the last three seconds through George Blanda's heroics.

I then walked to the Houston Club with Stanley, Adams and Corey. We joined Eyring, Baker, Milligan and Welch Foundation Trustees Doherty, Jack Binion and Roger Wolfe for dinner in the Bluebonnet Room on the ninth floor.

After dinner we all walked to the Southwest Bank building, where we held our regular joint meeting at the Welch Foundation headquarters. We made our report to the Trustees on our recommendations for renewal of old and acceptance of new proposals. I walked back to the Rice Hotel with the SAB members.

Monday, November 9, 1970- Houston- Germantown

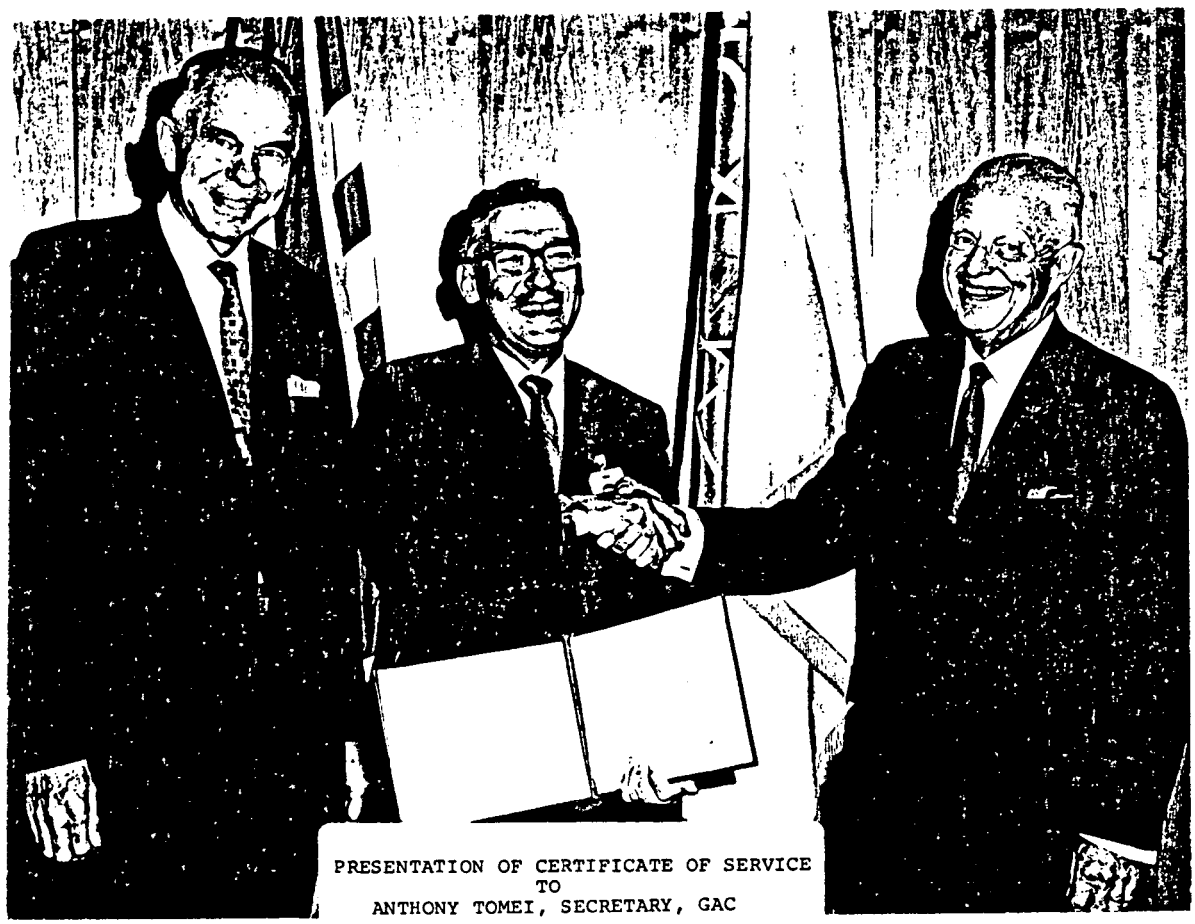
I had breakfast in my room, took a taxi to the Houston International Airport, and caught Eastern Airlines Flight No. 550 to Baltimore. We left at 9:30 a.m. and arrived at 1 p.m. I was met by Henry Hinds, who drove me to our Germantown headquarters where we arrived at 2 p.m.

I received a call from Bill Bevan, who said Spilhaus had called him on Saturday regarding the matter of my candidacy for President of AAAS. He said he told

Spilhaus that all the mechanical work had been done for balloting, that he understood from Glass that I was giving the matter further thought and would let them know what my pleasure was in the matter. He said he didn't want to circulate ballots until he had my decision and that this was the basis for his call. I told him that on the basis of Spilhaus' feeling and after some clarification of my talk with Bentley, I am of the view that I will go ahead as a candidate. I said that if elected and a conflict of interest should develop (which I doubt), I could either abstain, temporarily resign, or resign.

On the matter of Science Service, I told Bevan that as a result of Saturday's Board of Trustees meeting, Ted Sherburne will be in touch with him to work out possible consulting arrangements. I said we are looking at other possibilities as well, which may not be consistent with maintaining a tie with AAAS. I told him I am sorry that things turned out the way they did.

Commissioners Ramey, Johnson, Thompson, Larson and I met with the General Advisory Committee from 3:05 p.m. to 4:05 p.m. The Committee members present were: Howard Vesper (Chairman), Rolf Eliassen, Herbert Friedman, Edwin L. Goldwasser, Jane H. Hall and Lombard Squires. Others present included Melvin A. Harrison (Scientific Officer) and Anthony A. Tomei (Secretary) of the GAC. Vesper reported that the GAC continues to feel that there should be no modification in the criteria for the Lawrence Awards in the direction of removing the age limit. I indicated that I continue to disagree, saying that their arguments are not cogent. I said we need an award so that we could honor people like Cotzias of Brookhaven and Anderson of ORNL, and the removal of the age limit on a portion of the Lawrence Awards seems to be the only solution. Attached is a list o of the topics we discussed.




Presentation of Certificate of Service to Anthony Tomei, November 9, 1970
L to R: Seaborg, Tomei, Howard G. Vesper

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TOPICS DISCUSSED AT MEETING WITH GAC
November 9, 1970

1. Commissioners' meeting with Laurance Rockefeller; also meetings with Washington Post and Evening Star staffs to promote understanding of nuclear power issues.

2. Program for AEC contracts with certain states for power reactor environmental radiation monitoring.

3. Book by Gofman and Tamplin entitled "Population Control through Nuclear Pollution" to be published November 16.

4. Outlook for the FY 1972 budget.

5. Increased interest in the breeder program evidenced by Paul McCracken and Dr. Edward David.

6. Official establishment of the Western Interstate Nuclear Compact.

7. The 14th General Conference of the IAEA and the related issue of financing IAEA safeguards.

8. CBS-TV special, "How Peaceful the Peaceful Atom" now scheduled for November 17.

9. The Regulatory issue of making available inspection reports, working papers and subpoena of AEC employees.

10. The status of the policy to exchange diffusion technology abroad.

11. The status of permitting access by U. S. industry to gas centrifuge and diffusion technology.

12. Public reaction to the use of salt mines in Kansas and bedrock at SRP for high level waste disposal.

13. Increased licensing fees.

14. The request for support to continue operation of the Fermi reactor.

15. AEC compliance with NEPA and FWQCA (AEC decision that no new legislation required ).

16. The KMS matter and laser-induced fusion for controlled thermonuclear reactions; numerous non-AEC scientists in this field.

Following this, I presided until almost 6 p.m. over Regulatory Information Meeting 432 and Information Meeting 1077 (notes attached). Abbadessa reported that OMB seems to have delayed apportionment of the Congressional add-ons to the FY 1971 budget (such as the addition of $15 million for the CIP) until the FY 1972 budget is determined. Kratzer reported that some people in ACDA and State want to call the Soviets to account for the venting of their October 14th weapons test. Only gaseous fission products were vented and were detectable in only small concentrations in Alaska. We oppose such an approach to the Soviets on the basis that it will deteriorate our relations with them and adversely affect our attempts to come to agreement with them on the interpretation of the Plowshare excavation tests. We discussed the distressing staff report that appreciable amounts of radioactivity have been found buried on privately-owned properties (previously Manhattan District- and AEC-owned) near the AEC's Niagara Falls site. This is also obviously going to create a serious public relations problem. We also discussed a detailed write-up of the principles to be covered in our contract with KMS.

I sent a letter to Henry Kissinger today, informing him that we have decided to cancel the ADAGIO test in view of the success of the other tests- Handley, in particular.

I received a memorandum from Henry Kissinger addressed to heads of all departments and agencies (copy attached) concerning the inappropriateness of attendance at the October revolution anniversary celebrations at the Soviet Embassy because of their unwarranted detention of the crew and passengers of the aircraft which inadvertently landed on Soviet territory last month.

I took a hike with Suki in the Reno Park area.

Tuesday, November 10, 1970- D.C.

At 10 a.m. I met with the following representatives of the Associated Western Universities: Dr. Victor Beard (Executive Director), Dr. Ferrel Heady (President, University of New Mexico), Dr. N. Edd Miller (President, University of Nevada at Reno), and Dr. James C. Fletcher (President, University of Utah). Also present were: Commissioners Johnson, Larson and Thompson, Ed Bloch, Elliot Pierce, George Kavanagh and other AEC staff. Heady, acting as spokesman, said that the purpose of the meeting was to explore the possibility of AWU serving as contractor for the operation of the Los Alamos and Livermore Laboratories should the Regents of the University of California decide to terminate their operating contract. I responded that I think the Regents of the University of California will vote to continue their operating contract and that we should learn their intentions before next April when the AWU Board is scheduled to have their annual meeting. Should the University of California decide to terminate, I said I think AWU would be considered very seriously by the AEC as a successor, but this decision would be made by evaluating them in competition with the other possible contractors, such as a non-profit institution.

We explored with them the extent to which they are worried about the same problems of faculty and student dissatisfaction with the operation of the laboratories that is giving problems to the University of California. They said they have problems to varying extents in their 333 member institutions but feel they are manageable, particularly if the laboratories are operated by subgroups of universities. They have even considered having two such subgroups, one concerned with operation of Los Alamos and the other with Livermore. We left it that we would let them know the University of California's decision as soon as it is made; should it be negative, we will cooperate with them in the

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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COPY NO. 3
November 9, 1970

# REGULATORY INFORMATION MEETING 432

4:10 p.m., Monday, November 9, 1970, Room A-458, Germantown Headquarters

1. Part 50 - Siting of Fuel Reprocessing Plants and Related Waste Management Facilities

   Noted.

2. SECY-573 - Proposed Letter to Senator Gravel on S. 3042

   The Joint Committee staff will be informed prior to transmittal. (Griffin-Congr.)

3. October 29 Letter from Dr. Gofman to the Chairman

   Preparation of a reply is requested. (BM)

4. Dr. Beck's November 6 Memorandum re Redraft of Senator Bible's Letter Transmitted by October 29 Memorandum

   Approved. (DDR)

5. Proposed Letter to Congressman Daniel Flood

   Approved. (DDR)

6. Oral Report on Signing of Pennsylvania Contract

7. Recommendation re Monticello Documents

   Approved. (ADRA-GC)

8. The State of Vermont Hearing, December 1, 1970

   Staff may attend if invited. (ADRA)

9. Midland-Michigan Citizens Group Visit to Oak Ridge Laboratory

Approved. (AGM)

10. November 4 Letter from Congressman Dingell re December Hearings on the National Environmental Policy Act of 1969

Noted. (SECY)

W. B. McCool
Secretary of the Commission

4:40 p. m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Beck | Commissioners |
| Commissioner Ramey | Mr. Henderson | Dir/Regulation |
| Commissioner Johnson | Mr. Brown | General Manager |
| Commissioner Thompson | Mr. Rubin | General Counsel |
| Commissioner Larson | Mr. Wells | Secretary |
| | Mr. Buck | |

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. - 3
November 9, 1970

# INFORMATION MEETING 1077

4:45 p.m., Monday, November 9, 1970, Room A-458, Germantown Headquarters

1. Commissioner Ramey's November 5 and Commissioner Johnson's November 6 Memoranda re Remarks at AIF Conference

   Noted. (SECY)

2. Statements re Delay in Nuclear Power Plants

   A check is requested. (AGM-SECY)

3. SECY-607 - Proposed Plan for LASL Effort on ILLIAC IV Computer, and SECY-608 - Annex to Appendix A of SECY-607

   Approved with a request. (AGMMA)

4. SECY-604 - Niagara Falls Site

   Staff may proceed as discussed. (AGMO)

5. SECY-614 - MTR: GM's Proposed Letter to Governor of Idaho

   Noted with a change. (AGMO)

6. SECY-609 - KMS Proposal

   Discussed and to be rescheduled. (SECY)

7. SECY-591 - Revised Fall 1970 AEC Agency Plan; and, SECY-592 - 1970 AEC Agency Plan Supplement

Noted. (PAR)

8. Request for License re Trip Steel

Approved. (AGM)

9. General Manager's Report re Discussion with Mr. Bauser, Director, JCAE Staff, re Industrial Access to Uranium Enrichment Technology

10. Drew Middleton Interview of General Giller Tomorrow

11. ACDA Proposal re Soviet Test

The staff recommendation is approved. (AGMIA)

W. B. McCool
Secretary of the Commission

5:55 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Brown
Mr. Hennessey
Mr. Abbadessa
Mr. Rubin
Mr. Kull
Mr. McCool
Gen. Giller*
Mr. Erlewine*
Mr. Hersh*
Mr. Gould*
Mr. Killian
Mr. Slaton*
Mr. Kratzer*
Mr. Bengelsdorf*
Mr. Sommer*
Mr. O'Donnell*
Mr. Fremling*
Mr. Perge*
Mr. Nowak*
Mr. McDaniel*
Mr. Pender*
Mr. Nash*
Mr. Vinciguerra*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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NOV 86

THE WHITE HOUSE

WASHINGTON

November 6, 1970

MEMORANDUM FOR

HEADS OF ALL DEPARTMENTS AND AGENCIES
OF THE EXECUTIVE BRANCH

SUBJECT: Presidential Directive on Attendance at October Revolution Anniversary Celebration at Soviet Embassy

In view of the continued unwarranted detention by Soviet authorities of the crew and passengers of a light aircraft which inadvertently landed on Soviet territory last month, including three officers of the US Armed Forces, the President considers it inappropriate this year for any Presidential appointee or any other member of the Executive Branch of equivalent rank to attend parties at Soviet Embassies and Missions observing the Anniversary of the October Revolution.

Heads of Departments and Agencies should ensure that attendance at such parties by their subordinates be (a) limited in number and (b) confined to officials of middle-level rank.

Heads of Departments and Agencies which do not normally have business with the Soviet Government or its organizations should ensure that no members of their Departments or Agencies attend such parties.

While it is not intended to volunteer a public statement explaining the above measures, the following statement may be made in response to questions:

> "In view of the unwarranted detention of the crew and passengers of a light American aircraft by Soviet authorities, including three officers of the Armed Services of the United States, it is not deemed appropriate this year for American officials to accept the hospitality of the Soviet Government on the occasion of the November celebration. This was a decision taken at the highest level."

The above actions will not be taken if the Soviets should release the crew and passengers of the US aircraft before the parties in question occur.

Henry A. Kissinger

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preparation of their proposal.

I had a meeting at 11 a.m. with Commissioner Johnson, Bob Hollingsworth, John Flaherty and Julie Rubin. Johnson brought me up-to-date on the recent meeting that he had with Don Rice and Will Kriegsman in which they discussed OMB intentions with respect to funding the CIP. They are not yet ready to apportion FY 1970 funds for this (authorized and appropriated by Congress above and beyond the President's budget) and Johnson is somewhat pessimistic about them doing it. Flaherty and Hollingsworth described conversations they have had with Bauser and, through Bauser, with Holifield. Holifield indicates that he will not go along with the sharing of uranium enrichment technology for European countries or bringing American industry into gaseous diffusion and gas centrifuge technology unless the White House approves the CIP program. We seem to be caught pretty much in between the White House and the JCAE. I think this confrontation is very unfortunate because much constructive work could be accomplished or, at least, much destructive effort could be avoided if these would work together. For example, Holifield is going to be chairman of the House Government Operations Committee and he will block White House reorganization plans if the White House continues to thwart his desires in the nuclear field.

Stan Schneider and I attended a luncheon hosted by Dr. Leonard Carmichael (Vice President for Research and Exploration) at the National Geographic Society. The purpose of the luncheon was to meet with the editorial staff of the National Geographic magazine to discuss the possibilities of an article on nuclear energy and nuclear power. Dr. Carmichael and others on the staff had read my remarks "Energy and the Future" and believe it might be the basis for an article. The luncheon was attended by Gilbert Grovesnor (Editor), John Scofield (Associate Editor), Frank Shor (Associate Editor), Allen Fisher (Senior Assistant Editor), Kenneth Whaver (Assistant Editor), Herbert Wilburn (Illustration Editor), and Joseph Scherschel (photographic staff).

We discussed in general the energy resources situation in the world and the U.S., the "power crisis," the chemical uses of fossil fuels, the environmental aspects of power production including air pollution and thermal effects, the prospects for fusion and the nuplex concept, nuclear medicine and, at some length, the possibilities of the fast breeder with which a few of the editors had become familiar through my article in Scientific American. Gilbert Grovesnor expressed the opinion that they would like to do two articles for which they would like our help. The first would be power and the "power crisis." This they would hope to complete this spring for publication next October. The second article on nuclear energy would follow within a year or so. They emphasized that their subscribers number some seven million, and their total readership is some 30 million people. They pointed out that the article on power would be a bit more difficult to illustrate than the one on nuclear energy. We agreed that their ideas are very worthwhile and offered to be as much help as possible to them in their planning and preparation of the articles.

After the lunch I mentioned to Carmichael Allen Astin's idea of a merger between Science Service and the American Philosophical Society. Leonard was somewhat skeptical about this in view of the large non-scientist membership of the APS, but he appeared willing to consider it further.

At 3 p.m. I attended a Distinguished Service Award ceremony in Under Secretary John Irwin's office (Room 7220) at the Department of State. Harry Smyth was presented the Distinguished Honor Award for outstanding service as Representative of the United States to the International Atomic Energy Agency. His citation read: "For outstanding service as Representative of the United

States to the International Atomic Energy Agency and for furthering the goals of this Government in the international nuclear field."

I called Cy Betts and Dodd Starbird to inform them that the AEC Commissioners have voted to bestow on them the AEC Citation and that the ceremony will take place at 2:30 p.m. on December 3rd at the Pentagon, if agreeable to them. They both agreed on the time and both expressed great pleasure at this announcement.

I received a memorandum (copy attached) from President Nixon, addressed to heads of departments and agencies, asking for subjects to be included in his State of the Union Message, together with a brief explanation of each subject.

I received a letter from Alexis Johnson (copy attached without enclosures) enclosing copies of aides memoires from the Federal Republic of Germany and the Commission of the European Communities concerning FRG's problem with regard to its expenditure of funds for uranium and uranium enriching services under their offset agreement with us.

Attached is a copy of a memorandum from John Harris to the White House covering current activities of the AEC in the public relations area.

I took a hike with Suki in the Fort Reno area.

Wednesday, November 11, 1970- D.C.

Commissioners Ramey, Johnson, Thompson, Larson and I, along with Bob Hollingsworth, W. McCool and Julie Rubin, met from 10 a.m. until 11:10 a.m. with the following members of the General Advisory Committee: Howard Vesper (Chairman), Rolf Eliassen, Herbert Friedman, Edwin L. Goldwasser, Jane H. Hall, and Lombard Squires. Vesper gave his usual meeting-end report to us on: (1) the meetings of the Weapons Subcommittee at Sandia and Livermore; (2) the views of the Reactor Subcommittee on NERVA (including the possibility of emphasizing the military uses in the budgetary process) and a description of their visit to Whitesell, Canada, to see the organic cooled reactor in operation; (3) Regulatory matters with the recommendation that the number of hearings be cut down; (4) public relations problems; (5) the enrichment situation on which they had been briefed by Quinn on the status of the CIP and industrial participation; (6) the thermionic reactor and GGA's participation; (7) the briefing on the reactor program they received from Milt Shaw; (8) the briefing on materials safeguards by Myron Kratzer and Del Crowson; (9) the status of exhibits for the Geneva IV conference; (10) their forthcoming recommendation of five nominees for the AEC Citation; and (11) their proposed review of the AEC Sherwood program, to which we acquiesced. The latter would include a review of the private work in laser-induced fusion and an evaluation of the amount of induced radioactivity in such machines.

Bob Hollingsworth and I met with Fred Malek (Special Assistant to the President), who has a new responsibility for personnel matters in the White House. He indicated that he will be studying the organization of this activity and in a month or two perhaps Flemming and his operation will be reporting to him. He indicated his relationships with Flanigan, who has some responsibility in this area, have not worked out. He was interested, in particular, in John Abbadessa for the position of Assistant Administrator for Administration and Planning in the Environmental Protection Agency. Hollingsworth and I gave him a very complete evaluation of Abbadessa's outstanding capabilities. We also told Malek that we would make additional suggestions for key administrators in the EPA and for other positions for which he needed people. We told him that the AEC is well fixed at the assistant general manager and division chief level,

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THE WHITE HOUSE

WASHINGTON

November 6, 1970

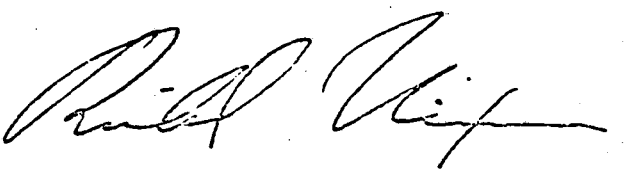
MEMORANDUM FOR

HEADS OF DEPARTMENTS AND AGENCIES

Please submit to me by December 1, 1970, the subjects which you propose for inclusion in my State of the Union Message, together with a brief explanation of each subject, its relationship to your current activities and plans, and the relative emphasis which you would recommend. You should include any views which you may care to present at that time concerning special Presidential messages during the next regular session of the Congress.

Descriptions of legislative proposals in support of such material should be made available through the Office of Management and Budget by the same date.

As you know, my many messages to Congress and other statements of policy during the past two years -- including last January's State of the Union message -- have laid out the general philosophy of the Administration in both foreign and domestic matters. I ask that your proposals reflect our determination to move forward as rapidly as feasible in achieving those policy goals, and that they be formulated with an eye to demonstrating that the goals are in fact achievable.



NOT DECLASSIFIABLE

OFFICE DIARY
GLENN T. SEABORG
Chr USAEC, 1961-72
FOLDER-PAGE 119119-119120

DOCUMENT TITLE Aide Memoire to DOS on FRG's concern re pricing policy of AEC for furnishing zirconium enrichment services between AEC/FRG
0913256

This document has been determined to be NOT DECLASSIFIABLE and has been removed from this folder.

C. Seager
Name

11-24-87
Date

Reference letter DOS, Burke to DOE, OC Gilbert dated 8-19-87

410

119119-119120

NOT DECLASSIFIABLE

OFFICE DIARY
GLENN T. SEABORG
Chr USAEC, 1961-72
FOLDER-PAGE 119121-119123

DOCUMENT TITLE 10-29-70 Aide Memoire to DOS on FRG's concern re AEC pricing policy for furnishing uranium enrichment services
0913257

This document has been determined to be NOT DECLASSIFIABLE and has been removed from this folder.

C. Kroger
Name

11-24-87
Date

Reference letter DOS, Burke to DOE, OC Gilbert dated 8-19-87

411

119121-119123

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 10, 1970

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Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Following are some of our current activities:

Monday, November 16 -- The Atomic Industrial Forum-American Nuclear Society joint meeting gets under way and runs through Thursday. We expect considerable news media interest in many of the sessions.

At the conference on November 16 Commissioner Thompson will be on an AIF panel dealing with the effects of the environment on the nuclear industry; Commissioner Johnson will give a speech on the U. S. uranium enrichment policy, requirements and capabilities; and Commissioner Ramey will participate on an ANS panel on Nuclear Standards.

On Tuesday, November 17 Chairman Seaborg will speak at the Youth and Atom session of the AIF conference and Commissioner Ramey will speak on "Environmental Considerations in Reactor Licensing Proceedings." Commissioner Larson will discuss "Technology and the Environment" during the November 18 session.

Also on Tuesday, November 17 -- The CBS-TV special "How Peaceful the Peaceful Atom" is tentatively scheduled for 10 p.m. It was originally scheduled on September 22.

Wednesday, November 18 -- We expect to announce that low levels of radioactivity have been found on land formerly used by the AEC and the military, but now privately owned, near Niagara Falls, New York. The land is undeveloped and generally uninhabited. It was used as a storage depot for miscellaneous nuclear materials during World War II and the post-war years. We plan to make more detailed surveys and take steps to rectify the situation.

Also on November 18 we will conduct a press briefing in Portland, Oregon--previously scheduled November 13--on our regulatory and licensing procedures related to the construction of nuclear power plants. The following day a hearing will open on the proposed Trojan Nuclear Plant near Portland.

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Thursday, November 19 -- Chairman Seaborg will speak at the Associated Press Managing Editors Association Convention in Honolulu on "Power, People and the Press." Commissioner Thompson will give a dedication speech dedicating the Double Tandem Van de Graaff Accelerator at Brookhaven National Laboratory. Commissioner Larson will speak at the 82nd Annual Convention of the National Association of Regulatory Utility Commissions in Las Vegas.

We understand that the November 17 issue of Look Magazine will carry an article by Bruce Mansfield, President of Ohio Edison, on "More Electric Power--How on Earth Do We Get It?"

Drs. John Gofman and Arthur Tamplin, AEC critics and authors of the book "Population Control Through Nuclear Pollution" which will be released November 16, will make several public appearances next week. They will speak before the Carolinas Ecology Study Group in Charlotte on November 15; the Council for Advancement of Science Writing in Raleigh on November 16, and will be in Washington, D. C., to address the Environmental and Ecological Forum at Kennedy High School on November 18.

The Frank McGee interview scheduled today with Chairman Seaborg for an NBC special on the energy crisis has been postponed for about two weeks.

Tom O'Toole of the Washington Post is researching an article on the underground nuclear weapons testing program. Charles Owen of Business Week is working on an article on the breeder reactor development program.

Drew Middleton of the New York Times is working on a story on the Chinese nuclear test program.

Sincerely,

(signed) John A. Harris

John A. Harris, Director
Division of Public Information

bcc: J. Rubin, OCM

has some problems with people at the GS-14 and GS-15 level, where changes need to be made.

I had lunch at the World Buttery with Stan Schneider and Syd Gaarder.

Eric, Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on White Horse Trail to Cross Trail 3, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

Thursday, November 12, 1970- D.C.

I was visited by George F. Boyd (President), Charles H. Mayer (Vice President, Nuclear Transportation Division) and Albert Thompson (General Counsel) of the Tri-State Motor Transit Company in Joplin, Missouri, and Roy Snapp, a Washington consultant. Julie Rubin was also present. Boyd said the purpose of his visit was to express appreciation for the prompt solution which the AEC produced in response to his request at the time we curtailed shipment of hazardous nuclear material because of the strike situation of his company. The AEC concern resulted from an incident when a truck full of dynamite exploded due to rifle fire from an act of violence directed at Tri-State in connection with the strike.

Ted Sherburne called to say that Bob Silber came by and made a request, which he thinks Silber should have made known at the Board meeting; he and Dorothy don't like it. Silber said they are going ahead with the proposal, but because of the time and money involved, they want Science Service to agree not to make any decisions on mergers (or anything of that sort) for a period of three months. Sherburne said this would back us into a corner. I said I don't think it would be wise to agree to this. He said he would tell Silber that Science Service is still interested, but until they have something in more detail, we cannot commit ourselves.

I taped an interview for a WGN (Chicago) nightly radio program conducted by Dan Price. Price asked the questions and Alan Wright (Producer) and CBS Engineer Dale Kelsey were present. The questions were on the following subjects: the progress of nuclear energy, handling of nuclear effects, use of coal and oil in the future, safety of nuclear plants, the safety of sites, the effects of radiation, restrictions on AEC scientists (Gofman and Tamplin), progress of SALT talks, nuclear arms race, proliferation, secrecy, demonstration before dropping the bomb on Japan, would any nation drop a bomb today, are we producing nuclear scientists today equal to former greats, and my personal background as Chairman and future plans.

Myron Kratzer and I had lunch at the Metropolitan Club with the Japanese Ambassador Nubuhiko Ushiba and Mr. Takao Nakajima (First Secretary of the Embassy). This was in return for the dinner the Ambassador hosted for me when I visited Tokyo last March. We discussed the safeguards problems that bother Japan and expressed appreciation for their cooperation in the current discussions on this subject in the IAEA Committee that Kratzer has been attending. We reiterated the importance of international verification of the safeguards and our intent to keep the safeguards as simple as possible. We also discussed the progress of the fast breeder reactor development in the U.S. and the general problems of reactor siting in the U.S. and Japan. I said that we would send him a reprint of my article on fast breeder reactors appearing in the current issue of Scientific American. We also discussed the current textile negotiations between Japan and the United States, in which he is representing Japan and Peter Flanigan, the United States. He agreed that Flanigan is a competent, but at the same time, personable negotiator. The Ambassador hopes

that the negotiations can lead to an amicable solution.

I met with Charles R. Owens of Business Week, together with John Harris, at 3 p.m. Owens is doing a story for Business Week on the GAO report criticizing the Commission's management of the fast breeder program and in particular, the delay in transferring responsibility from Battelle to the new Westinghouse subsidiary, WADCO. He said he has learned from numerous sources that I delayed this transfer because of my friendship for Fred Albaugh, who was in charge of the Battelle effort. I said this is erroneous information, that I never show favoritism on the basis of friendship, that I could hardly do so and still operate as Chairman because I have friends all through the atomic energy program in view of my role in training students in Berkeley before and after the war and in bringing people into the atomic energy program during my stay at the Metallurgical Laboratory during the war. I tried to make it clear that I haven't given Fred Albaugh any special consideration that he didn't deserve.

I was interviewed this afternoon in the Commission Meeting Room for a Belgian TV series on the future. The crew included: David Lachterman (Producer), Francoise Bedeon (Assistant Editor), Micheline Leglub (script girl), Jean F. Boucher (cameraman) and Jacques Molle (sound man). The questions concerned the possibilities of nuclear energy in the future. I discussed how we would progress from today's reactors to the breeders and eventually to fusion. I covered the uses of radioisotopes in medicine and the potential of the nuclear-powered artificial heart and the pacemaker. We also spoke about nuclear power in space, possibilities of the fusion torch, and the use of radioisotopes in agriculture. They asked what I think is the greatest fear and the greatest hope for the future. I replied that the greatest fear is nuclear war and the greatest hope is that we would solve our sociological, political and psychological problems and be able to apply the benefits offered by science and technology.

Pat Howe (Lawrence Radiation Laboratory friend) dropped in at 4:05 p.m. to say hello and to indicate that he would be interested in transferring to the new Environmental Protection Agency in a position at the proper level. He indicated that he is in favor of setting quantitative limits in our interpretation of lowest practicable levels of radioactivity for the monitoring of radioactive effluents from nuclear power plants.

I sent a letter to Jack Gofman (copy attached) in reply to his of October 29th (copy attached) concerning attempts to discredit his work.

I received a letter from Under Secretary of State John Irwin (copy attached) thanking me for the meeting and luncheon he had with the Commissioners last Monday.

I wrote to J. E. Hodgkins (Awards Administrator for the American Chemical Society) renewing my nomination of Robert E. Connick for the 1972 ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry.

Suki and I took a hike in the Fort Reno area.

Friday, November 13, 1970- D.C.

I had lunch with Howard Brown, Julie Rubin, Justin Bloom and Stan Schneider in the Commission Dining Room. We talked about the general problem of refuting criticism of the environmental effects of nuclear power plants and how we might answer some of those criticisms in the Seaborg-Corliss book, Man and Atom.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

November 12, 1970

OFFICE OF THE CHAIRMAN

Dr. John W. Gofman
Bio-Medical Division
Lawrence Radiation Laboratory
University of California
P. O. Box 808
Livermore, California 94551

Dear John:

I have carefully reviewed your letter of October 29, 1970, and accept your comments as a sincere attempt to be very frank in making your views known to me. The opportunity and willingness of a fellow scientist, and especially an AEC laboratory employee and one of my former students, to communicate directly to me his personal opinion on any subject or situation is always welcome.

I sincerely regret that you believe responsible AEC people, including Dr. John Totter, are attempting to discredit you or your work and that such attempts are condoned by me. I can assure you neither is the case. As Director of the AEC Division of Biology and Medicine (DBM), which supports your work, Dr. Totter has the responsibility for conducting periodic reviews of the broad range of work sponsored by his Division.

It is apparent from your letter that you feel you have been singled out for special and unfair treatment in the matter of the pending broad review of the program of the Bio-Medical Division of the Lawrence Radiation Laboratory at Livermore.

Conduct of such reviews is a common AEC practice, and, in fact, this past week DBM has conducted similar reviews of contractor programs at Sloan Kettering Institute and New York University. The week before there was a review of the Health Physics Program at Oak Ridge National Laboratory (ORNL); shortly before that a review was conducted of the Meteorology Program at ORNL; and a review of the Biology Division Program is scheduled at ORNL for next month. As you may know, the environmental portion of

Livermore's Bio-Medical Program was reviewed in August. In November the remainder of the program will be reviewed. You will recall that similar reviews of the Livermore Bio-Medical Program were conducted in 1966 with the AEC Advisory Committee for Biology and Medicine and in August of 1968 while you were Associate Director of the Laboratory. These reviews are routine and have long been an integral part of DBM's normal operating procedure.

In corresponding with Livermore Laboratory management arranging for the review, we explained that the purpose is to evaluate the scientific merit of projects conducted by the Livermore Bio-Medical Division and their relation to the Bio-Medical Division's mission and DBM's immediate and long-range program requirements. The review is intended to cover 20 bio-medical projects, not covered in the August review, and will, as is routinely done, involve outside reviewers with special scientific competence in these program areas.

I understand that you have recently suggested to Roger Batzel five reviewers qualified to evaluate your work. In view of your feelings that two of the outside reviewers DBM has selected are antagonistic toward your work, and in an effort to reduce your concerns, DBM staff will take the unusual step of arranging to add to the review team Dr. Samuel Epstein, Dr. Marvin Legator and Dr. Mortimer Mendelsohn from the five you suggested. I hope you will understand that it would not be sound administrative practice to go even further than this and remove from the review committee members already engaged in the task, on the basis of the recommendation of a scientist whose own work is included in the committee's review assignment.

As indicated in my letter to you of September 5, 1970, I am hopeful that the forthcoming review of your disagreements with the AEC by the AAAS, if they accept Senator Muskie's invitation, will serve to place the matter in proper focus and perspective for all concerned and that we can rest on the judgment thus obtained.

Cordially,

Glenn T. Seaborg

UNIVERSITY OF CALIFORNIA

Medical Division
ENCE RADIATION LABORATORY
BOX 808
MORE, CALIFORNIA 94551

UNCL. BY DOE
NOV 86

October 29, 1970

Dr. Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Glenn:

I am writing this letter to protest in the strongest terms my indignation at the preparation of further reprisals upon me and my work by Dr. John Totter of the Division of Biology and Medicine. You are, and have been, thoroughly aware of the conduct of Dr. Totter in slandering my person, my work, and my scientific competence. I have pointed out to you, from the beginning of the radiation standards controversy, that all the inappropriate personal attacks originate with Dr. John Totter. You have consistently ignored my urging that we work constructively towards solutions.

And now your Dr. Totter has prepared further reprisals against me. He, clearly disqualified through his prejudice on the record in a multitude of printed statements, has chosen "a review committee" to assess my scientific work on chromosomes and radiation and on chromosomes and cancer. Dr. Totter knows full well that the two men he chose to review my work are both antagonistic. One of the men, Dr. Myron Bender of Oak Ridge National Laboratory, has not only expressed his antagonism; he competes directly for research funds with me in the precise area of work he is reviewing. It would be difficult to envision a more clear-cut case of preparation of a kangaroo court evaluation.

Dr. John Totter is on the record as saying publicly that my chromosome research is worthless. On the other hand, the Xth International Cancer Congress Program Committee voted unanimously to invite me to speak on that work as a Guest Speaker. The British Journal of Cancer accepted my publication with the compliment that the reviewers felt the work was an important contribution. The American College of Physicians invited me as a guest speaker to present that work at an important Post Graduate Course in Richmond, Virginia, where the work was very well received.

Cancer is a dread disease of mankind. It is saddening to see you condone the actions of Dr. John Totter and the DBM staff doing everything they can to destroy work directed toward solution of this important problem. The least that society can expect of you, as a Nobel Laureate, is that you won't hinder cancer research, to say nothing of expecting constructive efforts on your part concerning the radiation hazards question.

I welcome any honest review and criticism of my scientific work on chromosomes. Your Dr. John Totter clearly should have nothing to do with such a review, since he has obviously disqualified himself. And his staff is disqualified since they answer to him.

You spoke of waiting for the independent review requested by Senator Muskie. Meanwhile, your Dr. Totter goes ahead preparing obvious further reprisal through a review that is biassed in the most evident fashion. Am I to understand this is the expression of your sense of justice and fairness? Your staff has already deprived us of our research funds for studying the radiation hazards-standards problem. Senator Muskie called for an independent review. Instead of restoring such funds, as a minimum element of fairness, you condone the reprisals, stating you are waiting for the review. Your sense of fairness is to deprive us of our ability to work pending the review, which moves at a snail's pace. All I can say is that the justness and fairness are simply a travesty, open for all to see.

Why do we need the facade of Dr. John Totter's "review" of my chromosome research? Why don't you simply cut off those funds too in the same manner as the other research funds have already been taken away?

Since the objective of Dr. John Totter is already on the record, namely, my personal and scientific destruction, why waste everyone's effort with a kangaroo court "review"?

If, on the other hand, there exists some desire on your part to have an independent assessment of my chromosome research, such could be carried through. The last group in the world to even have any say in conducting such a review is Dr. John Totter and the DBM staff.

Sincerely yours,

John W. Gofman

JWG:ms

XC: (1) Senator Edmund S. Muskie
(2) Representative Jonathan Bingham
(3) Senator Frank Church
(4) Senator John S. Cooper
(5) Senator Alan Cranston
(6) Representative Emilio Daddario
(7) Senator Mike Gravel
(8) Senator Philip Hart
(9) Hon. Chet Holifield
(10) Senator Edward Kennedy
(11) Senator Walter Mondale
(12) Mr. Ralph Nader
(13) Representative Richard L. Ottinger
(14) Representative Ogden R. Reid
(15) Representative John Saylor
(16) Representative Lester L. Wolff

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NOV 86

THE UNDER SECRETARY OF STATE

WASHINGTON

November 10, 1970

Dear Dr. Seaborg:

It was a great pleasure to meet with you and the other members of the Commission last Monday and very helpful to get your collective ideas on some of the problems we will be facing in the coming months in the atomic energy field. My colleagues and I also owe you our thanks for a most enjoyable luncheon.

Upon my return, and in the light of our discussions, I reviewed your letter of October 16, 1970 relating to the development of objective technical criteria which might be used to modify the Limited Test Ban Treaty so as to permit the peaceful exploitation of nuclear excavation technology. Your suggestion that the Under Secretaries Committee consider in the near future the question of inviting the Soviets here for further technical talks on this subject seems to me to be a good one.

You indicate that the AEC will shortly have a further report for the Interagency Study Group which has been dealing with this matter. As soon as the report is available, I will ask Herman Pollack's office to convene

The Honorable
Glenn T. Seaborg,
Chairman,
U.S. Atomic Energy
Commission.

the Study Group for it as promptly as possible to prepare recommendations for the Under Secretaries Committee's consideration. The Committee presumably would review at the same time the study which I understand was prepared last spring to weigh the importance of the development of nuclear excavation against the political risks which such development might involve.

With kindest regards,

Sincerely,

John N. Irwin II

After lunch I went to the Department of Health, Education and Welfare Building (Room 1137), where I met with a number of special invitees prior to the NASA Honor Awards ceremony to which we had been invited. Here I talked to George Low (Acting Administrator of NASA), Bob Seamans, Werhner von Braun, and others. I had a few words with Mitzi, whom Peter knew when he worked at NASA on a summer assignment, and she inquired about Peter and passed on her best regards. I talked to Alan Bean, the astronaut who had the assignment of pulling the Pu-238 out of its container in order to assemble the SNAP-27 power source on the moon on November 19, 1969, and to Charles Conrad who was Bean's companion on that mission. I told Bean that I had watched his efforts via TV at the Flight Mission Headquarters in Houston and that I virtually used my hands to help him pull the Pu-238 capsule out when it got stuck, in view of my deep concern as a co-discoverer of Pu-238. Bean said that Conrad had solved the problem with his hammer blow, to which Conrad modestly replied that he was proud to have been able to participate in a team effort on this historic first. I also had an opportunity to talk briefly to Mrs. Hugh Dryden and Mrs. Tom Paine. I also talked to Michael Collins and Edwin E. Aldrin, Apollo-11 astronauts. I mentioned to Aldrin that Mrs. Seaborg and I had met his father at the Los Angeles dinner for the Apollo-11 astronauts last August.

I then walked into the HEW Auditorium and onto the stage, where Low presided at the Honor Award ceremony. Seated on the stage were: George Low, Tom Paine, Jim Webb, Homer Newell, Bob Seamans, Willis Shapley, Werhner von Braun, Alan L. Bean, Edwin E. Aldrin, Charles Conrad, Jr., Richard F. Gordon, Michael Collins, James A. Lovell, Jr. and I.

First, Group Achievement Awards were presented to four project teams, followed by Exceptional Service Medals to 18 individuals and Exceptional Scientific Achievement Awards to about 15 individuals. This was followed by the presentation of the Exceptional Bravery Medal to Herbert W. Grandy of the Goddard Space Flight Center and an Outstanding Leadership Medal to Robert L. Krieger of Wallops Station and James C. Elms, formerly of the Electronics Research Center. There was a brief musical interlude while we were waiting for Vice President Agnew to arrive. After the Vice President arrived the ceremony continued. After an introduction by George Low in each case, the Vice President presented Distinguished Service Medals to Thomas O. Paine, Michael Collins and Edwin E. Aldrin (Apollo-11 astronauts), Charles Conrad, Jr., Richard F. Gordon and Alan L. Bean (Apollo-12 astronauts), and Joseph A. Lovell, Jr. (an Apollo-13 astronaut). Also receiving Distinguished Services Medals in absentia were Neil A. Armstrong (Apollo-11), and John L. Swigert, Jr. and Fred W. Haise, Jr. (Apollo-13). George Low then introduced the Vice President, who spoke briefly from a prepared text extolling the astronauts and the space program.

Regulatory Commission Meeting 291 was held in my absence (action summary attached).

Upon my return, at 3:35 p.m., I presided over Information Meeting 1078 (notes attached), which had just commenced. Jerry Tape visited with us and, in his role as our Chief Technical Consultant for the Fourth Geneva Conference on the Peaceful Uses of Atomic Energy, discussed with us the work of his committee in choosing some 75 papers for final choice out of the more than 400 entries for submission to the IAEA Geneva Conference staff. After Tape left we discussed again the difficult problem of making amendments to agreements for cooperation with a number of countries (like Japan, Switzerland, Korea, Pakistan, Brazil and China) because of the stand by the JCAE that they will not approve these amendments until there is assurance that our enrichment capacity is adequate, which can only be the case if the CIP program is approved. Unfortunately, the OMB is holding up on the apportionment of the additional CIP funds. In the

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 16, 1970
Approved CKB
Date

Clifford K. Beck, Acting Director
of Regulation

ACTION SUMMARY OF REGULATORY MEETING 291, FRIDAY, NOVEMBER 13, 1970, 2:45 P.M., ROOM 1115, D. C. OFFICE

SECY:FG

Commission Business

1. SECY-R 71 - Implementation of Civil Penalties Legislation for Licensing Violations

   Approved. (CO/NMS)

2. SECY-R 78 - Proposed Amendments to 10 CFR Parts 30 & 150 - Reporting & Control Requirements for Tritium

   Discussed.
   The Commission requested:
   a. further definition of "recovered" as applied to tritium produced in reactors; and
   b. the matter be rescheduled.

   (NMS/SECY)

3. SECY-R 80 - Amendment to Part 50 on Emergency Planning for Production & Utilization Facilities

   Discussed, and to be rescheduled. (SECY)

   The Commission noted:

   a. staff would brief the Commission on the public relations aspects of emergency procedures for potential nuclear accidents; and
   b. staff is preparing a report on the licensing rules and criteria for plutonium processing facilities.

   Commissioner Johnson requested staff consider extending surveillance control criteria and emergency planning procedures to fuel fabrication facilities.

   (RS)

F. T. Hobbs for

W. B. McCool
Secretary of the Commission

cc:
Commissioners

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 13, 1970

INFORMATION MEETING 1078

3:35 p.m., Friday, November 13, 1970, Chairman's Conference Room, D. C.

1. Mr. Brown's Oral Report on the NSSM 101 Study

   Noted. (AGM)

2. SECY-620 - Eazor Terminal Incident

   Noted. (CONS-BM)

3. Geneva IV Papers (Discussion with Dr. Gerald Tape; See also Mr. Brunenkant's November 12 Memorandum)

   Dr. Tape will proceed as discussed in consultation with Commissioner Thompson. (SECY)

**********

EXECUTIVE SESSION

4. November 6 Memorandum from the President re Public Relations Activities

   Staff recommendations are requested. (AGM)

5. President's November 6 Memorandum on Subjects for the State of the Union Message

   Recommendations are requested. (AGM)

6. SECY-609 - KMS

Approved for discussion with the Joint Committee staff prior to formal transmittal to the JCAE. The General Counsel is to call Mr. Eugene Zuckert. (GC-Congr.-SECY)

7. General Manager's Oral Report on Staff Discussions with Mr. Chet Holifield re Cooperation with the Europeans and Industrial Access to Enrichment Technology

**********

8. SECY-625 - Guidance for Laser Classification Panel

Staff is to proceed as discussed. (C)

9. Agenda for the Weeks of November 16, 23, 30 and December 7, 1970

Approved. (SECY)

10. NTS Events (See General Giller's November 10 Memorandum)

Noted. (AGMMA)

11. Mr. Wells' November 12 Memorandum re Change in Alternate Board Member in Consolidated Edison Co. of New York (Indian Point 2), Docket No. 50-247

Approved. (Chm. AS&LBP)

12. SECY-611 - Export of Depleted Uranium for Conventional Military Applications

Approved. (AGMIA)

13. SECY-628 - Negotiation of Agreements for Cooperation

Staff will proceed as discussed. (AGMIA)

14. SECY-629 - Reply to Swiss Ambassador's Request for Additional U-235 to Fuel New Power Reactors

Approved. (AGMIA)

15. SECY-604 and SECY-624 - Niagara Falls Site

Approved with changes. (AGMO)

16. Executive Personnel Item

Noted. (PER)

17. SECY-623 - Proposed Contractor Selection for A-E Services for Gaseous Diffusion Production Support Facilities

Noted with a request. (DC)

18. SECY-618 - Proposed Letter to NASA on High-Energy Accelerators

Noted. (R)

19. Pending Contractual Matters Report No. 381

Noted. (PAR)

20. SECY-619 - Senator Aiken's Request for Comments on Standards Radioactive Discharges

Staff will review with Commissioner Thompson. (OEA)

W. B. McCool
Secretary of the Commission

6:20 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Brown
Mr. Hennessey
Mr. Rubin
Mr. Griffin
Mr. Kull
Mr. McCool
Mr. Erlewine*
Mr. Brunenkant*
Dr. Gerald Tape*
Mr. Kratzer*
Mr. Pender*
Mr. McDaniel*
Gen. Giller*
Mr. Marshall*
Mr. Nash*
Mr. DeRenzis*
Mr. Harris*
Mr. Wells*
Mr. Buck*
Mr. Burr*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

meantime, we are caught in a sort of juggling act trying to keep representatives of these countries from learning that we may not be able to keep our commitments.

In executive session, with violent dissent from Ramey, we gave final approval to the arrangements for a no-fund contract whereby KMS can conduct secret work on laser-induced controlled thermonuclear reactions. This will now be discussed with the JCAE. We also discussed the matter of whether there should be a modification of the classification in order to permit non-AEC research on laser-induced fusion. This problem is complicated by the possibility that in order to permit KMS or similar work to proceed for us, it may be necessary to declassify the essential conception of thermonuclear controlled weapons. Therefore, we are considering this further before constituting a laser classification panel, which would include outside consultants, to consider this thorny question.

Hollingsworth reported on Flaherty's meeting with Holifield in Los Angeles in which he learned that Holifield is so opposed to the AEC's recent impending action in sharing uranium enrichment technology with our European friends that he will fight this on the floor of the House if necessary. Holifield also said that the question of the involvement of U.S. private industry in enrichment technology will require a meeting of the AEC with the full JCAE. He also offered the information that in view of his taking over the chairmanship of the House Committee on Government Operations as a result of Representative Dawson's death, he will offer the vice chairmanship of the JCAE to Mel Price, but in any case he will continue to play a very active role in the work of the JCAE.

At 6:20 p.m. I presided over Regulatory Information Meeting 433 (notes attached).

I learned that Roger Heyns resigned his position as Chancellor of the University of California at Berkeley today. He announced this action in a news conference and indicated that he will stay until next June if a successor cannot be found sooner.

Saturday, November 14, 1970- D.C.

I worked in the office until 12:45 p.m. I called Roger Heyns to discuss with him his announcement yesterday that he is resigning as Chancellor of the University of California, Berkeley, telling him I have mixed feelings about it. He said he appreciated my calling and that he, too, has mixed emotions; he arrived at the decision reluctantly, but it seemed like the thing to do. He said the energy requirements were beginning to be a little hard. I said I am sorry that he is not staying on at the University, and he said he has thought long and hard about that, but decided he should get into another setting for a while. We discussed the difficult task of finding a successor. He said he thinks the wheels will start turning immediately, and he recommended to Hitch that he should meet with the search committee once a week in an effort to stimulate it and cut down the length of the search. Heyns said it would be a capstone on his career if he could get me back there. I said I would be returning but didn't know whether it would be during his regime. I told him that I will be in Berkeley on my way back from Hawaii on Friday, and that I will be attending the Big Game on Saturday with members of my family who are now in California. I said I might see him at that time. He then suggested that we might join him at the alumni luncheon before the game.

I received a memorandum from the White House (copy attached) asking us to provide them with specific information as to the progress we have made in implementing the Federal Procurement and Minority Business Enterprise established by the President on December 5, 1969.

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 13, 1970

# REGULATORY INFORMATION MEETING 433

6:20 p.m., Friday, November 13, 1970, Chairman's Conference Room, D. C.

1. Mr. Hennessey's November 10 Memorandum re Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

   Changes and reconsideration are requested. (GC-SECY)

2. Environmental Statement on Dresden 3 (Bureau of Radiological Health)

   Discussed. Staff will prepare a recommendation. (DDR)

3. Notice of Proposed Issuance of Facility Operating License (Commonwealth-Edison, Dresden No. 3)

   Approved. (DDR)

4. Environmental Statement re Indian Point No. 2 and Notice of Hearing on Consolidated-Edison, Indian Point No. 2

   Noted. (DDR)

5. ACRS Letter re Metropolitan Siting

   To be discussed with the Commission. (DDR)

6. Trojan Press Briefing

   Noted.

W. B. McCool
Secretary of the Commission

6:55 P.M.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Beck | Commissioners |
| Commissioner Ramey | Mr. Henderson | Dir/Regulation |
| Commissioner Johnson | Mr. Hanauer | General Manager |
| Commissioner Thompson | Mr. Rubin | General Counsel |
| | Mr. Griffin | Secretary |
| | Mr. McCool | |

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NOV 86

MEMORANDUM

THE WHITE HOUSE
WASHINGTON

November 10, 1970

MEMORANDUM TO HEADS OF DEPARTMENTS AND AGENCIES

In keeping with the attached Presidential Memorandum (December 5, 1969), we are requesting that you provide this Office with specific information as to the progress your Department or Agency has made since the issuance of this memorandum. Since this report is being prepared for the President, we ask that it be sent to the Office of Robert J. Brown no later than the close of business, November 20, 1970.

Thank you for your assistance in this matter.

Leonard Garment
Special Consultant
to the President

Attachment

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NOV 86

THE WHITE HOUSE

WASHINGTON

December 5, 1969

MEMORANDUM TO HEADS OF DEPARTMENTS AND AGENCIES

SUBJECT: Federal Procurement and Minority Business Enterprise

Minority business enterprise is a major concern of this Administration. For that reason, on March 5, 1969, I established by Executive Order the Office of Minority Business Enterprise in the Department of Commerce to coordinate the efforts and resources of Federal departments and agencies and private enterprise in this field.

One of the most important ways to promote this effort is to develop a program which will increase the involvement of minority group contractors in the multi-billion dollar Federal procurement program. The Office of Minority Business Enterprise, the Small Business Administration, and a Federal Task Force on Procurement -- under the leadership of Robert L. Kunzig, Administrator of General Services -- are working closely with members of my staff to develop such a program.

Leonard Garment, my Special Consultant, and Robert J. Brown, my Special Assistant, will assist in the development of that program, keep me informed of progress, and make such recommendations as they feel are necessary.

I request that during the period of program development, all departments and agencies provide to the Office of Minority Business Enterprise and the Small Business Administration full support in the following ways:

-- Provide procurement opportunities.

-- Supply management and technical experts.

-- Help to set goals to measure progress of the efforts being made.

-- Name a representative of your department or agency to pursue these efforts.

This program has high priority on this Administration's agenda. I trust that all of you will give it your best attention and effort.

Richard Nixon

I sent a letter to Holifield (copy of this and IAEA letter attached) informing him of developments related to a new agreement with the IAEA for the development of agency safeguards.

I had lunch with Justin Bloom at the World Buttery.

In the afternoon I helped to officiate at a belated birthday party which Dianne gave for 11 of her girl friends. I took a number of snapshots and a roll of movies.

Dianne Seaborg's Birthday Party
November 14, 1970
L to R: front row- Patty Archilla, Amy Ballou, Laura Dodd; middle- Abbe Kaufman, Regina Archilla, Dianne, Rhoda McFarland, Sabrina Miller; back- Debbie Jaffe, Brendan Canary, Sandy _____ and Jessica Nicoll.

I took a hike with Suki in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on White Horse Trail to Cross Trail 3, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

Allyne Snyder came by for dinner, bringing a birthday cake and presents for Eric, who will have his 16th birthday next Tuesday. Brendan Canary also had dinner with us. She is spending the weekend as Dianne's guest and attended the party this afternoon.

I spent the evening working on the final draft of Man and Atom.

Sunday, November 15, 1970

I spent most of the day working on the final draft of Man and Atom.

In the afternoon I watched on TV the Washington Redskins-New York Giants football game, which the Giants won in a heartbreaking manner, 35-33, by scoring 21 points in the last quarter.

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 14 1970

Honorable Chet Holifield
Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

I refer to my letter of June 2, 1970, and related correspondence concerning a new agreement with the IAEA for the development of Agency safeguards and to the draft agreement attached to that letter.

After further consideration of the draft agreement, the IAEA Secretariat has concluded that it would prefer to have the substance of the agreement incorporated in an exchange of letters. Such an exchange would be less formal than the proposed draft agreement and would not require approval by the Agency's Board of Governors. (The Secretariat staff had expressed some concern about submitting a safeguards agreement to the Board which did not contain a provision concerning sanctions, since in their view the lack of such a provision might create difficulties in connection with future safeguards agreements.) Accordingly, the IAEA Director General has proposed that the substance of the proposed draft agreement be effected by arrangements set forth in his letter to the U.S. Representative to the IAEA. The U.S. proposes to accept the arrangements set forth in this letter, a copy of which is attached.

The exchange of letters, while providing for essentially the same scope of technical cooperation as the proposed agreement, differs from the agreement in certain important respects. The letter does not include the formal undertakings regarding peaceful uses which were contained in Sections 2 and 3 of the draft agreement, nor does it contain any provision for the settlement of disputes. On the other hand, the letter more explicitly establishes the arrangement as being for the purpose of assisting the Agency "in increasing the effectiveness of its safeguards through support of its present work in developing safeguards practices in respect of all parts of the fuel cycle, and in elaborating and testing new methods and techniques of applying safeguards". In effect, therefore, it provides for one or more technical exercises, rather than the formal application of safeguards.

Discussions have been held between staff of the Agency and the AEC concerning possible exercises under the proposed arrangements. On July 15 and 16, 1970, three members of the Agency staff visited the Westinghouse

Fuel Manufacturing Facility in Columbia, South Carolina, for the purpose of obtaining sufficient information to permit the development of a test exercise proposal. Additional discussions with Agency and Westinghouse personnel concerning this proposal were held during the week of October 12, 1970. The Agency has also indicated that it would submit a detailed proposal for a further exercise at the NFS chemical reprocessing plant. We believe these exercises will be of value in enhancing the safeguards capabilities of the IAEA. Participation by industry in such exercises would be on a voluntary basis.

You will recall that we also mentioned in my earlier letter the possibility of the IAEA conducting a safeguards exercise at the Novovoronezh Power Station in the USSR. According to recent information obtained informally from knowledgeable Agency staff members, the Soviets are expected to present a specific proposal for an appropriate exercise to the IAEA in November for consideration by the Agency. Assuming the proposal is satisfactory, it is tentatively planned that Agency representatives visit the Soviet Union in December to work out the details of the exercise. We shall, of course, keep the Joint Committee informed of further developments concerning this matter.

Cordially,

Chairman

Enclosure:
1. Ltr. dtd. 10/7/70 from
   S. Eklund to Hon. D.J. Porter

UNCL. BY DOE
NOV 86

INTERNATIONAL ATOMIC ENERGY AGENCY
AGENCE INTERNATIONALE DE L'ENERGIE ATOMIQUE
МЕЖДУНАРОДНОЕ АГЕНТСТВО ПО АТОМНОЙ ЭНЕРГИИ
ORGANISMO INTERNACIONAL DE ENERGIA ATOMICA

TELEPHONE: 52 43 11
TELEX: 01-1645
CABLE: INATOM VIENNA

KÄRNTNER RING 11, P.O. BOX 590, A-1011 VIENNA, AUSTRIA

IN REPLY PLEASE REFER TO
PRIERE DE RAPPELER LA REFERENCE:

7 October 1970

Sir,

I have the honour to refer to recent discussions between the United States and the Agency with respect to arrangements that might be concluded between your Government and the Agency to continue their co-operation in the development of safeguards after the expiration of the Agreement for the Application of Safeguards to United States Reactor Facilities of 15 June 1964.

During these discussions it was agreed that the main purpose of any such arrangements would be to assist the Agency in increasing the effectiveness of its safeguards through support of its present work in developing safeguards practices in respect of all parts of the fuel cycle, and in elaborating and testing new methods and techniques of applying safeguards. It was recognized that it would be desirable for the Agency that its safeguards staff should have the opportunity to familiarize itself with a wide range of facilities and particularly to concentrate its activities from time to time in areas of special interest to it.

In the view of the Agency and in accordance with the stated intentions of your Government, conditions for meeting this purpose could be created if your Government, in agreement with the Agency, would from time to time specify nuclear material and facilities associated with peaceful nuclear activities, in respect of which the Agency could apply its safeguards procedures and test its safeguards methods and devices for an agreed period of time. It would be understood that for that period the United States would allow the Agency to apply its safeguards procedures and/or its methods and devices in respect of such material and such facility.

The Honourable Dwight J. Porter
Resident Representative of the
United States of America to the
International Atomic Energy Agency
Permanent Mission of the United States of America
Schmidgasse 14
Vienna VIII

It would be understood, moreover, that within the agreed period the United States could effect the termination of the Agency's activities in respect of specified nuclear material or a specified facility by giving the Agency two months' written notice. Equally, the Agency could, by written notice, terminate the application of its safeguards procedures in respect of specified nuclear material or a specified facility.

In applying its safeguards procedures and testing safeguards methods and devices the Agency would observe the principles set forth in Paragraphs 9 to 14 of the Safeguards Document (INFCIRC/66, Rev.2).

The basic safeguards procedures to be applied by the Agency pursuant to these arrangements would be those of the Safeguards Document. Particular understandings would be reached between the United States and the Agency concerning details of the safeguards procedures to be applied or tested in respect of specified nuclear material or a specified facility; these understandings could also include the records and reports systems that would be maintained pursuant to Paragraphs 33 and 37 of the Safeguards Document. The Agency would have the right to request the information referred to in Paragraph 41 of the Safeguards Document and to make visits as referred to in Paragraphs 51 and 52 of that Document.

The provisions of Paragraphs 1 through 7 and Paragraph 9 of the Inspectors' Document would apply, mutatis mutandis, to Agency staff applying safeguards inspection procedures or testing methods and devices, pursuant to these arrangements. It is proposed that the United States and the Agency would consult on the timing of visits to be made for the purpose of applying safeguards procedures or testing methods or devices, to take account both of the interests of the operator concerned and of the Agency's interest in meeting the purposes mentioned above. In order to create, to the extent possible, operational conditions, it would be understood that, in accordance with Paragraph 50 of the Safeguards Document, no notice need be given of visits for the purpose of applying safeguards procedures or testing methods or devices in respect of any specified principal nuclear facility or nuclear material to which the Agency would have access at all times in accordance with the Safeguards Document. The Agency would also be authorized to apply continuous inspection procedures in respect of a specified principal nuclear facility or of specified nuclear material to which it would have inspection access at all times in accordance with the Safeguards Document.

The provisions of the International Organizations Immunities Act of the United States would apply to Agency staff performing functions in the United States under these arrangements and to any property of the Agency used by them.

Each party to these arrangements would bear any expenses incurred by it in their implementation. The Agency would be ready to reimburse special expenses incurred by the United States or persons under its jurisdiction if they resulted from a written request by the Agency or its officials and if the United States notified the Agency in writing before the expenses were incurred that reimbursement will be required.

In carrying out its functions under these arrangements within the United States, the Agency and its personnel would be covered to the same extent as United States nationals by any protection against third-party liability provided under the Price-Anderson Act, including insurance or other indemnity coverage that may be required by the Price-Anderson Act with respect to nuclear incidents within the United States.

It is suggested that these arrangements remain valid for an initial period of two years from the date they are concluded and that they could be renewed by further exchange of letters.

If the foregoing proposals are acceptable to your Government, your written confirmation thereof and the present letter would constitute the arrangements, to take effect upon the date of such reply.

Accept, Sir, the assurances of my highest consideration.

Sigvard Eklund
Director General

My cousin George Lambert from Chicago (who is in town for the ANS meeting) came by for dinner. He is working as a technician at Argonne National Laboratory on the LMFBR program. Brendan Canary also had dinner with us.

Monday, November 16, 1970- D.C.

As I came to the office this morning, I met Ed McMillan, Jack Hollander and Andrew Sessler in front of the building and talked briefly with them. They are in town to present a proposal from the Lawrence Radiation Laboratory in Berkeley to work on environmental matters.

Herman Pollack called and said they have been trying to get the Executive Branch to approve the CIP and upgrading request. The other day Jack Irwin raised the question with Kissinger, who apparently went to Flanigan because Flanigan just called Irwin. Pollack gathered from the report that Flanigan is concerned that if the Commission's proposals are adopted, the transfer of the facilities to private industry will be made more difficult. He asked me if I have been in touch with Flanigan on this. I said we have talked only on the broad background of the whole problem of things eventually going into private hands and that this has been caught up in the new enrichment criteria that the White House wants and the JCAE is fighting. I said in the course of these conversations Flanigan has voiced the fear that Pollack identified. Pollack asked if I would support their understanding that before the question of private ownership of these facilities could be resolved, several more years would pass. I said that is right, no one wants to buy them now. In the meantime we have to have the enrichment capacity. He asked me if he is correct in his understanding that we calculate that the government investment would be repaid. I said it would be more than repaid, there would be a profit, although we don't use the term publicly. I said it is a real good business proposition and would help the foreign exchange situation which, I understand, is quite critical. Pollack said Irwin is very concerned about this problem as a result of the briefing he received in Germantown. I said perhaps Irwin, Flanigan and I should meet on this matter and he said he intends to suggest that. He said he would let me know what develops.

At 11 a.m. Commissioners Johnson, Larson and I met with the following officials of the Western Interstate Nuclear Board: Frank Young (Chairman), Dr. Alfred T. Whatley (Executive Director), Dr. Bruce H. Van Domelen (Division Supervisor, Sandia Laboratories), Paul L. Clifton (California Power Plant Siting Committee), Dr. John C. Bellamy (Wyoming Director of Research for Natural Resources), Lawrence E. Wilkinson (Oregon Nuclear Coordinator), Dwight Neill (Colorado Director of Commerce & Development), Donald C. Gilbert (Executive Director, Arizona Atomic Energy Commission), Gene P. Rutledge (Executive Director, Idaho Office of Nuclear Energy Development), and Milton Weilenmann (Executive Director, Utah Department of Development Services). Others present included Ed Bloch, Ernie Tremmel, Eber Price and Julie Rubin. After visiting over cups of coffee for a while we sat down and Frank Young briefly described the organization and function of the Western Interstate Nuclear Board. The Board apparently contains a number of knowledgeable people and should play an influential role in the constructive development of nuclear affairs in the West.

I then went to the Shoreham Hotel, where the Atomic Industrial Forum and the American Nuclear Society are holding their annual meeting, to attend the AIF luncheon in the Blue Room, as a member of the head table party.

Preceding the luncheon I attended a reception in the Board Room. There I talked to Harvey A. Wagner (Executive Vice President, Detroit Edison Company), who referred to the letter of today's date that I received from Walker Cisler (copy attached), which asks for an early decision by the AEC to waive the use and

POWER REACTOR DEVELOPMENT COMPANY
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1911 FIRST STREET
DETROIT, MICHIGAN 48226

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WOODWARD 1-4838

November 16, 1970

The Honorable Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Dr. Seaborg:

I wish to thank you for your letters of October 1 and October 21, 1970, concerning possible Commission interest in a program for continuing utilization of the Enrico Fermi Atomic Power Plant.

As you know, the facility is now back on the line and the reactor and all systems have performed most satisfactorily since criticality was attained on July 18, 1970. The plant has been operated at its full licensed power of 200 Mwt (60 Mwe) and during a programmed 48-hour run produced three million kilowatthours of electric power for the Detroit Edison system and the Michigan Power Pool. We therefore believe it is the appropriate time to consider what future contributions Fermi can make to the Liquid Metal Fast Breeder Reactor program.

In this connection, members of the Commission's staff have suggested that we provide more detail on a proposed plan for continuing utilization of the Fermi-I plant about which I wrote you on August 4, 1970. Because of the favorable experience of the plant, it seems appropriate to provide at this time a proposal which covers the details suggested. This proposal is enclosed.

In essence, the proposal involves continuation of operation until the life of the present fuel is exhausted next year, followed by conversion of the facility to power operation with an oxide core. The result will be an early demonstration of the feasibility of high power sustained operation with this advanced and more efficient type of fuel. The result will also be creation of operating characteristics similar to those which will be encountered in the next generation of fast breeder plants; thus the reactor can be utilized for irradiation tests of interest to the development of these reactors.

Fermi is built, paid for, and has been successfully operated at power while other future fast reactor projects are still predominantly on the drawing board. There can accordingly be a high degree of confidence that the experience and data which our proposed program is designed to produce will be available at a relatively early date, thus making a major contribution to the rapid development of future fast breeder plants.

In this respect, we believe it appropriate to regard our proposed program as insurance against the real danger that the Commission's present LMFBR program, including the Fast Flux Test Facility, will experience significant

slippage due to rising costs or technical difficulties. Provided the premium is reasonable in relation to the total LMFBR effort, we submit that it would be in the public interest for the Commission to contribute financially to the further utilization of Fermi-I.

We understand that the Commission is under severe budgetary limitations at the present time, and accordingly suggest that the Commission's contribution could initially take the form of waiver of use and burnup charges from 1971 through 1976. Such an affirmative indication of support will, we believe, make it possible for us to make a good beginning in raising the substantial funds from member companies and other private sources which will be necessary to finance the program. Unless potential contributors have some concrete indication that the Commission shares with us the belief that Fermi-I can make a further and significant contribution to the development of fast breeder reactors, we have doubts that the necessary funds can be raised. Since our presently available resources will cover operation for only a few more months, an expression by the Commission at an early date as to whether it is willing to participate at least to the extent of waiver of use and burnup charges would be appreciated.

We hope, of course, that at a later date the Commission will consider a substantially greater participation in the program as its interrelationship with the nature and timing of the other aspects of the current LMFBR effort become known with greater preciseness. If the Commission should believe that the emphasis in the proposed program as between power demonstration operation of the oxide core and use of the facility for irradiation test purposes should be shifted more toward the latter use and that such a shift is a prerequisite to financial contribution by the Commission, we would be most willing to consider doing so.

Any revenue received by Power Reactor Development Company as a result of the sale of heat produced by the reactor during the program period to The Detroit Edison Company under the terms of the contract between the two companies will be used by PRDC in furtherance of the program. Our estimate of this revenue is approximately $4 million.

The detailed cost figures in the enclosed proposal differ somewhat from those given previously to members of your staff, although the total remains unchanged. One change I want particularly to mention is an increase in the allowance for fuel fabrication cost to cover procurement from a U. S. manufacturer. The earlier estimate was made on the basis of offers submitted by Belgian and Japanese manufacturers which contained significant elements of contribution to the program. The change has been made as a result of our understanding that the Commission views qualification of domestic reactor and fuel manufacturers as one important objective of the LMFBR program. If the Commission feels that a U. S. manufacturer should be used, we would hope the Commission will pay at least a part of the additional cost to PRDC. Also, if a domestic manufacturer is used, I would like to see some way found for the Belgians and

Japanese nevertheless to participate in the fuel manufacture as they have been staunch supporters of Fermi for many years.

We are prepared to discuss our proposal and the suggestions made in this letter with the Commission members and staff. It is our most sincere wish to work with the Commission in this effort to assure that Fermi-I makes the greatest possible contribution to the LMFBR program.

Sincerely,

Walker L. Cisler

Walker L. Cisler
President

Enclosure

burn-up charges in the Fermi reactor from 1971 through 1976. He said that such a step by the AEC would show that we are supporting the operation of Fermi and would aid them in getting the needed financial support from utilities. I told Wagner that I had just received the letter from Cisler and that the AEC will give this request serious consideration.

Others present at the head table were: Sherman Knapp (President, AIF), Clavin Brantley, Art Rolander, Keith Glennan, James Campbell (Chairman of Consolidated Edison), Harold Hughes and Wayne Thompson of the Portland Oregonian, and James Maxfield, the luncheon speaker. I sat next to Rolander, which gave us an opportunity to discuss the gas cooled breeder program at Gulf General Atomic. He was pleased with the treatment of the gas cooled fast breeder that Bloom and I gave in our Scientific American article. He indicated that Gulf management is not yet too worried about the financial burden they are carrying in carrying through the HTGR and gas cooled fast breeder development.

After lunch Sherman Knapp presented the Forum Award for significant contributions to the public understanding of nuclear energy to Consumers Power Company (Michigan) and the two Portland Oregonian reporters, Harold Hughes and Wayne Thompson. Knapp then introduced Maxfield, who gave a rather witty, clever and complete talk, with specially prepared slides, on the peaceful uses of atomic energy, including, in particular, their uses in medicine.

After the talk I rode back to the office with Sidney Siegel and Justin Bloom. During the ride and after we arrived in my office Siegel briefed me on the safety aspects of the LMFBR prototype that AI of North American Rockwell has designed. He had heard about my concern over the safety of fast breeders. The largest conceivable explosive type of accident apparently would release an energy equivalent to about 250 pounds of TNT.

I called John Nassikas (Chairman, FPC) to express my appreciation for the excellent letter he sent to Caspar Weinberger (Deputy Director, Office of Management and Budget) on the urgency of the fast breeder reactor program, a copy of which he sent to me (attached). He said he has heard there might be a slight problem here, so he decided to go forward and explain how vital it is from the standpoint of a reliable source of power- and not simply limiting it to the Liquid Metal Fast Breeder Reactor but to other breeder reactors, too, viz., helium, etc. He said he read my recent article on fast breeders and found it most instructive. He said that if I ever feel that he can do anything to be of help with overall programs, he would be very pleased to help.

I called Erik Jonsson (Mayor of Dallas, Texas) to ask him whether we could possibly interest him in joining the Board of Trustees of Science Service. He said he used to read Science News all the time. However, he said what he really does not need at the present time is another activity inasmuch as he is already travelling about 150,000 miles a year- and he mentioned his age (60). However, he suggested I send him a brief letter and said he would give me a prompt reply. He concluded by saying he likes our publication and what we do, and he is sure that the people involved would be interesting to work with.

Pollack called again as a follow-up to our conversation of this morning. He said it turned out that Irwin, who was called by Flanigan on Saturday, was not sure he fully understood what he was being told by Flanigan. Therefore, Pollack was commissioned to get in touch with Kriegsman and find out. He said it is Irwin's thought that he shouldn't bring the AEC into his discussions with the White House at this point; he might be more helpful if it were an independent effort by the State Department. I told him I will be away November 18th through 21st, but that Commissioner Johnson will be available.

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

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NOV 86

November 6, 1970

The Honorable Caspar W. Weinberger
Deputy Director
Office of Management and Budget
Executive Office Building
Washington, D. C. 20503

Dear Mr. Weinberger:

I wish to urge upon you the high order of national interest in retaining the proposed level of research and development expenditures of the Atomic Energy Commission on the Liquid Metal Fast Breeder Reactor program in Fiscal Year 1971 and beyond. In doing so, I well realize the need for an austerity approach in the current budget. Nevertheless, in my opinion, based on the total picture which we at the Federal Power Commission have of present and prospective demand for electric power and the fuel resources to provide this energy, this fast breeder reactor program is uniquely important. It is not just another nuclear research and development program.

The importance of the breeder program arises initially from the fact that nuclear generated power is expected to grow from its present 3 percent share of electrical generation to an estimated 22 percent by 1980 and 40 percent by 1990. In that dramatic increase in our dependence on nuclear power, the ultimate importance of the breeder rests on two principal considerations: (a) its technology offers a principal means of raising the future efficiency of nuclear generation, leading to a one-fourth reduction in their waste heat discharges to the environment; and (b) by greatly extending the usefulness of our natural uranium fuels, the breeder will not only conserve our available uranium fuels but will also save equivalent supplies of our fossil fuel resources which have finite limitations.

In this connection, I believe we can also anticipate substantial future economic benefits from continuing the present pace of the fast breeder reactor program. Any delay in the breeder program, even a temporary one, will add to the upward pressure on prices of increasingly scarce fossil fuels, thus tending to escalate power generation costs. On the other hand, continued advancement of the breeder reactor program should contribute to stabilizing such price tendencies as did the original nuclear program.

The major share of this breeder development program which is being carried by the Federal Government cannot be shifted to private industry because the magnitude and time scale of the effort is well beyond their capacity to support. While we intend that industry substantially increase its technical effort on a variety of electrical and energy resource problems, these are necessary in addition to the continued progress of the Liquid Metal Fast Breeder Reactor program to which I have referred.

I trust you will weigh seriously these major considerations of national interest in sustaining this effort.

Yours sincerely,

John N. Nassikas

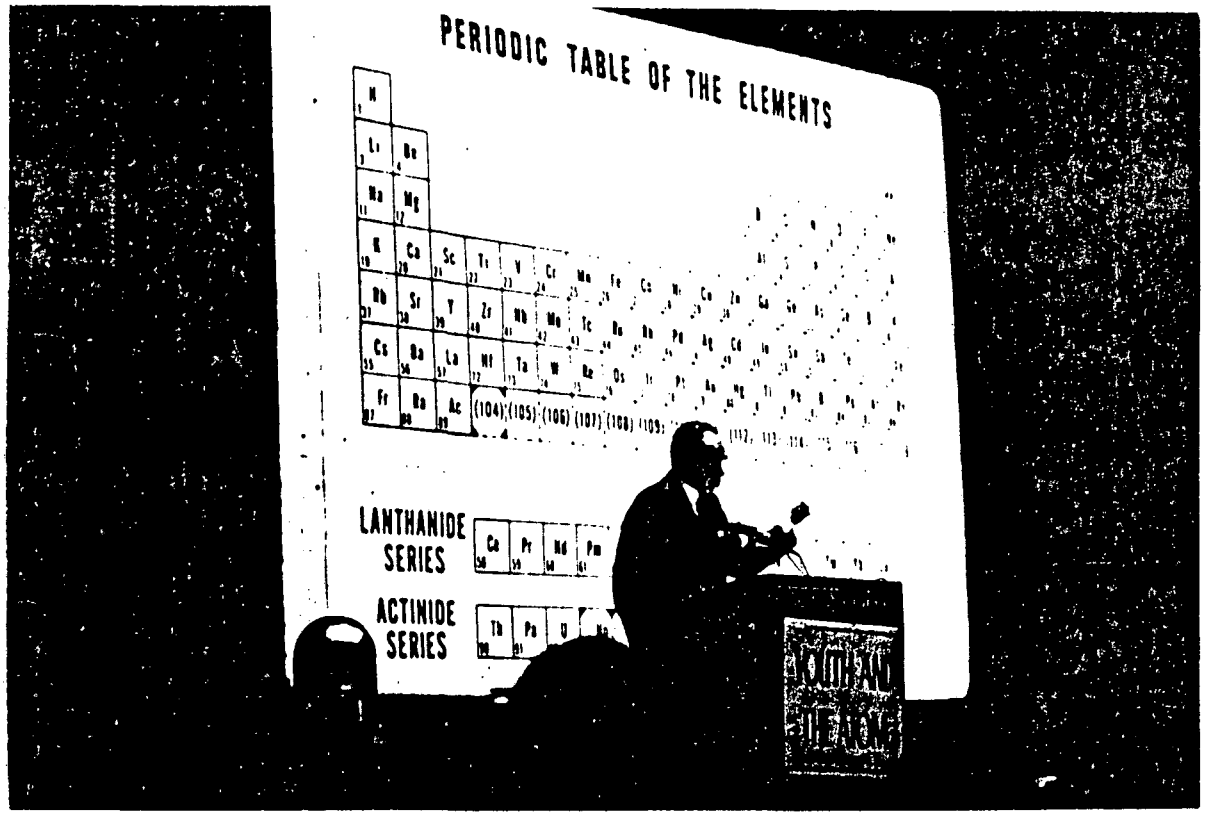
John N. Nassikas
Chairman

Helen and I attended a reception given by Westinghouse and the Smithsonian Institution at the National Museum of History and Technology in connection with the ongoing annual meeting of the AIF-ANS and the tenth anniversary of Yankee Atomic's nuclear power station. We talked to a great number of people, including the Holifields (who have just returned from California) and the Weinbergers. Weinberger and I briefly discussed some FY 1972 budget problems which he will further develop with me by telephone conversation tomorrow. We talked to General and Mrs. Groves (son of General Leslie R Groves). I had an interesting talk with Norman Hillberry concerning people involved in the early start of the Metallurgical Project in December 1941 and January 1942.

After dinner Suki and I took a hike in the Reno Park area.

Tuesday, November 17, 1970- D.C.

About 11 a.m. I went over to the Regency Room of the Shoreham Hotel to speak to the Youth and Atom Group, which was sponsored by the Potomac Electric Power Company, the Virginia Electric and Power Company, and the Southern Maryland Electric Power Cooperative, Inc. in connection with the annual meeting of the AIF-ANS. Following the presentation of "This Atomic World" by Ward Whelchel, I was introduced by Frank S. Walters (Manager of Commercial Operations, Potomac Electric Power Company). I gave my talk "Nuclear Progress in the 1970's," which consisted of a description of the peaceful uses of nuclear energy and the present status and future prospects for the transuranium elements. This was followed by a number of questions.




Youth and Atom Forum- November 17, 1970

Joined by Arnie Fritsch, we went across the hall to the Ambassador Room for lunch. Fritsch and I sat at a table with Miss Anderson (a chemistry teacher at the new Friendly High School in Friendly, Virginia) and her students. Julie

Rubin and Stan Schneider sat at another table. I spoke with a number of the students going to, during, and after lunch.

We then walked with the students over to the Exhibit Hall in the Sheraton-Park Hotel, where I viewed a number of the exhibits and had my picture taken with the students and exhibitors at a number of places by Charles Yulish and an AIF photographer. Among the students I met was Jane Darnell, who told me she is a winner of the Glenn T. Seaborg Award, presented by her high school teacher.

AIF/ANS Annual Meeting
L to R: Seaborg, Myrna Steele (Division of Technical Information Extension, ORNL)

Don Dunlop returned a call I had made to him yesterday regarding his draft of the energy report. I said that my main comment would be that if the draft could be broadened, it would serve as a good basis for what Ed David asked us to do. I said that David mentioned "national energy policy" several times. I said Flaherty will work on the draft; Dunlop said that since Flaherty will be going to his office for a meeting on Thursday, he could bring the revised draft with him at that time. I said I will be out of town from Wednesday through Monday, but I will look at the report at that time in preparation for Tuesday's Federal Council meeting.

I was interviewed from 2:45 p.m. to 3:30 p.m. for a television series being produced by RAI Italian Radio TV System. The series will be about five hours of program telecast eight or nine months from now. The title of the series will be "If Peace Breaks Out..." The interview was conducted by Maria Bosio (Assistant Producer). Other members of the crew were Mr. Scorpa (cameraman), Mr. Spinelli (assistant cameraman), and Mr. Casillo (soundman). A list of the questions asked is attached.

I sent my biweekly status report to the White House today (copy attached).

The U.N. Political Committee today approved the U.S.-USSR draft of the Seabed Treaty by a vote of 91-2.

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RAI CORPORATION
ITALIAN RADIO TV SYSTEM
1350 AVENUE OF THE AMERICAS • NEW YORK, N. Y. 10019 • TELEPHONE (212) 265-8540

GLENN T. SEABORG

1) Do you feel that the great scientific and technological development related to nuclear and thermonuclear bombs, their carriers, chemical and biological weapons has improved or deteriorated the national security of the United States ?
Do you think that this scientific and technological progress has contributed to international peace ?

2) According to you, do scientists and technicians who are engaged in producing always more powerful and lethal weapons have to feel a particular responsibility for the work they are carrying out ?

3)Some feel that the Great Powers accumulate strategic weapons in quantities that are too large to be justified from a purely military point of view.
Do you agree wit this ?

4) According to you which are the factors that influence the major decisions in the field of armaments ?
To what extent,scientists and technicians working to improve these weapons, influence these decisions ?

5) From a technical point of view, what are the possibilities of establishing an effective Anti Missile Defense System ?
From a strategic - political point of view, do you find it a wise endeavour ?

6) The development of multiple warhead missiles, with inertial and accurate guidance systems, may be very dangerous as the missile may seem to have the capability of destroying, in a surprise attack all strategic enemy carriers. In other words, the so-called first strike capability.
Do you think this will lead, among the Great Powers, to the

revival of a missile race to arms ?
Or do you think there is hope, through the SALT Talks, of reaching an agreement that will halt this proliferation ?

7) Is Seeking Peace, Peace as a social system, possible on our planet ?

8) Some believe that Society's orientation towards war has greatly motivated scientific and technological progress. From the discovery of iron to the atomic bomb war has always been an incentive for research. scientific
What would happen to/research in a world of peace ?

9) If the present social system based on a potential state of war were to change - if peace were to break out - which would be the major problems faced by humanity ?

10) If technology and scientific progress were to run out of hand, whose responsibility would it be to control or even prevent certain scientific applications - scientists or politicians ?

As chairman of U.S. Atomic Energy Commission, and
as scientist could you briefly point out the role of atomic
energy in a society of Px -

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# AEC BIWEEKLY STATUS REPORT FOR NOVEMBER 17, 1970

1. All Commissioners are participating in various parts of the annual joint meeting of the Atomic Industrial Forum and the American Nuclear Society that is being held in Washington, D.C., this week. (The Forum is an association of business firms and other groups interested in promoting the peaceful uses of nuclear energy. The Society is a professional association.) The meeting consists of speeches, symposia, and panels -- with the main theme on how the environmental movement is affecting the nuclear industry.

2. Chairman Seaborg will speak to the convention of Associated Press Managing Editors on November 19. His topic will be "Power, People, and the Press."

3. A report on The Disposal of Solid Radioactive Wastes in Bedded Salt Deposits, which evaluated the proposed salt mine concept and commented on proposed geologic studies, has been submitted to the AEC by the National Academy of Sciences' Committee on Radioactive Waste Management. The report concludes that the use of bedded salt for disposal of radioactive waste is satisfactory and that the site near Lyons, Kansas, is satisfactory subject to additional confirmatory data and evaluation. One of several briefings on the proposed salt mine repository was given at Lyons by the AEC on November 12 to industry representatives. The briefing was sponsored by the Governor of Kansas and the Kansas State Department of Economic Development. The briefing was followed by a tour of the existing salt mine facilities.

4. Low levels of radioactivity north of Niagara Falls and near Lewiston, N.Y., have been discovered on land formerly used by the AEC and the armed forces as a storage depot for miscellaneous nuclear materials during World War II and the early postwar years. The land was sold to private owners in the late 1960's and is undeveloped and generally uninhabited. The radioactivity was discovered by the AEC during a scheduled radiation monitoring operation at a small AEC boron-10 production facility located on Federal land near the private land. The radioactivity on the private land did not result from operations of the boron-10 plant; it appears to have been associated with uranium ore processing residues and other scrap material stored there on an interim basis during the late 1940's and early 1950's when the private land was part of the

Federal reservation. The radioactivity is limited to a few small areas on two privately-owned parcels comprised of a total of almost 1,000 acres. Preliminary surveys indicate that most of the radioactivity is at a very low level, but that a few spots are higher than levels permitted for unrestricted use by both AEC and New York State regulations. AEC and the State are continuing their investigation. AEC expects to make a public announcement on these developments on November 18.

5. In Vermont, the impasse was broken over the proposed certification of a bond issue to build a nuclear power plant. The utility, Vermont Yankee Nuclear Power Corp., agreed to install augmented radiation waste control equipment and to adhere to radiation standards set by the State of Vermont as long as the equipment and standards do not contravene AEC regulations. Other parties to the agreement were the State and four conservation groups. The agreement also calls for the utility not to challenge Vermont's claim to jurisdiction to set standards on the grounds that the AEC has exclusive jurisdiction to do this. The Vermont Board of Health has scheduled hearings on December 1 on a proposed state regulation that would restrict radioactive releases to one tenth of the level permitted by Federal protection standards.

6. The CBS-TV one-hour special "How Peaceful the Peaceful Atom?" is tentatively scheduled for November 17 at 10:00 p.m. It was previously scheduled but pre-empted on September 22.

7. A book by Drs. John Gofman and Arthur Tamplin was published on November 16. Entitled Population Control Through Nuclear Pollution, it uses the AEC as a case to support the argument that science and technology are not responsive to the needs of society. The book is being promoted by the public relations firm of Ruder and Finn, which is reportedly arranging for the authors to be interviewed by press, radio, and TV to publicize its release. The authors have scheduled some appearances around the time of publication, including one in Raleigh, North Carolina, on November 16, before the Council for Advancement of Science Writing, and another on November 18 before the Environmental and Ecological Forum in Silver Spring, Md.

8. Conservation groups are expected to intervene in two hearings, scheduled to begin during the next two weeks, on permits to construct nuclear power plants. A hearing on the Trojan plant, to be located on the Columbia River forty-two

miles northwest of Portland, Oregon, is expected to draw intervenors both pro and con. This hearing will begin November 19. On the 18th, AEC will hold a press briefing in Portland to explain its regulatory and licensing procedures on the construction of nuclear power plants. A construction hearing on the Midland nuclear plant, planned in Michigan on the Tittabawassee River is scheduled to begin December 1. This plant would be built by Consumers Power Company of Michigan, which is also the owner of the Palisades plant on Lake Michigan. A controversial hearing over an application by Consumers Power to operate the Palisades plant has been in session off and on since last June, and the counsel for the opponents of Palisades has stated that he will represent intervenors opposing Midland. Intervenors in favor of the plant are also on record.

9. Dr. Ernest J. Sternglass is expected to testify on December 7 before the Illinois Pollution Control Board at a State hearing on the issuance of a permit to operate the No. 3 reactor at the Dresden nuclear power station about fifty miles from Chicago. This State hearing is now necessary under the recently enacted Illinois Environmental Protection Act, which requires a public hearing on the environmental effects of the proposed operation of nuclear power plants and nuclear fuel reprocessing facilities. Dr. Sternglass is expected to reiterate his charges on infant mortality near the Dresden plant, which have been previously rebutted by both the AEC and Illinois State Health Department. Testimony on radiation standards is also expected to be heard.

10. The Commission has been asked to testify at hearings by the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries during the first week in December on AEC's compliance with the National Environmental Policy Act of 1969. The Subcommittee has expressed particular interest in the requirements of the Act that (1) Federal agencies submit environmental statements on proposed and planned actions that might significantly affect the environment and (2) agencies review their authority and procedures to determine if they are consistent with the Act.

11. A new group is being organized to oppose the spread of nuclear power plants and other industrial uses of the atom. Called "Citizens for Survival: An Organization to Combat Nuclear Pollution," the group, according to reports, is

being sponsored by Mrs. Lenore G. Marshall (a wealthy philanthropist who co-founded SANE), with the cooperation of Drs. Gofman and Tamplin and the office of Senator Gravel. Their campaign will be guided by the public relations firm of Ruder and Finn, which previously worked with SANE and Mrs. Marshall in opposing nuclear weapons testing. Although there are a number of multi-issue environmental groups hostile toward nuclear energy, this will be the first organization devoted entirely to opposing the peaceful atom. It hopes to form a connecting link among many scattered local groups opposing individual plants, and expects to have an executive director, a central information office, a newsletter, a speakers bureau, and a nationally known scientific advisory panel.

12. A Washington Post reporter, Tom O'Toole, is researching an article on the U.S. underground nuclear weapons test program. The New York Times' Drew Middleton is working on a story about Chinese nuclear testing. Charles Owens, a writer for Business Week, is preparing an article on AEC management of the fast breeder reactor program, an outgrowth of the GAO's report on the contractual difficulties experienced in the design phase of the Fast Flux Test Facility (FFTF) scheduled to be built at Richland, Washington. The nature of the questions addressed by the reporter to AEC Commissioners and staff indicates that the article may charge the AEC with the responsibility for the difficulties.

I attended a reception given by the British Nuclear Forum and the UKAEA on the occasion of Atom Fair '70 in the Rotunda of the British Embassy. In talking to Ambassador John Freeman we discussed my recent trip to England with Mrs. Seaborg and our tour of atomic energy facilities under the guidance of Sir John Hill.

I also talked to Peter Jelinek (the technical manager of Julich in Germany) about the gas centrifuge troika, as he called it, in Europe. He said that Euratom and OECD, which would have power to make the final decision concerning future enrichment plans for Europe, are interested in the recent reports that the United States is considering sharing its gaseous diffusion technology with Europe. He said that Europe would not make its decision as to which approach, gaseous diffusion or gas centrifuge, to use before 1972 and, thus, this should give both the U.S. and Europe sufficient time to consider this matter carefully before a decision will be made.

I also talked to Keith Alder (Director of the Lucas Heights Nuclear Center in Australia). He commented on the fact that he had missed seeing me during my visit to Australia in January 1967, he having been visiting the United States at the time. Tabor (the new head of the AEC Portsmouth gaseous diffusion plant) came up and introduced himself to me, which gave us a chance to get acquainted. I talked to numerous other people, including Harry Lawroski (who works at the Idaho Nuclear Testing Station and is a brother of Steve) and to Mr. and Mrs. Joe Palladino (Joe is busy during the present ANS meeting in his role as President of the American Nuclear Society).

Suki and I took a hike in the Reno Park area.

Pete called about 10 p.m. with the distressing news that Jane's father had a serious heart attack at about noon today. He was thought to have died, but was barely revived and brought to a hospital where he lies in a coma. The outlook is not very good.

Wednesday, November 18, 1970- D.C.- Honolulu

At 9:10 a.m. I presided over Information 1079 (notes attached). We approved the renewal of exchange arrangements with the Romanian Committee of Nuclear Energy and a protocol with the USSR on collaborative projects in high energy physics.

I received from Howard Vesper the report of the 114th meeting of the General Advisory Committee, which was held in Germantown and Washington on November 9th, 10th and 11th (copy attached). Also attached is the memorandum of John Harris to the White House summarizing current AEC activities in the public relations area.

Accompanied by Stan Schneider, I flew to Honolulu to address the Associated Press Managing Editors (APME) Convention. We left Baltimore Friendship Airport on United Airlines Flight No. 975 about 11:45 a.m. and arrived about 4:50 p.m. We were met by Herbert Spendlove of the Jackson Citizen Patriot (Jackson, Michigan) and Mrs. Valerie Humphries (Stan's cousin, who lives in Hawaii). We rode to the Ilikai Hotel in a taxi with Spendlove, where I checked into Room 1073.

After we changed clothes Valerie met us and drove us in her car to a section of Honolulu called St. Louis Heights, where Stan and I climbed a steep hill called Wilhemina Rise. Valerie met us at the top of the hill and drove us back to the Hawaiian Village at the Hilton Hotel, where we joined the APME group at their luau. There I spoke to Dick Smyser of the Oak Ridger, Don Carter of the

913285

UNITED STATES
ATOMIC ENERGY COMMIS...
WASHINGTON, D.C. 20545

OFFICE DIARY
GLENN T. SEABORG
Chr USAEC, 1961-72
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COPY NO. --- 3
November 18, 1970

# INFORMATION MEETING 1079

9:10 a.m., Wednesday, November 18, 1970, Chairman's Conference Room, D. C.

1. November 16 Letter from Mr. Walker Cisler re the Enrico Fermi Reactor

   Preparation of a reply is requested. (RDT)

2. Executive Session Item

3. November 12 Letter from J. Van der Spek to Commissioner Johnson re Inga Project

   Commissioner Johnson will circulate a proposed reply. (SECY)

4. SECY-630 - Federal Waste Repository: Environmental Statement

   Approved. (AGMO)

5. SECY-632 - FY 1971 Environmental Statement: NTS Underground Nuclear Test Program

   Approved. (AGMMA)

6. SECY-641 - Renewal of Exchange Arrangements with the Romanian Committee for Nuclear Energy

   Approved. (AGMIA)

CLASSIFICATION CANCELLED *
BY AUTHORITY OF DOE/OC
[signature] 2/28/89
REVIEWED BY DATE
*Ltr. NSC Grabosko to DOE, OCTP Siebert dated 2/10/89
[signature] 3/1/89

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7. SECY-642 - USSR: Protocol on Collaborative Projects in High Energy Physics

Approved with changes on Pages 8 and 9. (AGMIA)

8. SECY-647 - Visit by USSR Delegation to AEC Headquarters, ANL, BNL, and NAL

Approved. (AGMIA)

9. SECY-633 - USSR National: Proposed Assignment at SLAC

Noted. (AGMIA)

10. SECY-627 - Survey of Shipment Practices for Nonradioactive Toxic Materials

Noted. Staff will discuss with Commissioner Ramey. (CONS-SECY)

11. Mr. Kratzer's Report on Discussions with the Germans re Offset Payments

12. SECY-648 - Initiation of EEO Action

Mr. Traynor is to discuss with Mr. Coors. (Asst. to GM)

13. SECY-645 - AEC Citation

Approved with a revision. (SECY)

14. Mr. Corso's November 12 Memorandum re FY 1971 Apportionment

Noted.

15. Mr. Corso's November 17 Memorandum re Schedule for Senate Hearings on FY 1971 Supplemental, 10:00 a.m., Saturday, November 21, 1970

Noted. (SECY)

16. NSSM 101 - Review of Security Requirements Regarding Uranium Enrichment Technology

Approved. Commissioners' comments will be directed to staff. (AGM-SECY)

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OFFICE DIARY
GLENN T. SEABORG
Chr USAEC, 1961-72
FOLDER-PAGE 119190

17. September 24 Letter from Messrs. Holifield and Hosmer re Delays in Reactor Licensing

An early reply is requested. (ADRA-SECY)

18. SECY-R 89 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

To be circulated today for consideration on Monday, November 23. (GC-SECY)

19. Commissioners' Meetings with Regulatory Staff

To be scheduled at an early date. (SECY)

W. B. McCool
Secretary of the Commission

10:00 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey | Mr. Bloch | General Manager |
| Commissioner Johnson | Mr. Hennessey | General Counsel |
| | Mr. Rubin | Secretary |
| | Mr. Rosen | |
| | Mr. Griffin | |
| | Mr. Abbadessa | |
| | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Kratzer* | |
| | Mr. Brobst* | |
| | Mr. Erlewine* | |
| | Mr. Tesche* | |
| | Mr. Facer* | |
| | Mr. Bartlett* | |
| | Mr. W. J. McCool* | |
| | Mr. Traynor* | |
| | Mr. Wells* | |

*Attendance by Topic (s)

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NOV 86

GENERAL ADVISORY COMMITTEE
TO THE
U.S. ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 11, 1970

Dr. Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Dear Glenn:

The General Advisory Committee held its 114th Meeting at the AEC offices of the Commission in Germantown and Washington on November 9, 10 and 11. The members of the Committee are Rolf Eliassen, Herbert Friedman, Edwin L. Goldwasser, Jane H. Hall, Norman F. Ramsey, Lombard Squires, William Webster (absent), and Howard G. Vesper, Chairman. The Scientific Officer, Melvin A. Harrison, also attended.

We were pleased to welcome Dr. Eliassen to the Committee; his term commenced August 1. The Committee took formal note of the absence of Dr. John C. Bugher who died September 19; an appropriate resolution citing his many important contributions was adopted as a part of the Committee's permanent records.

Our recommendations, actions and comments regarding the 114th Meeting are summarized below.

1. Weapons Subcommittee Visit

Following the meeting of the GAC at LRL-Livermore, on July 20, 21 and 22, the Weapons Subcommittee visited the Sandia Laboratory in Livermore, on July 23. The report of the Subcommittee is appended.

2. Reactors Subcommittee

The Reactors Subcommittee submitted reports on its reviews of the NERVA program and of the Whiteshell Organic Test Reactor, WR-1.

In regard to the first review, the Subcommittee concluded:

(1) Outstanding technical progress has been achieved in the NERVA program culminating in the impressive XE engine test series. Quality of the development effort in fuel element technology, in engineering of reactor components and structures, and in reactor instrumentation and control is equal to those of other outstanding reactor development programs, e.g. the naval reactors program.

(2) The vital reactor test operations which must per force be done at approximately full-scale are well conceived and executed. The AEC can take justifiable pride in the effective attention given to safety in all phases of the test program.

(3) The joint AEC-NASA management of the program should be complimented. Overall direction is well coordinated, with appropriate delegation for program execution made to the capable contractor organization. The contractor teams work effectively together and morale appears high in spite of severe budgetary reductions.

(4) The NERVA program appears to have broad elements which make it interesting for military use. For example, the restart and endurance capability of NERVA would seem to be uniquely useful for loitering missions.

In regard to the review of the Whiteshell reactor program, the Subcommittee concluded:

(1) The WR-1 research reactor is successfully demonstrating characteristics of considerable importance to utility acceptance -- high availability factor (above 80%), simple and easily operated primary coolant system, and potential high thermal efficiency (38-40%) -- in its five years of operation.

(2) The future market for the HWOCR is limited to 1-3 units in the next 10-15 years in Canadian utility systems. Successful operation of the HWOCR on Canadian utility systems should improve the exportability of Canadian reactors.

(3) There is no real place for the HWOCR in the U. S. at the present time. Capital costs are high -- $225-250 per kilowatt -- even in large four-unit plants. No U. S. utility or nuclear steam system supplier has indicated any real interest in the HWOCR to date. Technically, the HWOCR could be considered an alternate to some U. S. advanced reactor, but economics and timing are not favorable. Nevertheless, the Whiteshell management indicated their expectation of soon contacting one or more nuclear suppliers in the U. S. to determine possible interest. There may be a place for HWOCR's in the U. S. utility complex, particularly if (a) HTGR's (Fort St. Vrain, etc.) should falter, and (b) some organization like Combustion Engineering should become interested as a vendor.

(4) Contact with the Canadian HWOCR should continue through the existing bilateral agreements. In another two years or after operation of the new, higher temperature coolant loop, another visit may be appropriate.

The GAC has adopted both reports and they are appended.

3. Regulatory Matters

The CAC was briefed on regulatory matters by Dr. Clifford K. Beck and representatives of the various divisions under the Office of the Director of Regulation. In each of the areas which were discussed the ratio of the workload to the available staff is rapidly increasing, resulting in a mounting backlog and excessive delays in all regulatory proceedings.

The licensing procedure is suffering from increasing stretch-out of the time for technical review prior to granting construction permits. The problems are aggravated by a proliferation of unresolved cases as well as constantly changing requirements in the design of safety features. Industry is often to blame for not conducting adequate R & D; this deficiency is reflected in the poor quality of applications. More standardization of designs would be desirable; it was pointed out that 31 different containment building designs were involved in some 50 new facilities.

Safety continues to be an overriding requirement, but the licensee has full responsibility. Compliance is difficult to investigate and enforce with available manpower. Since even the present incomplete inspection procedures still reveal many significant deficiencies, great emphasis should continue to be placed on quality assurance.

Although the thrust of adverse criticism of atomic power plants appears to be shifting from questions of safety to those concerned with environmental quality, there is little evidence, if any, to arouse concerns over radioactive effluents. In view of the evidence that the large majority of the plants release less than a few percent of the tolerance limits, it may be desirable to accept limits appreciably lower than presently specified.

The atomic energy act permits almost unlimited intervention in the siting hearings and in subsequent hearings on matters related to design of new reactor facilities. While the opportunity for public review must be guaranteed there has been such growing abuse of the hearing process that we believe a pressing need exists for new legislation to: (a) initiate the site hearings for an early and comprehensive site approval procedure; (b) conclude the site hearings before site preparation activities are begun; and, (c) similarly conduct and conclude public hearings on design features as early as possible in the process leading to granting of construction permits.

Some of the Commission's former responsibilities for establishing standards of radiation exposure and environmental pollution have already been transferred to the FRC or are in the process of being assigned to NEPA. Since criticism is now frequently expressed of the AEC's dual role of advocate and judge in hearings related to the siting of new facilities, the Commission may wish to consider again the possible advantages of transferring its licensing responsibility to an independent authority while continuing its role of fostering and defending the establishment of new atomic power installations.

4. Environmental Effects Program

Mr. Joseph J. DiNunno, Director of the Office of Environmental Affairs, discussed the relationship of his newly established office, with a technical staff of five, reporting to the General Manager. Through the latter, expert assistance can be obtained on any phase of the environmental programs distributed among the various laboratories and divisions of the AEC. The Office of Environmental Affairs acts as an interface between the AEC and the public, together with the Public Information Division and the Commissioners themselves, all of whom have been active in speaking on environmental matters.

Mr. DiNunno also has a role with the AEC to advise individual divisions on environmental issues which need solutions and to coordinate with regulatory staff on matters raised by the National Environmental Protection Act, especially on radioactive discharges to the air - water - land environment from AEC facilities. The GAC strongly supports the objectives of this new office.

Data were presented on yearly total radioactivity in gaseous and liquid effluents from AEC facilities, national laboratories, and nuclear reactors. For instance, yearly tritium discharges were estimated at 12 million curies from AEC facilities, including 400,000 curies of tritium per year from Savannah River. The projected annual releases of krypton from the Barnwell and Midwest fuel reprocessing plants will be 15 million and 4 million curies. The statement was made that the quality of the environment at site boundaries would be satisfactory. If such figures were released to the public, without taking into account diffusion and decay, they might lead to dramatic misinterpretation and misleading conclusions.

The GAC noted with interest that the AEC is planning eventually to report to the public on the release of radioactive materials from the various atomic energy sites. The GAC feels that the AEC has both the opportunity and the obligation to establish a format for the report which will be as meaningful as possible. It will be difficult to develop the suitable form for such a report, and work on it should start promptly. The GAC would welcome the opportunity to review such a report before it is released.

Members of the staff of the Division of Biology and Medicine reported on research in the atmospheric and environmental sciences. The GAC was pleased to note that principles derived from the fallout studies were being applied to air pollution control problems and the release of heat into the atmosphere. Thermal pollution of fresh waters is being investigated, including ecological effects on the food chains of fishes and other matters raised by conservationist groups in contesting power plant siting. The GAC is of the opinion that the work on marine sciences, land and fresh water ecology and atmospheric sciences is of real value in obtaining the results which will be needed if the nuclear energy field is to grow.

The GAC was impressed with the program being developed for an Upper Mississippi River Basin Environmental Study as a prelude to a national study for the year 2000. The purpose of the study is to estimate the potential dose to individuals and population groups from nuclear power reactors and fuel reprocessing plants. Mathematical models are being developed to include prospective power plant locations and capacities of both fossil- and nuclear-fueled plants. As the computer program is improved and factual data are processed, power plant siting can become a more rational process considering a whole region.

5. Cascade Improvement Program and Gas Centrifuge Program

Mr. George F. Quinn presented interesting and complete summaries on both of these programs.

It is clear that the technical basis for the cascade improvement program and its subsequent upgrading with additional power input has been well considered and developed. Increased capacity by these means is firmly established. Even though the total capital cost is estimated at about $750 million, this is clearly the cheapest and best way to obtain the next increment of needed enrichment capacity. This increase will be required in 1979-81 on the basis of known reactor needs, reasonable estimates of foreign requirements and plutonium recycle in light water reactors starting in 1974. To meet this schedule, firm authorization must be obtained in FY 1972, together with release of appropriate funds. No feasible alternates to this procedure appear to be available.

The gas centrifuge program continues to show good technical progress. Work carried out since the Committee's last briefing indicates improved efficiency through higher bowl inventory and better thermal control. Further upgrading appears probable. Greater understanding of the technical variables involved has been obtained. The process may now be considered to be proven technically; the principal problem in the future is that of engineering development and commercialization.

It seems quite likely that the cost of added, new enrichment capacity after about 1980 will be less with the centrifuge process than diffusion, with the further advantage that the centrifuge plant is less sensitive to the size factor. Furthermore, only about 5% of the operating cost for the centrifuge is power vs about 50% for diffusion. Thus, it appears urgent that steps be taken without delay to prove commercialization of the centrifuge process, since a decision on new capacity must be made not later than the end of FY 1974.

A good development program to permit such a decision was outlined, consisting of three parts (in addition to continued process research and development):

(1) Equipment test facility to operate up to 120 test centrifuges for up to 5 years for determination of life characteristics. $3.7 million was included in FY 1970 for part of this; an added $2.6 million will be needed in FY 1972.

(2) Component preparation laboratory to develop techniques and facilities for the manufacture of the centrifuges and related equipment on a mass production basis. This will require $18.3 million in FY 1972.

(3) Component test facility for the testing of several hundred full scale units starting in 1975 as a regular production facility. This needs $2 million in FY 1972 and $16.9 in FY 1973.

The total estimated cost of these three facilities needed to prove the centrifuge process commercially is $43.5 million, of which $3.7 million has already been included in FY 1970. $22.9 million of this is needed in FY 1972 and cannot be delayed beyond this time if the 1975 decision date is to be met. In addition, a total of about $58 million is needed in FY 1972 through 1975 for continued process research and development. We realize these are large figures, especially in this period of tight budgets. However, as a practical matter we see no feasible alternate to carrying this program forward and we urge the Commission to do this, even at the cost of curtailing other valuable -- but less essential -- programs.

The Committee has concurred earlier with the suggestion that further industrial participation be arranged, with only a question on the timing. We now feel that the time has come to move forward on this so that maximum advantage of other industrial experience can be obtained in the commercialization phase. Mr. Quinn outlined a plan to advise a considerable number of qualified firms of the situation on a classified basis so that they could send representatives to become familiar with the work and the problems. Those firms interested would then make formal proposals for participation in the development work, and an appropriate number of favorable proposals would be accepted. This seems to the Committee to be a reasonable approach and we endorse it.

## 6. Space Nuclear Systems

Mr. Milton Klein, Director, Division of Space Nuclear Systems, briefed the Committee on the applications of nuclear energy in the space program. Isotopic and reactor power sources continue to be of increasing interest to NASA. Radioisotope thermo-electric generators (RTG) are being developed as power sources for the Pioneer, Transit and Viking space crafts. SNAP-19 in Nimbus and SNAP-27 in the scientific package of Apollo-12 are performing well.

A recent organizational change of interest is consolidation of the NASA and AEC administration of their respective programs in space power with the present joint NASA-AEC Space Nuclear Propulsion Office which administers the NERVA program.

7. Reactor Development

Mr. Milton Shaw, Director, Division of Reactor Development and Technology, covered a number of topics of interest in his excellent presentation on the status and problems of the civilian nuclear power program. He discussed the major causes of the present energy crisis and the recent report on Electric Power and the Environment by an interagency study group. The recommendations of the report include long range planning of power plant siting on a regional basis ten years in advance of need for the site, preconstruction site review and approval by the relevant regulatory agencies with participation by the public and an expanded R & D program concentrating particularly on waste treatment and disposal, air pollution and abatement, waste heat rejection, underground transmission, new forms of generation and the natural environmental characteristics of sites. The report should provide valuable guidance in the effort to alleviate the energy crisis.

An encouraging increase was reported in the number of nuclear power plants ordered this year (14) compared to last year (3). The capacity of nuclear (as well as fossil) plants appears to be leveling out at around 800-1000 Mwe; this should be a significant factor in stabilizing the design of nuclear stations and thus reducing delays in the licensing process.

Funding limitations have resulted in a significant consolidation in the number of program participants in the LMFBR development; three industrial contractors and two AEC laboratories are now carrying out the principal parts of the program.

There was considerable discussion of the possible role of the Fermi fast reactor as a fuel element test bed for the LMFBR development program. Fermi has recently achieved a power level of 200 Mwt and is operating very satisfactorily after its long outage due to a fuel failure accident in 1966. With a new oxide core Fermi expects to be able to operate at 400 Mwt and a fast flux level of $7 \times 10^{15}$.

The Committee strongly recommends that this facility and its experienced operating crew be utilized in the LMFBR development program as a significant, existing and operating addition to the high flux irradiation facilities available to the Commission. The cost appears modest and the opportunity to advance the LMFBR program unique. Continued successful operation of Fermi would materially increase utility confidence in the LMFBR concept. The matter needs prompt resolution and we hope the Commission will agree with our recommendation.

[illegible] International Affairs

[illegible] Kratzer summarized the recent meetings in Vienna concerning the NPT and safeguards inspection procedures. To date about 50 nations have ratified the NPT out of approximately 90 signators. The Agency must now start applying safeguards by March 5, 1972.

The Committee is very much interested in the progress of IAEA safeguards agreements and appreciates the opportunity to discuss these matters with the Assistant General Manager for International Activities.

[illegible] and Materials Management

Gen. Delmar L. Crowson reviewed the current major concerns of his office.

(1) The President's offer to other signatories of the NPT presents a problem in that funds will not allow IAEA inspection of all U. S. commercial fuel fabrication plants, reactors and processing plants. If only a few of the commercial installations were inspected, discrimination charges would result. Consequently, it is planned to implement inspection procedures gradually, starting with minimal surveillance of light water reactors in which a numbering system of reactor fuel bundles and reactor seals would be employed. Visits once a year would then be adequate. The Committee agrees with this philosophy as an interim measure but hopes that in the near future the offer can be completely honored because of the impact on reluctant nations.

(2) Accuracy in non-destructive measurements of fissionable material waste and scrap has improved during the last year with the development and use of the two mobile units, the LASL and GGA MONALS. Very encouraging results have been obtained. Work is starting on measurements of spent fuel but this work is not as important initially because of the small probability of diversion of highly radioactive fuel bundles.

(3) The Committee believes that one of the most important areas in materials control is preventing diversion in transport and that every effort must be made to establish better controls. Although the incidents to date have been due to personnel error, past shipping practices would allow easy diversion by organized criminal groups. Full support should be given to the OSMM to develop the necessary countermeasures.

(4) We note that the proposed OSMM Budget for FY 1972 is about the same as that for FY 1971. More support could be used to advantage and we hope that this can be given in FY 1973. The plans for the Geneva meeting in September 1971 were described and we agree in the decision not to send a MONAL for exhibition.

## Lawrence Award Discussions

In response to the Commission's letter of September 24, the Committee discussed possible candidates for nominations for the recently redefined USAEC Citation.

We hope that two outstanding candidates will receive immediate and favorable consideration for the initial award. These are:

(1) George C. Cotzias of Brookhaven National Laboratory, who has made outstanding contribution to society, through his participation in the nuclear energy program, with the development of L-Dopa, a drug now widely, successful use for the relief of symptoms associated with Parkinson's Disease.

(2) Norman C. Anderson, of Oak Ridge National Laboratory, for his development and application of the high speed centrifuge technique to the problem of separation of biologically active substances and to the purification of vaccines to previously unachievable levels.

It is, perhaps, worth noting that the accomplishments of at least one of the two could not readily be accommodated within the criteria for the Lawrence Award, but fit quite adequately within the somewhat broader criteria for the AEC Citation.

In addition to these two outstanding individuals, we wish to nominate three others -- Hal O. Anger of LRL-Berkeley and Duane C. Sewell and Sidney Fernbach of LRL-Livermore -- whose contributions we believe also deserve your consideration for this special recognition. Detailed resumes for these five persons are attached.

In connection with a closely related subject, the Committee wishes to reiterate its unanimous opposition to the proposed removal of the age limitation on candidates for the Lawrence Award. In our session with the Commission on November 9th a recent letter from Dr. Ramsey was distributed which well reflects the unanimous views of the Committee. A copy is attached.

Our principal concern is for the preservation of the basic intent of the award, namely public recognition of young contributors to research and development of nuclear energy as one means for stimulating additional talented young people to choose careers in this program. With the removal of a firm upper age limit, dozens of deserving scientists who have just missed the award in earlier years will now be placed back in competition and it will be very difficult or even impossible to justify passing over them in favor of an award to a younger, less well-established man.

Furthermore, [illegible] competition of candidates over 45 years of age, it [illegible] difficult to use review panels constituted of involved and knowledg[illegible] but ineligible experts. That system has operated well in bringing outstanding young candidates to our attention. Instead we shall have to rely [illegible] on the voluntary recommendations of eligible individuals, obtained in a manner similar to or identical with that used for the Fermi Award. We believe that this will seriously detract from the quality and effectiveness of these awards.

11. Forthcoming Sl[illegible]ood Re[illegible]

[illegible] reported to the Commission and with its concurrence, the GAC has decided to initiate a comprehensive review of the Controlled Thermonuclear Research Program. The entire GAC, under the chairmanship of Lombard Squires, will participate in this study. AEC staff members will be consulted for advice prior to the initation of this review.

12. Weapons Subcommittee Plans

The Weapons Subcommittee will visit the Albuquerque Laboratory of the Sandia Corporation on February 22 or February 26 to hear a review of its general program.

13. Next GAC Meeting Plans

The next meeting of the Committee will be held at the Los Alamos Scientific Laboratory on February 23, 24, and 25. Agenda topics are as follows:

(1) Program of the LASL for approximately one and one-half days.
(2) Recommendations for the 1971 Lawrence Award.

14. 116th GAC Meeting Plans

The next following meeting of the Committee is tentatively scheduled to be held on May 17, 18, and 19, 1971, in Washington, D. C.

Sincerely,

Howard

Howard G. Vesper
Chairman

Attachments (5)
Weapons report
Reactors reports on NERVA and WR-1
Five nominations for AEC Citation
Letter on Lawrence Award criteria

UNCL. BY DOE
NOV 86

November 18, 1970

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Some of our current activities include:

Monday, November 23 -- An AEC Licensing Board will convene a public hearing in Louisa, Virginia, to consider the application of Virginia Electric and Power Company for permits to build its proposed two-unit North Anna Power Station in Louisa County.

Also on November 23, a prehearing conference will be held in Port Clinton, Ohio, to discuss matters to be considered at a public hearing beginning December 8 on the application of Toledo Edison Company and Cleveland Electric Illuminating Company for a permit to build the proposed Davis-Besse Nuclear Power Station near Toledo.

Tuesday, November 24 -- Commissioner Thompson speaks at the Western Conference of the Council of State Governments in Las Vegas.

Wednesday, November 25 -- We tentatively plan to announce that AEC uranium enriching services to the nuclear power industry in the U. S. and abroad have passed the $2 billion mark. We now have 52 agreements to provide toll enriching services over the next 30 years.

Also on November 25 we will release a newsfeature on the uses AEC is making of heavy gun barrels, armor plate and other surplus military equipment from World War I and World War II days.

Friday, November 27 -- Chairman Seaborg will give the keynote address at the Junior Science and Humanities Symposium at Georgetown University.

Business Week will carry an extensive story next week on a change in contractors at our Hanford facility in the reactor development field. We are building a major reactor installation--the Fast Flux Test Facility--at Hanford and Business Week is interested in the shift from Battelle to Westinghouse as the project manager.

Peter Jones of BBC-TV is producing a show on nuclear weapons capabilities and control. He has interviewed Dr. Harold Agnew, Director of the AEC's Los Alamos (New Mexico) Scientific Laboratory, has visited various Defense Department installations and plans to interview Dr. Edward Teller tomorrow.

We understand that the National Observer is preparing an article on nuclear power reactors and their potential dangers. The article was stimulated by discussions held this week at meetings in Charlotte and Raleigh, North Carolina, where opposing viewpoints were presented on the subject.

This week we announced that we have received an application from Atlantic Richfield to build a chemical plant to reprocess nuclear fuel at Leeds, South Carolina; an application from Commonwealth Edison to build a two-unit nuclear power station near Seneca, Illinois; and that a public hearing will begin December 17 at Peekskill, New York, to consider an application by Consolidated Edison Company for a license to operate Unit 2 at the Indian Point Nuclear Station at Buchanan.

Sincerely,

(signed) John A. Harris

John A. Harris, Director
Division of Public Information

bcc: J. Rubin

Hackensack Record and Vice President of APME, who was elected the new president of the Convention, my host Arville Schaleben of the Milwaukee Journal, Robert Haiman of the St. Petersburg Times, Frank Agnelo of the Detroit Free Press, A. A. (Bud) Smyser, Dick Smyser's brother who is with the Honolulu Star-Bulletin, and many others. We stayed at the luau for a short time and then returned to the Ilikai Hotel where we spent the night.

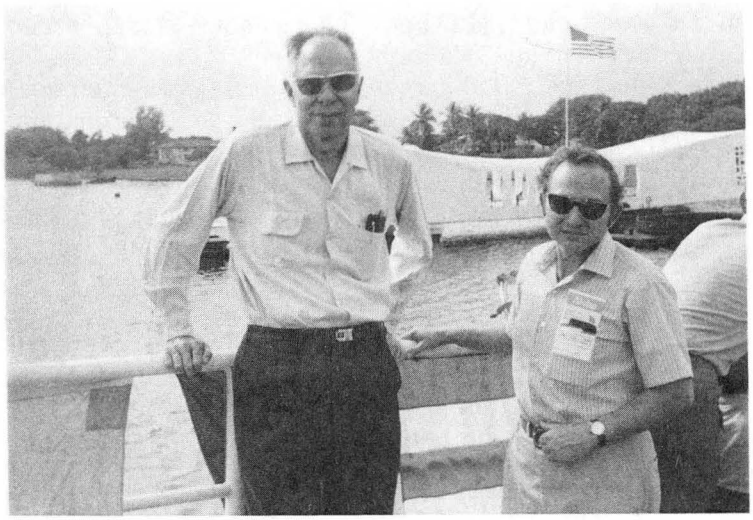
Thursday, November 19, 1970- Honolulu

I had breakfast with Stan Schneider and Joe Fouchard in the Pier 7, one of the hotel restaurants.

At 9:30 a.m. I gave my talk to the APME Convention in the main ballroom of the Ilikai. I was introduced by Harry Sonneborn of the Milwaukee Sentinel. I spoke on "Power, People and the Press." The talk was well received and was followed by a series of questions by a panel composed of William B. Dickinson of the Philadelphia Bulletin, William H. Hornby of the Denver Post, and Frank Haven of the Los Angeles Times. Don Carter then presented me with a gift from the APME, a pen and pencil set.

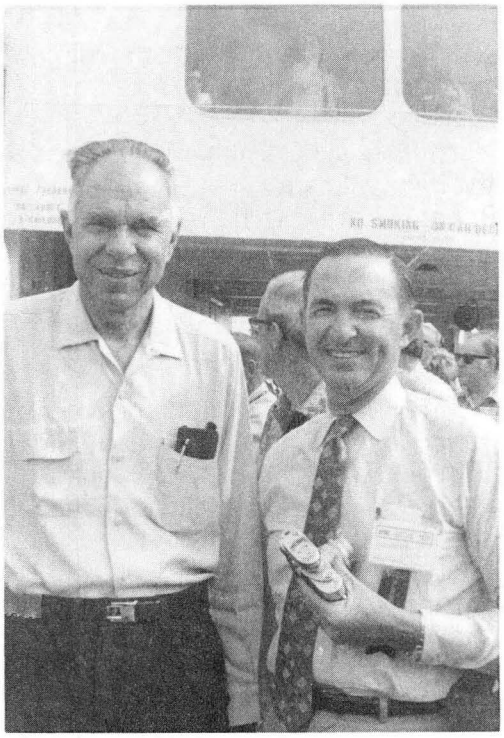
Following my talk I held an informal press conference in an adjoining room. Present were: Dick Smyser, Barclay Johnson of the Grand Junction Sentinel, Ted Natt of the Longview, Washington Daily News, H. Blonk of the Winnachi, Washington Daily World, Howard Clevinger of the Spokane Daily Chronicle, and J. E. Murray of the Arizona Republic.

At 11:45 a.m. we met in front of the Ilikai to board buses to take us to the Fort de Russey for a C-ration luncheon given for the APME by the Army. On the bus I spoke to Alan Moyer (Editor for the Wichita Eagle), who expressed concern over the burial of radioactive waste in Kansas and suggested that I come out there to explain the situation and allay some fears. Stan, Joe Fouchard and I ate at a table on the edge of Waikiki Beach. At lunch we were joined for a minute by Malcolm Mallette (American Press Institute at Columbia University), who complimented me on my talk. We took a short walk along the beach before boarding the buses for Pearl Harbor.



Pearl Harbor- November 19, 1970
L to R: Seaborg, Stan Schneider

At Pearl Harbor we boarded a ferry that took us on a tour of the harbor. The aircraft carrier Kitty Hawk was in port there. On the tour we saw Ford Island and the remains of and monuments to several ships sunk by the Japanese attack on December 7, 1941, including the memorial to the famous battleship Arizona in which over 1,000 men are entombed. We also saw several large drydock facilities, including a crane that is the sixth largest in the world. We saw several submarines and other navy ships at dock and boarded one of them, the USS Preble, a guided missile frigate, for a brief tour.



Pearl Harbor- November 19, 1970
L to R: Seaborg and Don Carter (President, APME Association)

Upon returning to the buses we left for Hickam Field. We did not take the tour there, but returned to the hotel. I went to my room and prepared for dinner.

At 7:15 p.m. I met Mr. and Mrs. Don Carter and McGeorge Bundy in the lobby and rode with them in a taxi to the home of Mr. and Mrs. George Chaplin (4437 Kolohala Street) to attend a reception and buffet dinner. Chaplin is Managing Editor of the Honolulu Advertiser. For dinner I sat informally at a coffee table with Mr. and Mrs. Harlan Cleveland (he is now President of the University of Hawaii), Bill Dickinson (Managing Editor of the Philadelphia Bulletin), Bill Dana (Jose Jiminez of TV fame), Seymour Topping of the New York Times, and Helen Griffin (wife of Jack Griffin, Editorial Page Editor of the Honolulu Advertiser). Among the others I met during the evening were the Bill Hills (Washington Star), Harry Montgomerys (AP), Darlyle Feldemeirs (Chicago Daily News), Howard Clevinger (Spokane Chronicle), Robert Fichenbergs (Albany Knickerbocker News), Orville Schalenbens (Milwaukee Journal), Larry Jinks (Miami Herald), Paul Poormans (San Diego Union), and Fred Kinne (San Diego Union) and Jack Griffin. I found Helen Griffin, a Japanese, a quite well-informed and animated conversationalist, who announced herself immediately as an "environmentalist" and then proceeded to present some simplistic views which I was able to help put into perspective in an amicable exchange. Bill Dana, apparently in Hawaii for a short vacation, was amusing and amiable. The Clevelands gave me a good fill-in on student problems at the University of Hawaii. We discussed these also with Tom Hamilton, the immediately preceding president of the University of Hawaii.

At the end of the evening the Carters, Bundy and I rode back to the Ilikai Hotel with one of the dinner guests in his car.

Friday, November 20, 1970- Honolulu- Berkeley, California

Stan Schneider and I had breakfast in the Pier 7 restaurant. I then took a taxi to the Honolulu International Airport, where I caught United Airlines Flight No. 180 to San Francisco, leaving about 9:10 a.m. and arriving about 3:30 p.m. I won the prize, a bottle of champagne, for the closest estimate (11:18 a.m. against an actual time of 11:17 a.m.) of the time we reached the halfway point between Honolulu and San Francisco. (I won the same prize on the way over to Honolulu.)

I was met by Ward Blackmon and after checking and waiting about an hour at the United Airlines nearby terminal for my mail package from my Washington office, which couldn't be found despite the fact that it had arrived, he drove me to the Jasaitis residence (400 Hillside, Piedmont). (Ward picked up the mail later.) Here I met Lynne and Bill, who are living in their home in a basement apartment pending the purchase by the Jasaitis' and renovation of a teahouse on neighboring grounds, in which Lynne and Bill will live. I also talked to Zene and Celeste and their children- Jonathan, Jane, Jim and Jean. I had a look at Lynne's and Bill's living quarters and at the teahouse.

Ward then drove Lynne, Bill and me to Lafayette, where we took a hike up the road to the water tank at the end of Monticello Road in the dark (it was about 7 p.m.). We then went to 1154 Glen Road, where we had a shishkabob dinner with the Akols- Alan and Doris and their children Kemlal and Leyla. I spoke by phone to Steve, who is going to join us at the Big Game tomorrow.

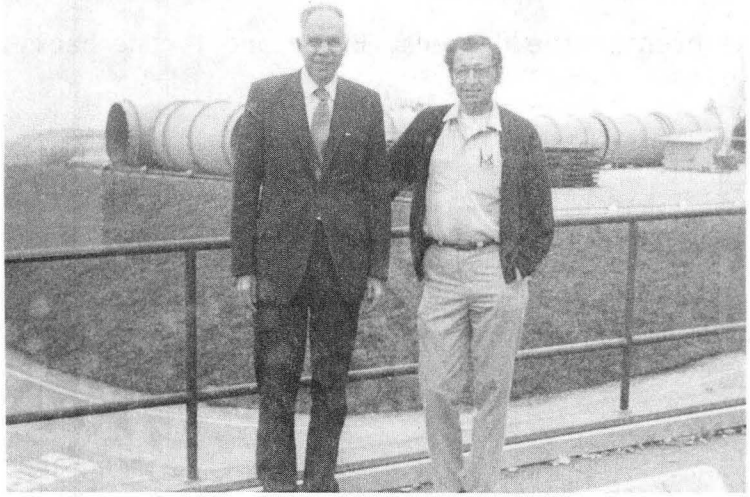
Ward then drove us to the Jasaitis', where we dropped off Lynne and Bill and then drove me to the Durant Hotel where I checked into Room 325. I called Dave at his dormitory room in Davis and learned that he is not coming to the Big Game tomorrow due to the pressure of studies. He is still having troubles in his relationship with Carol.

Saturday, November 21, 1970- Berkeley- D.C.

I had breakfast in the Durant Hotel coffee shop and then went to the office of Kent Kohler (my dentist) at 2522 Dana Street. Again he found no cavities.

I then returned to the Durant Hotel where I met Al Ghiorso. We drove up to the HILAC Building in the Lawrence Radiation Laboratory. I saw the progress on the apparatus for fast chemistry (e.g. ion exchange) on elements 102, 103, 104, 105, etc. of Nurmia and Trautman.

I also saw the apparatus Al is using to produce californium and einsteinium targets by volatilization. Al told me he has no suggestions to make on my article on the "History of the Transuranium Elements" for the Soviet meeting on the History of Chemistry next August. He said Ken Street is allotting only $300,000 for the HILAC operating expenses in FY 1971 from the $570,000 that Van Dycken allotted him. His first priority now is to try to make 106-263 by bombarding Cf-249 with O-18. He thinks Flerov's two-second SF activity could be due to 104-260, formed from 105-260 by electron capture.



Visit to the Lawrence Radiation Laboratory, November 21, 1970
L to R: Seaborg and Albert Ghiorso with SuperHILAC equipment in background

Al and I then went down to Building 70A and visited with Burris Cunningham in his office. Burris said that he approves of the suggestion for publication of our revision of The Chemistry of the Actinide Elements made by Metheun Company. He told me he is only partially retiring from actinide chemistry (to take up archeological research), not wholly retiring as some rumors have it. He will soon send me a revised chapter on the chemistry of protactinium as a demonstration of progress on our book The Chemistry of the Actinide Elements. Burris agreed to help Al with the preparation of californium and einsteinium targets and indicated that he might participate in the chemistry of the transactinide elements. Al said that Bob Silva is not coming back to Berkeley to stay, but will continue his work on heavy actinide and transactinide elements at Oak Ridge.

Ward then drove me back to the Durant Hotel. Bill, Lynne and Steve joined me there. (Steve had hitchhiked to Berkeley from Davis with his friend Ron Mandella.) We met Ralph Edwards at the Durant and walked with him to Memorial Stadium. We all went to the Brick Muller Room in the stadium to attend a reception and sandwich lunch given by the University of California Alumni Association. Here I met many old friends, including Dick and Jan Erickson, Herman Selvin, Mr. and Mrs. James Dieterich, Roger and Esther Heyns, Mr. and Mrs. William Hudson, Mr. and Mrs. Goldman, Mr. and Mrs. Robert Mulvaney, Wendell Witter, "Truck" Cullum, Doc Miles Hudson, Wally Haas, Sr.; Wally Haas, Jr.; Daniel Koshland, Sr.; and Mrs. and Mrs. Lapen (he was head of the Government National Mortgage Association and was fired, he thinks illegally, by President Nixon). The Cal Band came by outside and chanted, as they used to do, "Hello, Mr. Seaborg."

We went into the stadium where we were joined by our guests, Trina Chope (Lynne and Bill's friend) and Kem Akol. We saw an exciting Big Game (between Berkeley and Stanford) which Berkeley won, 22-14. After the game Steve, Bill and I went to the California dressing room where we met Clark Kerr, Coach Ray Wilsey, California quarterback Dave Penhall, many former California football players, Adrian Kragen and others. We met Jim Sander, a prospective junior college transfer quarterback. We also met Paul Brechler (the California Athletic Director) just outside of the stadium.

Lynne, Bill, Steve and I walked down to Telegraph Avenue, then walked to Ashby Avenue, near which Lynne and Bill had parked their Falcon. We stopped at Karen Wagner's (Lynne's childhood friend) at 2536 College Avenue and visited with Karen, her boyfriend Tom McQueen, her girl friend Chris and her boyfriend. The four of us rode to the Jasaitis' home, where Lynne served us a lasagne dinner in their (Lynne and Bill's) apartment. We were joined by John Jasaitis.

I then rode with Ward to the San Francisco Airport where I caught United Airlines Flight No. 56 to Washington Dulles Airport, leaving at 10:40 p.m. and arriving at 6 a.m. (Sunday).

Sunday, November 22, 1970

I went to Kennedy Stadium with Eric and Howard Brown and his son John Christopher to see the Washington Redskins-Dallas Cowboys football game, which the Cowboys won, 45-21. The Redskins played about as poorly as I have seen them play in the last year or so.

Eric, Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on White Horse Trail to Cross Trail 3, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

I spent the evening reading AEC papers that had accumulated during my absence.

Monday, November 23, 1970- D.C.

I presided over Information Meeting 1080 from 9:50 a.m. until 11:20 a.m. (notes attached). We decided, on the basis of the Department of Justice's decision that they couldn't make available in a hearing the information they have, that we will not conduct a hearing in connection with granting clearance for weapons information to the individual whose case I have been discussing with Attorney General Mitchell. Instead, we will ask that individual to sign an affidavit under oath that he has not passed on sensitive information to any unauthorized person, that he will not do so in the future, and that he doesn't intend to move to another country. We discussed the case of the uranium ore tailings under houses in Grand Junction and decided that AEC will do everything it can to cooperate with Colorado state authorities to remedy the situation. We finally agreed to go ahead with the appointment of a special Classification Panel to consider the difficult problem of laser applications to controlled thermonuclear reactions and the possibility of carrying on such work to a limited extent in unclassified situations. We learned from the General Manager that the strike at Paducah has been settled. The General Manager also indicated that he is appointing Ron Paul as Director of Battelle Pacific Northwest Laboratories, replacing Fred Albaugh (whose recent illness suggests that he should be given lesser responsibilities in the Laboratory). The General Manager reported that the Senate Appropriations hearing last Saturday on the $25.5 million supplemental for weapons facilities went very well.

After the Information Meeting Carl Walske came in and gave us a briefing on a proposed program. Walske is going to Europe during the first week of December to discuss this with NATO officials and, through them, with German authorities. A particularly difficult problem is the degree of fallout.

At 11:20 a.m. I presided over Regulatory Information Meeting 434 (notes attached).

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 23, 1970

INFORMATION MEETING 1080

9:50 a.m., Monday, November 23, 1970, Chairman's Conference Room, D. C.

1. Commissioner Larson's November 18 Memorandum re Meeting with the Surgeon General of the Public Health Service

   The study support at $100,000 is authorized and staff will discuss the broader questions with the Commissioners' Environmental Group. (AGMO)

**********

2. Executive Session (See Mr. Riley's November 19 Memorandum)

   Staff will proceed as authorized. (S-SECY)

3. SECY-655 - Underground Test Program Data for a Portion of Emery II

   Approved. A briefing is requested. (AGMMA-SECY)

4. SECY-656 - Laser Classification Panel

   Approved. (C)

5. SECY-652 - Response to WPPSS: Nuclear Plant at Hanford

   Approved. The staff will discuss with Mr. Owen Hurd. (AGMO)

6. Eazor Terminal Incident (See SECY-620)

Noted. (BM)

7. Atlantic Richfield Patent Application

Noted. (GC)

8. General Manager's November 19 Memorandum re Twenty-Third Annual Arthur S. Flemming Awards Program

Noted. (PER)

9. SECY-653 - Fact Sheet on Nuclear Power Vis-A-Vis Coal

Noted. (RDT)

10. SECY-658 - Discussion of Major Program Issue Process with OMB

Noted. (PA)

11. SECY-663 - Notification of Contract Awards

Noted for discussion with the Joint Committee. (DC-Congr.)

12. NTS Events for the Week of November 23, 1970

Noted. (AGMMA)

13. Invitation for Participation in U.S. Civil Service Commission Executive Seminar, Berkeley, California, January 18-29, 1971

Commissioner Johnson, Thompson, or Larson will consider attending. (SECY)

14. General Manager's Oral Report on Settlement of Paducah Strike

15. Executive Organizational Change at Battelle, Hanford

Noted.

16. Early Meeting of the Chairman, Commissioner Ramey and General Manager with Chairman Chet Holifield, JCAE

To be scheduled. (Rubin-GM)

17. General Manager's Oral Report on Staff Meetings with New York State Representatives and Others to Discuss Waste Materials at Niagara Falls Site

W. B. McCool
Secretary of the Commission

11:20 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Brown
Mr. Hennessey
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. Erlewine*
Mr. Biles*
Mr. Vinciguerra*
Mr. Kingsley*
Mr. Riley*
Mr. Slezak*
Gen. Giller*
Mr. Bruner*
Mr. Marshall*
Mr. Keto*
Mr. Doran*
Mr. Quinn*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

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WASHINGTON, D.C. 20545

COPY NO. 3
November 23, 1970

# REGULATORY INFORMATION MEETING 434

11:20 a.m., Monday, November 23, 1970, Chairman's Conference Room, D.C.

1. Parts 20 and 50

   The draft rule is scheduled for consideration this afternoon. (SECY)

2. Regulatory Staff Discussions with French Safety Authorities

3. SECY-R 89 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities

   Revision and reconsideration today are requested. (ADRA-GC-SECY)

W. B. McCool
Secretary of the Commission

11:45 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STAFF:

Mr. Beck
Mr. Henderson
Mr. Hennessey
Mr. Rubin
Mr. Shapar
Mr. DiNunno
Mr. Rogers
Mr. Wells
Mr. Buck
Mr. McCool

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Commissioners
Dir/Regulation
General Manager
General Counsel
Secretary

I had lunch at the Cosmos Club (Room C) with Raymond J. Seeger and Walter Berle of the AAAS staff and Ohio Congressman Charles A. Mosher and Homer Newell, participants in the December 30th AAAS symposium. We discussed the program for the symposium with the intent of coordinating the topics to be covered by various speakers. I will be the wind-up speaker with broad responsibilities for speaking in a retrospective, as well as prospective, manner.

Following this lunch I dropped into Room A of the Cosmos Club, where Paul McDaniel was hosting a lunch for the Soviet delegation on high energy physics exchanges; the U.S. representatives also attended. I spoke a brief word of greeting, indicating that I hope the negotiations will be successful. Those present were: I. I. Smolin (Deputy Chief, Department of International Relations and Scientific-Technical Information, USSR State Committee on the Utilization of Atomic Energy), Mrs. D. F. Khoklova (staff member, Department of International Relations and Scientific-Technical Information, USSR State Committee on the Utilization of Atomic Energy), I. V. Chuvilo (Director, Institute of Theoretical and Experimental Physics, Moscow), Y. D. Prokoshkin (Section Chief, Institute of High Energy Physics, Serpukhov), M. E. Selznov (USSR Embassy), J. Trevithick (State Department), Gerald F. Tape,. W. K. H. Panofsky, W. Penkowsky, W. W. Wallenmeyer, Abe Friedman and Mel Abrahams.

I returned a telephone call that Ed David made to me last Wednesday. He said he has been personally concerned for some time about the lack of reliability of electrical power equipment. I asked him if he is thinking only of nuclear power, and he said that is part of it, particularly electrical generators, which have been quite unreliable. He said he wonders if it would be a good idea to set up a panel to look into this; Dave Freeman could provide the staff support and AEC, the information on the nuclear side. I asked him if this would in any way conflict with what Paul McCracken is doing. He said he would, of course, clear it with him, that a meeting has already been scheduled. I told Ed that Dunlop and I will have a rough draft of our energy study report for the FCST meeting tomorrow. I said we were very worried last week that we might be called upon to make a catastrophic cut in our basic research budget. He said he is aware of it and has been working on it. He thinks I should work on it, too, but that he and I shouldn't coordinate too closely. He is on the inside now, which gives him a tremendous advantage, but it could be lost easily. He said the whole question of testing came up, including whether the two kinds of testing shouldn't be separate budget items. I said that has an advantage, but Congress would be against it. He said he is worried that some of he necessary things won't get down because of too many tests. I told him that if it becomes a matter of choice of that or closing down the laboratories, I would rely on his judgment.

At 2:40 p.m. I presided over Commission Meeting 2444 (action summary attached). We agreed to the DOD suggestion for modification to the current statutory determination for the transmittal of atomic information to NATO. A joint DOD-AEC memorandum will be sent to the President requesting approval of this modification.

At Regulatory Commission Meeting 292, which followed at 3:05 p.m., we finally approved with a unanimous vote the document for the AEC implementation of the National Environmental Policy Act of 1969 in AEC regulatory activities (action summary attached).

After the meeting Hollingsworth and Erlewine came in to talk with me about the meeting Erlewine has had with Daniel T. Kingsley (Commissioner of the GSA) and Darrell Trent (Presidential Land Review Committe) concerning the sale of the

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 24, 1970
Approved _____
REH

R. E. Hollingsworth, General Manager Date _____

ACTION SUMMARY OF MEETING 2444, MONDAY, NOVEMBER 23, 1970, 2:40 P.M., ROOM 1115, D. C. OFFICE

SECY:RDL

Commission Business

1. SECY-638 - Proposed Extension of Contract for Construction Management Services at NRDS

   Approved, with the understanding that negotiations to extend the contract will not commence until such time as the amount of funds for FY '72 has been clarified. (DC)

2. SECY-640 - Proposed AEC-KFA Technical Exchange Arrangement on High-Temperature Reactor Research

   Approved. (AGMIA)

3. SECY-654 - Atomic Information for NATO & NATO Member States

   Approved.

   The Commission requested staff confirm with Dr. Walske that no commitments were made by the Commission at the November 23, 1970 Special Briefing. (AGMMA)

Original signed
W. B. McCool

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 24, 1970
Approved _____
CKB
Date _____

[illegible] Director
[illegible] of Regulation

ACTION SUMMARY OF REGULATORY MEETING 292, MONDAY, NOVEMBER 23, 1970, 3:05 P.M., [illegible] 1115, D. C. OFFICE

SECY-601

[illegible] 23, 1970, Memorandum re Amendments to 10 CFR Parts 20 & 50

The Commission:

a. Approved, with item 4(2)(iii) deleted, issuance of the amendments, to be effective at the end of 30 days with the period for public comment extending for 60 days; and

b. Requested revision in the notice of rulemaking (page 13 of the subject memorandum) to read "...and in relation to the utilization of atomic energy in the public interest;" and

c. Approved [illegible]ssuance of item 4(2)(iii) as a separate proposed amendment to the effective amendment (a above), allowing 60 days for public comment.

Commissioner Thompson dissented from the Commission decision on (c) above and will prepare a separate memorandum elaborating his position. (DDR)

SECY-R 72 - Implementation of the National Environmental Policy Act of 1969 in AEC Regulatory Activities (See also SECY-R 89 & the General Counsel's November 10, 1970 Memorandum)

The Commission:

a. Approved SECY-R 72, as revised by the draft language distributed at the meeting, with the deletion of item 2(b); and

b. Requested, in lieu of 2(b), consideration be given to a rule change in CFR Part 2 for an administrative determination to be made by the Commission on the admissability at subsequent hearings of issues having "significantly adverse impact on the environment" subsequent to the pre-hearing conference.

The Commission also requested:

a. The option be kept open for environmental statements to be required for (1) conversions of provisional operating licenses to operating licenses and (2) additions to materials licensee facilities; and

b. Implementation of NEPA of 1969 in AEC regulatory activities be discussed with interested parties.

(GC/DDR/Chm.,ASLEP)

3. December 15 Meeting on Regulatory Activities - Bethesda Office, 9:30 - 12:00

Confirmed. (SECY)

ORIGINAL SIGNED
W. B. McCOOL

W. B. McCool
Secretary of the Commission

cc:
Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

North Tract at Brookhaven. They have decided to sell this tract despite our pleas to retain it. We will have an opportunity to appear before the Presidential Land Review Committee to appeal this decision.

At 5 p.m. I met with Carl Thomas and Bertrand Chatel of the U.N., Francis J. Seidner of the State Department, Abe Friedman, Ed Brunenkant and Julie Rubin. The purpose of the meeting was to try to arrange a time for the press conference at which Sigvard Eklund and a U.N. official (or officials) could be present to announce my election as President of the Fourth Geneva Conference on the Peaceful Uses of Atomic Energy. I suggested that 10 a.m. on December 3rd might be a good possibility; this will be explored with Eklund.

I sent a letter to Alexis Johnson (Under Secretary of State for Political Affairs) (copy attached) concerning the FRG-AEC toll enrichment services under our offset agreement with Germany.

I received a letter from Crown Prince Carl Gustaf of Sweden (copy attached) thanking me for sending him a copy of "Peaceful Uses of Nuclear Energy."

I took a hike with Suki in the Fort Reno area.

Tuesday, November 24, 1970- D.C.

Julie Rubin and I had lunch with Will Kriegsman and Don Rice (OMB) at the White House Mess. Rice was late in arriving and we ordered lunch and started to discuss items of interest. In answer to an inquiry about White House interest in the Fermi reactor, Kriegsman advised that Walker Cisler had called Flanigan once in the past about Fermi, and they would defer to AEC judgment but generally favored retaining an asset of this nature.

I asked if there is some way that we could cooperate better with Holifield. Kriegsman's reaction is that they are not picking fights intentionally, but if there is disagreement between the Administration and Holifield, they are not prepared to give in. There was some discussion on the meaning of Holifield's announcement that he is giving up the vice chairmanship of the JCAE.

We discussed the possible shutdown of the N reactor and Kriegsman indicated that there would be less reluctance to take this move at this time. He even indicated there may be consideration of shutting down both the N and K reactors in FY 1972. I stated that this may be too drastic a move. I advised of DOD's support for continuing operation of five production reactors, but this did not seem to surprise or impress Kriegsman. He also added that there is now less concern about actions which Senator Jackson might oppose.

Rice joined us and informed me that Weinberger would be calling very soon to arrange for a discussion of the markup of the FY 1972 budget. He did not give any indication of decisions made to date. There apparently will not be any full meeting with the Commission, nor will the past practice of a final appeal session with the President be followed.

Rice indicated that Commissioner Johnson has been trying to arrange a meeting with him and asked if I knew the subject. I expressed mild surprise and Rubin indicated that Johnson is currently contacting key congressmen about AEC plans for providing access to diffusion plant and gaseous centrifuge technology in preparation for private construction of new enrichment capacity. Both Rice and Kriegsman indicated that involving the aerospace industry would be very desirable.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 23 1970

Honorable U. Alexis Johnson
Under Secretary for Political Affairs
Department of State

Dear Alex:

I have reviewed with interest your letter of November 6, 1970, concerning the FRG-AEC toll enrichment services contract under the U.S.-FRG offset agreement.

The AEC has given considerable thought to this matter and has kept in close contact with the staff of the Department of State in trying to work out an arrangement which would alleviate the FRG's concern over our inability to grant a waiver on the 90-day advance feed delivery requirement under our contract.

Over the past few days we have had several discussions on this matter with representatives of the FRG and the German commercial firm which is implementing the toll enrichment services contract for the FRG. At the latest meeting, we suggested that one way of compensating for the reduced amount of enrichment services which can be obtained by the FRG as a result of the increase in the AEC's charge for separative work could be through mutual agreement to a reduction in the eight-year period during which the FRG is obligated to hold the enriched uranium obtained under the offset arrangement. The FRG representatives indicated that they felt this would be a most acceptable solution and that they would develop the information necessary to support an appropriate reduction--which we agreed would be for some fractional period of a year--and forward these data to us in the near future.

After the information is received, we will be in contact with the Department. If the FRG's proposal can be satisfactorily developed we would be prepared, subject to the Department's concurrence, to make the necessary amendment to the AEC-FRG toll enrichment services contract to reduce slightly the eight-year storage period.

With kindest regards,

Cordially,

Signed
Glenn T. Seaborg

Chairman

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Stockholm, November 11, 1970.

Mr. Glenn T. Seaborg
United States Atomic Energy Commission
Washington, D.C. 20545
U.S.A.

Thank you very much for your kindness to send me "Peaceful Uses of Nuclear Energy". I will with pleasure acquaint myself with the contents of your book.

Sincerely yours,

The status of the JCAE Omnibus Bill was surfaced and Kriegsman indicated considerable confidence that the bill will die in the Senate. He reported conversations with Senator Pastore that indicated anticipated opposition to the bill would make Senate consideration questionable, and even if eventually passed, would make overriding a possible presidential veto doubtful. I voiced surprise at this conclusion in light of the House passing the bill, 345 to 0.

I then went to the Executive Office Building (Room 213) to attend a meeting of the Federal Council for Science and Technology. I entered a little late as a result of my luncheon meeting.

Present were Ed David (Chairman), Ned Bayley (Agriculture), Robert H. Cannon (DOT), Don Dunlop (Interior), Lewis Hellman (HEW), Harold Finger (HUD), Eberhardt Rechtin (DOD), Bill McElroy (NSF), George Low (NASA), Hugh Loweth (OMB), Lewis Branscomb (NBS), Herm Pollack (State), and Dave Freeman, Leonard Laster and Gabor Strasser of the Office of Science and Technology.

When I entered, Freeman was describing the Energy Study of the Domestic Council by the subcommittee of which I am a member. Following this we discussed briefly the National Energy Policy report, which Dunlop and I had prepared and which had been handed out at the meeting. Dunlop made the point that we need a reorganization of the non-nuclear energy research effort, but that this is a very delicate topic. I said that our report is only a rough draft pitched largely to national energy research goals and that there should be more on a broad national energy policy in the final report. David agreed with this, but also suggested that there be more description of the specific research aspects related to future developments. Freeman suggested that we ought to identify ideas that are far down the road. David suggested that we give some attention to the role of theory in energy research, and I used as an example of this the prospective participation of inorganic chemists to devise means for removing sulphur from coal on the basis of applying chemical reactions rather than empirical approaches. David suggested that our report identify the differences of approach to energy research between the United States on the one hand, and others like the Soviet Union, Japan, etc., on the other hand. He used as an example the Soviet emphasis on M.H.D. and the U.S. lack of emphasis on this approach.

David then called on Bill McElroy, who indicated that his report on the role of the FCST in aiding constructive public response to societal problems was a quick effort on the part of the NSF Public Information Office, and that it needs much more work. He made the point that we need to assure the academic community that the federal government is not against science and suggested that something be prepared for the President to use as a statement on some occasion. David replied that he has already started along these lines and is in the process of trying to get the President to make a report to the country on the status of science in the country. He suggested that we send him some examples of the "cutting edge" type that might be used in this report. (In the course of this statement David revealed that Myron Tribus is leaving his position at the Department of Commerce.)

Rechtin said that he must be "seeing a different part of the elephant" because he couldn't agree with much that was being said at this meeting. He indicated that Congress doesn't support science. He said that faculty will no longer work on DOD problems or accept them on campus. He indicated that such segregation on scientific projects doesn't make sense, and that it is no wonder that academic science is in trouble. He said he feels that the Mansfield amendment did permanent damage and that DOD can on longer support pure science.

McElroy and others indicated that Rechtin seemed to be a little two sensitive and that others don't see things too differently from his viewpoint.

David asked whether a well-publicized letter to either John Foster or David Packard, stating that the Executive Branch doesn't want to see the basic research potential of the country dismantled,, might be helpful. Rechtin said that perhaps having the President write to the Secretary of Defense would be better. He said he feels we need protection from the relevancy hunters and from the GAO, which has become hyperactive in this area of ferreting out basic research projects.

David then said he was sorry that he had to leave and, therefore, would have to postpone the other agenda items to a later meeting.

I had a call from Henry Kearns (President of the Export-Import Bank), who said that the bank is having a difference of opinion with the World Bank on nuclear power financing. He said there are so many purely developmental projects that need to be done, but for the World Bank to get into a project that can be financed in normal financial terms through the Export-Import Bank seems to foul up the works. When the World Bank gets into it and takes worldwide bidding, the Ex-Im people don't do well on that kind of transaction. He said that whether the World Bank actually finances or not is secondary to what they do to the market; when it gets into anything it takes two or three years to study a case and has a tendency to slow things down. Kearns said he is not worried about the competition, but it is a matter of getting the job done. He would like to come over and discuss this matter with the AEC. (It was agreed later that the Commission would see them on Tuesday, December 1st.)

I received a memorandum from Kissinger advising that the President has approved for execution the Second Quarter FY 1971 Underground Nuclear Test Program (EMERY II).

I received a letter (copy attached) from Norman E. Borlaug, Nobel Prize winner, thanking me for the congratulatory message I sent to him.

Attached is a report from the AEC Division of International Affairs on the status of the SALT negotiations.

Attached is a copy of a letter I wrote to Professor Walter LaFeber (Cornell University) advising him that I cannot consider at this time the release of the transcript of my oral interview for the Kennedy Library, which he has requested. I also sent a letter to John F. Stewart (Acting Director of the John F. Kennedy Library) (copy attached) advising him of my decision.

I took a hike with Suki in the Fort Reno area.

Wednesday, November 25, 1970- D.C.

Walter Sullivan of the New York Times called to say he is doing an assessment of the new techniques of uranium separation and he wanted my opinion on a few points. He has spoken with French and British scientists and has read an article in the New Scientist by Barnaby. They all downgrade the proliferation significance of uranium enrichment plants. Their argument is that this is an economic matter, rather than one of proliferation, because no small country would go the uranium route. I told him that my comments were not for attribution; however, I tend to agree. There are other sources: there is plutonium from nuclear power reactors, for example. Sullivan commented that few plants are open to IAEA inspection; I said that it right, but the NPT will

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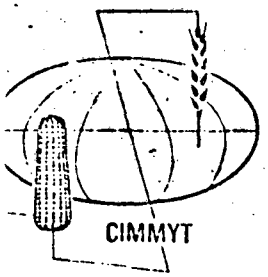


CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO

INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER

Londres 40, México 6, D. F.
Apdo. Postal 6-641
Cable: CENCIMMYT

November 18, 1970

Dr. Glenn S. Seaborg, Chairman
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Dr. Seaborg:

I want to thank you for your kind congratulatory message of November 3rd.

I fully recognize that in designating me as the recipient of the award, the Nobel Prize Committee is really honoring all agriculture. It is gratifying to have world attention thus centered upon the problem of feeding the hungry people everywhere.

As you state, we must not allow our efforts to slacken. However, if the population and related problems are not brought under control within the next 20 to 30 years, all of our work will have been in vain. We must all concentrate our complete efforts in resolving these very pressing, universal problems.

Sincerely yours,

N. E. Borlaug

Norman E. Borlaug

NEB/jms

CROSS REFERENCE SHEET DOCUMENT #913302

TITLE OF DOCUMENT STATUS OF SALT NEGOTIATIONS
November 24, 1970
3 pages

This document requires further classification review and has been removed from this folder.

Dick Koogle
Name

September 3, 1986
Date

490
119234-11923

913302

OFFICE DIARY
GLENN T. SEABORG
Chr USAEC, 1961-72
FOLDER-PAGE 119234

NOT DECLASSIFIABLE

DOCUMENT TITLE Memo To File From Bengelsdorf, Office of AGMIA, AEC, dated 11/24/70 "Status of Salt Negotiations"

This document has been determined to be NOT DECLASSIFIABLE and has been removed from this folder.

W. Tauch
Name

11/24/87
Date

Reference Ltr. DOS Burke To DOE/OC Gilbert dated 8/19/87

UNCL. BY DOE
NOV 86

November 24, 1970

Dear Professor LaFeber:

As much as I appreciate your interest in using the transcript of my oral interview on file in the John F. Kennedy Library, I find that I could not grant such a request at this time.

In the series of interviews which I completed early in 1964, I made every effort to include all the details I could recall, regardless of their classification or sensitivity. This decision on my part will, I hope, enhance the value of the transcript as an historical record, but it does pose obvious difficulties in releasing the material so soon after the events it describes.

Under the circumstances, I have concluded that I cannot consider the release of the transcript while I am still active in the Government, and I hope you will understand the reasons for this decision.

Sincerely,

(Signed) Glenn T. Seaborg

Glenn T. Seaborg

Professor Walter LaFeber
Department of History
West Sibley Hall
Cornell University
Ithaca, N. Y. 14850

bcc. R. G. Hewlett

RGHewlett/GTS:MJ
Gen. Files

November 24, 1970

Dear Mr. Stewart:

As you may know, I have recently received a request from Professor Walter LaFeber of Cornell University requesting access to the transcript of my oral history interview on file in the Kennedy Library.

As I have explained in a letter to Professor LaFeber, I do not believe it would be appropriate to grant access to the transcript at this time. I have also concluded that I should not consider release of the transcript while I am still active in the Government.

It occurred to me that it may save the time of your staff and other researchers to have my decision on this matter on file in your office.

Sincerely,

(Signed) Glenn T. Seaborg

Glenn T. Seaborg

Mr. John F. Stewart
Acting Director
John F. Kennedy Library
380 Trapello Road
Waltham, Mass. 02154

bcc: R. G. Hewlett

RGHewlett/GTS:MJ
Gen. Files

change that. I said we are past the point where we just hold the lid on and not have anybody else build enrichment plants. They will build them because it's an economic matter. The technology is no longer a secret, and Europeans will want to be somewhat self-sufficient. However, control will have to be maintained through inspection. As the world goes toward nuclear power, it will have to live with the fact that uranium enrichment plants will be springing up in many places. He asked whether India, Pakistan and South Africa are among the non-signers of the NPT. I said I was not entirely clear on South Africa. I mentioned that Israel has not signed and that Japan has signed but not ratified.

At 10 a.m. I presided over Information Meeting 1081, which was followed at 11:55 a.m. by Regulatory Information Meeting 435 (notes attached). We agreed on a letter to Walker Cisler which, after a few revisions, will be discussed at a future Information Meeting. We approved the protocol for joint projects in high energy physics with the Soviet Union. We approved a letter to Charles Edwards (Commissioner of the Food and Drug Administration), outlining the transfer of some of our regulatory responsibilities to the FDA. We also approved a letter to Arnold R. Weber (Chairman of the Property Review Board) appealing the decision to sell the North Tract of the Brookhaven National Laboratory (copy without enclosures attached). We heard a report from Charles Edington (Division of Biology and Medicine) on Gofman's meeting with the Review Committee. The review took the form of a two-hour question and answer session at which Gofman was belligerent. However, toward the end of the meeting he was sufficiently cooperative so that the session was moderately successful. We will hear from the ten members of the Review Committee, who will individually express their opinion of Gofman's chromosome work.

I had lunch with Jerry Tape at the University Club. We discussed various aspects of AEC operations, including the deteriorating relations between Chet Holifield and the White House; the problems concerning the FFTF and the use of the Fermi reactor in the LMFBR program; the reasons for delay in getting approval for the CIP funding from the White House (which reasons are related to the poor relations between Holifield and the White House); the problems of getting on with the Fast Breeder Program from the standpoint of funding; the fear that there may be a large cut by the Nixon Administration in basic research; the role that Ed David is playing in keeping the White House informed of the importance of research activities, etc.

I saw the TV tape of the talks that Gofman, Tamplin and Sternglass gave recently at the John F. Kennedy High School in Silver Springs, Maryland, as part of an Environmental and Ecological Forum being held in Montgomery County. Gofman was very effective so far as the uninformed members of his audience were concerned, but quite unfair in his treatment of the AEC and its staff.

At about 4 p.m. Bob Miller (Manager, NVOO) gave us the tragic news that Commissioner Theos J. Thompson and Jack Rosen were in an airplane that crashed into Lake Mead, and the indications are that we have lost them both. This is an unbelievable tragedy. Everyone here is devastated. Apparently, they were flying in a little NP-8 Cessna on a sightseeing trip. We don't have the details yet, but apparently aboard also was Bill Smith (head of the Visitors Bureau of Reynolds Electrical Engineering Co.). The plane was piloted by Charles Roland of the National Park Service, who was picked up by an excursion boat and was the only survivor.

I called Bob Miller on the phone (the original message had come through Bob Hollingsworth) to get any more information he could give me. He said that apparently Dr. Thompson had made the request yesterday to fly over Lake Mead to the northern edge of the Grand Canyon. I asked whether this was sightseeing; he

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
November 25, 1970

INFORMATION MEETING 1081

10:00 a.m., Wednesday, November 25, 1970, Chairman's Conference Room, D.C.

Agenda for [illegible] November 30, December 7, 14 and 21

[illegible] d. (SECY)

2. Schedule for Friday, November 27, 1970

Schedule for the Week of December 28, 1970

No meetings will be scheduled. (SECY)

4. Schedule for Modifications to Commissioners' Conference Room, D. C. Office

SECY-672 - Emery III-IV Underground Nuclear Test Program

Approved. (AGMMA-Rubin)

SECY-677 - West German National: Proposed Assignment to LASL

Approved. (AGMIA)

7. SECY-680 - Protocol for Joint Projects in High Energy Physics with USSR

Approved. (AGMIA)

8. Study re Future Commitments as Related to Enrichment Capacity

Staff will proceed with the Department of State. (AGMIA)

9. SECY-678 - BNL Land

Approved. Commissioner Thompson will discuss with the Property Review Board. (AGMO-Rubin-Spurgeon)

10. SECY-671 - Wahluke Slope: Availability for Recreational Uses

Staff may proceed as discussed subject to Commissioner Thompson's comments. (AECA-Spurgeon-SECY)

11. SECY-687 - PRDC Proposal for Fermi Reactor

Discussed and rescheduled for consideration Monday, November 30, 1970. (RDT-SECY)

12. SECY-679 - Tests on Plutonium Shipping Containers

Noted. (DC)

13. Pending Contractual Matters Report No. 382

Noted. (PAR)

14. SECY-683 - National Petroleum Council Advisory Committee: Nuclear Task Group

Noted. (RM)

15. Chairman's Comment re News Interview with Mr. Russell Train

16. SECY-653 - Fact Sheet on Nuclear Power Vis-A-Vis Coal

Development of an abbreviated fact sheet and a plan are requested. (AGM)

17. FCST Study re Future Energy Policy

Noted. (Rubin-SECY)

18. Joint Committee on Atomic Energy Hearings on FY 1971 Supplemental Authorization, 10:00 a.m., December 1, 1970

19. Oral Report on Gofman/Tamplin Activities

W. B. McCool
Secretary of the Commission

11:55 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey | Mr. Brown | General Manager |
| Commissioner Johnson | Mr. Hennessey | General Counsel |
| Commissioner Larson | Mr. Rubin | Secretary |
| | Mr. Spurgeon | |
| | Mr. Kull | |
| | Mr. McCool | |
| | Gen. Giller* | |
| | Mr. Peterson* | |
| | Mr. Friedman* | |
| | Mr. English* | |
| | Mr. McDaniel* | |
| | Mr. Kratzer* | |
| | Mr. Keto* | |
| | Mr. Edington* | |
| | Mr. DiNunno* | |
| | Mr. Bibb* | |
| | Mr. Harris* | |
| | Mr. Shaw* | |

*Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 2
November 25, 1970

REGULATORY INFORMATION MEETING 435

11:55 a.m., Wednesday, November 25, 1970, Chairman's Conference Room, D. C.

1. Mr. Price's November 23 Memorandum re Proposed Reply to Letter of September 24, 1970, from Congressmen Holifield and Hosmer

   Approved with changes. (ADRA-Rubin)

2. Dr. Beck's November 23 Memorandum re FDA Proposed Statement of Policy on Radiopharmaceuticals

   Approved. (DDR-ADRA)

3. Mr. Price's November 24 Memorandum re The Need for Additional Holdup Capability for Gaseous Radioactive Wastes for the Dresden Nuclear Power Station Units 2 and 3

   Staff recommendations will be submitted to the Commissioners' Environmental Group on Thursday, December 3, 1970, and the Commission on Friday, December 4, 1970. (ADRA-SECY)

4. Dr. Beck's November 24 Memorandum re Supplemental Memorandum by Calvert Cliffs Coordinating Committee, etc., for Show Cause Order - Calvert Cliffs Nuclear Power Plant

   Approved with an addition. (ADRA)

5. Recommendations on Early Site Hearing Procedures

   To be submitted to the Commission prior to mid-December. (ADRA-SECY)

W. B. McCool
Secretary of the Commission

12:20 p.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Beck | Commissioners |
| Commissioner Ramey | Mr. Henderson | Dir/Regulation |
| Commissioner Johnson | Mr. Hennessey | General Manager |
| Commissioner Larson | Mr. Hanauer | General Counsel |
| | Mr. Morris | Secretary |
| | Mr. Wells | |
| | Mr. Buck | |
| | Mr. Rubin* | |
| | Mr. Bloom* | |
| | Mr. McCool | |

*Partial Attendance

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 28 1970

Honorable Arnold R. Weber
Chairman, Property Review Board
Executive Office Building

Dear Mr. Weber:

Mr. Darrell Trent, Executive Secretary of the Property Review Board, has informed representatives of the Atomic Energy Commission of the recommendation under consideration by the Board that AEC declare excess the North Tract of its Brookhaven National Laboratory (BNL) located in central Suffolk County, New York.

The Laboratory consists of approximately 7,602 acres divided into two main parcels, the South Tract of 5,263 acres on which all improvements are located and the North Tract consisting of 2,259 unimproved acres. AEC has agreed to excess a 40-acre parcel adjacent to the North Tract and is prepared to excess a portion of the North Tract consisting of approximately 700 acres.

The purpose of this letter is to appeal the recommendation that the AEC be directed to excess the remaining portion of the North Tract, consisting of some 1,559 acres. AEC recommends that any decision on disposal of the remainder of the North Tract be deferred for five or ten years.

Enclosed is a description of BNL and its program and a discussion of the importance of retention of the North Tract by BNL for its future as a major center for high energy physics research in the United States.

We are informed that the recommendation that the North Tract be excessed is based on a determination that the "highest and best" use of the land would be for residential purposes and that a tentative value of $3,500 per acre has been used in making this determination.

On this basis disposal of the 1,559 acres should provide the Treasury some $5,500,000. On the other hand, the Government has already invested more than $250,000,000 in facilities at BNL. Retention of the 1,559 acres of the North Tract is necessary if BNL is to remain in contention for the location of major national or international accelerators of the type recommended by the scientific community.

So important is this to the future of BNL and the morale of its some 2,600 employees that the Commission requests that one of the Commissioners meet with the Property Review Board to discuss the matter before any decision is taken.

Another matter discussed with Mr. Trent, and which he suggested be included in this letter, relates not only to the BNL North Tract but to similar studies now underway by the General Services Administration at other AEC sites. Under Section 202 of the Atomic Energy Act of 1954, as amended, the Commission is required to keep the Joint Committee on Atomic Energy of the Congress "fully and currently informed with respect to all of the Commission's activities." To date AEC has not informed the JCAE of these property review activities because the President's memorandum of July 24, 1970 was stamped "Administratively Confidential." Guidance is requested concerning informing the JCAE of these GSA surveys and recommendations.

Cordially,

Glenn T. Seaborg

Chairman

Enclosure:
Statement in Support of
Retention by BNL of the
North Tract of its Site

said it isn't clear, but probably should be considered as this sort of thing. Thompson, Rosen and Bill Smith left McFarren Field fairly early this morning (about 8:30 a.m. or 9 a.m.) in a National Park Service plane (a Cessna 280, which can hold five or six passengers) piloted by a National Park ranger, a qualified pilot named Charles Roland. Miller said that the first report they had was from the National Park Service, who received a report from the operator of an excursion boat, Echo, that happened to be in the vicinity. The report is very fragmentary inasmuch as the boat is still out and won't dock for about another hour. However, there is evidence of a plane accident: pieces of wreckage, scraps of seat cushions, etc. Roland, the pilot, was picked up, alive, and is being taken by ambulance to Rose de Lima Hospital in Las Vegas; nothing more is known about his condition. There was no evidence of the three passengers. The crash must have occurred shortly after noon (3 p.m. EST). Miller said he has dispatched people to every point where they might gather information or be of assistance. Two of his people are enroute to meet the ambulance, in the hope of being able to speak to the pilot.

I called George Shultz to inform him that Commissioner Thompson and Jack Rosen are believed lost in a plane crash over Nevada's Lake Mead.

I sent letters to Jack Rosengren, Carson Mark, Jerry Tape, Marshall Rosenbluth, Fred Seitz, Bob Bacher, Bob Sproull, Jim Fisk and Charlie Townes, asking them to serve on a Laser Classification Panel.

I received a report on "The National Desalination Program 1970-1990" from Ed David, asking for comments by December 3rd.

President Nixon today fired Secretary of the Interior Walter J. Hickel. Rogers Morton (Chairman of the Republican Party) will succeed him.

I took a hike with Suki in the Reno Park area.

I received a call at home from Hollingsworth, which expanded into a joint conversation with Holifield and Admiral Rickover, in which I learned that Congressman Holifield is suggesting a huge search for the bodies of Commissioner Thompson and Jack Rosen, involving resources of the Department of the Navy. We decided that due to the great depth of the water (400 feet) this would not be feasible over the Thanksgiving Day holiday. Hollingsworth called Holifield and convinced him of this course of action.

I called Dorothy Thompson at her home in Winchester, Massachussetts, to express my extreme feelings of sorrow over the accident that took Tommy's life. I emphasized the close relationship that Tommy and I had experienced and the brilliance with which he had carried on his duties as an AEC Commissioner.

I also called Lorraine Rosen at her home in Rockville and expressed my great sorrow over the loss of Jack. I described my special bond to Jack and said that I had turned to him for advice on many critical occasions and his wise counsel will be sorely missed.

I also received a call from Emerson Jones in Lincoln, Nebraska, who is in touch with Tommy's mother and brothers and their families. I brought him up-to-date on what we know about the accident.

Thursday, November 26, 1970- Thanksgiving Day

I worked most of the day on the final draft of our book Man and Atom.

I watched on TV the Oakland Raiders-Detroit Lions football game which the Lions won, 28-14, and the Dallas Cowboys-Green Bay Packers game which the Cowboys won, 16-3.

Allyne Snyder and Amy Ballou joined Eric, Dianne, Helen and me for our Thanksgiving dinner, which we had about 1:30 p.m.

After dinner Eric, Suki and I took a hike in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on White Horse Trail to Cross Trail 3, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

In the evening Lynne called us from the Jasaitis' home in Piedmont, California, saying that following a large family dinner, they were just leaving for the Jasaitis' cottage at Lake Tahoe. I agreed that we will foot the bill for a new Volvo station wagon that Lynne and Bill are in the process of buying. (This will serve as a graduation present for Lynne.)

Friday, November 27, 1970- D.C.

I went to Georgetown University to give the keynote address at the Junior Science and Humanities Symposium being held there. Upon my arrival at Georgetown I met Diana Bronte (who spoke after me). We went to the auditorium on the third floor. I was introduced by Dr. Heyden and gave my talk on "The Transuranium Elements", illustrated with slides and followed by questions. There was some trouble with the slide projector at the beginning so I began my talk using a blackboard, but the trouble was soon fixed. Following my talk I listened to the first part of Miss Bronte's talk, then left and went to the H Street office.

I had lunch in the Longworth Cafeteria with Justin Bloom, Stan Schneider, George Sakalosky, Syd Gaarder and Doris Knief.

I called Sigvard Eklund in Vienna. In response to my inquiry, he said he would be arriving in New York Wednesday evening, December 2nd, and will be able to participate in the press conference at the United Nations on Thursday, December 3rd, regarding the GENEVA IV Conference. He offered his condolences on the deaths of Commissioner Thompson and Jack Rosen. He mentioned that he will be meeting with Keith Glennan at his home in Vienna on Sunday.

I sent a letter to Chet Holifield (copy without enclosures attached) in response to his and Hosmer's letter of September 24th concerning AEC procedural and administrative mechanisms for the licensing of nuclear power plants.

I sent a letter to Petrosyants expressing satisfaction with the protocol agreement that has been reached between the U.S. and the USSR for joint collaboration in the field of high energy physics.

Dr. Donald D. Dunlop (Science Adviser to the Secretary of the Interior) was fired today.

Saturday, November 28, 1970- D.C.

I worked in the office in the morning and then had lunch with Tom O'Toole (Washington Post), John Harris and Justin Bloom at the World Buttery to discuss the article which O'Toole is writing in tomorrow's Post regarding my candidacy for the presidency of the AAAS. Apparently three dissident members of the AAAS Board of Directors have got in touch with the Washington Post following Dan

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 27 1970

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

This is in response to your and Congressman Hosmer's letter of September 24, expressing your concern about AEC's procedural and administrative mechanisms for the licensing of nuclear power plants.

The Commission has given serious thought to the observations contained in your letter and, indeed, Commissioner Ramey summarized many of the Commission's conclusions and possible courses of action in an address on November 17, 1970, before the Atomic Industrial Forum - American Nuclear Society entitled "Reactor Licensing Delays in Perspective - Problems, Progress, New Directions." We consider our responsibility for the protection of the public health and safety in the licensing of nuclear power reactors to have the highest priority. We are, however, very much aware of our responsibility to assure that this mission, as well as our obligations under recent environmental quality legislation, is carried out as efficiently as possible and with a minimum of delay. This is particularly important in view of the urgent national need for electrical energy.

I am enclosing a statement which reviews the licensing record from 1967 to the present, discusses efforts to improve the process, and responds to specific points raised in your letter. The Commission has under review several proposals which Commissioner Ramey referred to in his address mentioned above, and which we expect to discuss in more detail with you, Mr. Hosmer and other members of the Joint Committee. In any review of the licensing process, we believe it important to keep in mind that the AEC has been "breaking new ground" in the administrative process and in regulatory procedures, and is continuing to do so. As members of the Joint Committee have noted, this is an evolving process and we should not overlook the significant progress that has been made.

In the last few years, the AEC has processed an increasing number of applications for nuclear facilities. Since the beginning of 1967, a total of 52 construction permits and 11 operating licenses have been issued. While elapsed time between receipt of the application and issuance of the license has increased, licensing nevertheless has generally kept pace with utility plant schedules, with only a few very recent exceptions.

As I noted earlier, the Commission has under consideration a number of possible actions to provide for the more effective and efficient handling of nuclear power plant applications. Briefly, we would expect to pursue the following courses of action: First, continue to press for sufficient staff, a more comprehensive framework of needed reactor standards, and any further possible organizational and procedural improvements to expedite the review of applications; second, seek all possible improvements in the efficiency of licensing hearing procedures, and explore any additional modifications that might be made under existing law in this area; and third, develop proposals for more basic changes in the licensing process. Regarding possible restructuring of the licensing process, we would expect, in particular, to fully explore the possibilities of providing for an early regulatory review of site suitability, including opportunity for a public hearing, and elimination of the requirement that an opportunity for a hearing be afforded at the operating license stage.

As you are aware, a recent study by the Office of Science and Technology's Interagency Power Plant Siting Study Group, in which the AEC participated, also contains recommendations for long-range planning by utilities and coordinated actions by the various concerned public agencies. For the long term, we feel that the approaches suggested in the OST report, "Electric Power and the Environment," merit serious consideration.

We appreciate the high priority which you have assigned to this subject in the tentative scheduling of Commission business, and will be pleased to discuss these matters with the Joint Committee at its convenience.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Enclosure:
AEC Statement

cc: Honorable Craig Hosmer
Joint Committee on Atomic Energy
Congress of the United States

Greenberg's resignation because Abelson wouldn't print an article that Phil Boffey prepared on this matter. I described the background for this to O'Toole: this is the third time I have been asked to run and that I would be embarrassed to refuse again, that I didn't hear about the opposition until November when it was too late to withdraw, that Spilhaus urged me not to withdraw, that the opposition never contacted me personally, and that, in any case, I would abstain from anything in the AAAS involving the Atomic Energy Commission. The story appeared on Sunday, November 29th (a copy is attached).

I played golf with Eric at the Chevy Chase Club. Eric shot 65 and I, 50.

Dianne had Kevin Edwards and Amy Ballou as dinner guests.

Helen and I attended a reception at the Tapes'. Among those present to whom we talked were Marina Whitman (John von Neumann's daughter by his first marriage) and her husband, Marietta Cooper (the first Mrs. von Neumann and the mother of Marina) and her son Mr. Cooper and his wife, the Curt Heidenreichs, Ed and Leila Creutz, Wilfrid and Esther Johnson and their son and Danish daughter-in-law and their niece Deborah Taylor (a student at Oregon State), James and Ginny Tape and their small son, Walter and Jean Tape, Clarence and Jane Larson, the Bill Bartels, the John Andrews (Atomic Energy Attaché, British Embassy), and Mr. and Mrs. Louis Groven (Scientific Attaché, Belgian Embassy).

Sunday, November 29, 1970

Helen, Dianne, Eric and I went to DC Stadium to see the Washington Redskins play the New York Giants. The Giants won, 27-24.

I took a hike with Suki in Rock Creek Park, starting at Oregon and Nebraska Avenues, going north on White Horse Trail to Cross Trail 3, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

I watched on TV the last part of the San Francisco 49ers-Los Angeles Rams football game which the Rams won, 30-13.

I worked on the final draft of our book Man and Atom off and on during the day.

Monday, November 30, 1970- Germantown

At 10 a.m. I presided over Information Meeting 1082 (notes attached). We agreed to suggest to the President that he mention the importance of energy fuels and the breeder reactor in his State of the Union message. We then discussed the question of increasing the tails to 0.30% in the operation of our gaseous diffusion and uranium enrichment plants. Actually, to raise the tails from 0.20% to 0.25% would be optimum now in order to take account of the increased cost of electric power to the gaseous diffusion plants. However, a raise to 0.30% would postpone the day when new plant capacity would be required and may be a way out, allowing us to meet foreign enrichment commitments if the CIP is not approved this year.

At 11:30 a.m. Commissioners Johnson, Larson and I met with the following members of the Molten Salt Breeder Reactor Group: L. F. Reichle (Vice President, Ebasco), D. R. de Boisblanc (Manager, R&D, Ebasco), Paul Reinker (General Manager, Nuclear Power Generating Department, B&W), John Sudbury (Continental Oil Co.), Charles Winters (Assistant to the Vice President for Research, Union Carbide), George Beams (Texas Utilities), William Brewer (Vice President for Middle South Services, Inc.), Robert Myers (Northeast Utilities), W. B. Jansen

WASHINGTON SUNDAY POST, Nov 29, 1970

# Scientists Split by Seaborg Candidacy

By Thomas O'Toole
Washington Post Staff Writer

The largest and most powerful scientific organization in the United States is at bitter odds with itself over whether its next president should be Glenn T. Seaborg, chairman of the Atomic Energy Commission.

While the issue might sound academic to most non-scientists, it has split the board of directors of the prestigious American Association for the Advancement of Science, has caused dissident directors to call for Seaborg to withdraw as a presidential candidate and has resulted in the sudden resignation of one of the top editors of Science magazine, perhaps the foremost weekly of its kind anywhere in the world.

"This is the most serious crisis we've faced in our history," says one member of the 13-member AAAS board. "I don't see any good coming out of this."

The crisis is reflected in an article written for science by staff writer Philip M. Boffey, an article that the magazine's editor, Philip H. Abelson, refused to run and that led to the resignation of Daniel S. Greenberg as news editor, a job Greenberg held for the past nine years.

"I asked Abelson to explain why he wouldn't run it," Greenberg said last week, "and his explanation was that it was impossible to prepare a story that would not be unfavorable to Seaborg.

"We prepared the story anyway," Greenberg went on, "thinking we'd be able to come up with something that would please everybody and still tell the story. Abelson read it, picked over it and decided again. There would be no story. So I resigned."

See SEABORG, A20, Col. 7

GLENN T. SEABORG
... seeks AAAS presidency

## SEABORG, From A1

The story itself was neither for nor against Seaborg's candidacy, but it did raise some questions about a possible conflict of interest Seaborg might have between his two jobs if he were elected to the AAAS presidency.

**Four Issues Raised**

Boffey raised four issues in his unpublished article. One was that under Seaborg, the AAAS might have its credibility damaged as a critic of the AEC. A second was that Seaborg's election could widen the gulf between the AAAS and the country's young scientists, who Boffey said were "increasingly suspicious" of interlocking directorships between federal and private groups.

The third issue took aim personally at Seaborg, who happens to be chairman of Science Service, a money-losing operation the AAAS recently turned down as a merger possibility.

"Should merger talk revive," Boffey wrote, "Seaborg might be the head of both parties to the talks."

The fourth issue was whether Seaborg could devote time enough to the presidency, which in the curious ways of the AAAS is a job that lasts for three years. In effect, a president serves as president-elect, president and finally chairman of the board.

The controversy began late last June, when Seaborg accepted the presidential nomination in an exchange of letters with Athelstam Spilhaus, the current president and chairman of the Committee on Nominations and Elections. Seaborg's acceptance was something of a surprise, since he had turned down the candidacy at least twice before, once in 1963 and again in 1968.

His opponent in this year's election is Aichard H. Bolt, a relatively unknown computer expert who is chairman of Bolt, Beranek & Newman, Inc., in Cambridge, Mass. Though the ballots are still in the mails, it is everybody's foregone conclusion that Seaborg will win.

Seaborg's nomination was a secret even to the board until September, when the two candidates were publicly announced.

Then, at least three board members are said to have written letters to the board, protesting Seaborg's candidacy. The board's last meeting in October is said to have been "spirited," with even a lawsuit mentioned as a possible course against Seabordg's candidacy.

One result of the board meeting was that AAAS Chairman H. Bentley Glass was dispatched to see Seaborg to at least describe the board's concerns over his candidacy. Several directors claim that Glass was told to ask Seaborg to withdraw as a candidate.

Whatever Glass told Seaborg when they met Nov. 3, it was not that the board wanted him to withdraw. Glass and Seaborg both agree their discussion never went that far.

In any case, Seaborg was concerned enough by the trouble his candidacy had caused to call Spilhaus. When he got Spilhaus on the phone. Seaborg told him he was thinking of withdrawing as a candidate.

**Urged to Stay In**

"I told Glenn on no account to pull out," Spilhaus said in describing their telephone conversation." I told him that I knew he'd been asked formally twice before to be president and that he'd refused both times. I told him that this time he'd accepted and that he should not turn it down again."

Seaborg told Spilhaus he'd

stay in the race, which, made dissident directors turn to Science magazine's Dan Greenberg for help. They told Greenberg all they know, asked him to document the full story himself and to get an article in Science so that the 530 voting members of the AAAS might decide the facts of Seaborg's candidacy for themselves.

Besides the conflict of interest possibilities, the dissidents said they were worried by other aspects of Seaborg's candidacy. They said, for instance, that when Seaborg was nominated last June at least one member of the nominating committee was under the impression that Seaborg would not serve another term as AEC chairman, when in fact he accepted a five-year term as chairman shortly thereafter.

Greenberg agreed that a story would be of interest to the scientific community and so directed Boffey to write one. Almost immediately, he ran into opposition from editor Abelson.

"Abelson said, 'Don't even bother to write it,'" Greenberg recalled. "He just said, 'There will be no story.'"

**Nine Years on Magazine**

The only real casualty so far in all this is Greenberg, who more than any other man on Science has helped to build its circulation to an all-time high of 160,000. In his nine years on the magazine, he wrote and directed numerous exclusives on the science beat. At the time of his resignation, he directed a staff of seven and had a budget of $170,000 a year.

As for Seaborg, he says that none of the AAAS board members who opposed his election ever contacted him to voice their objections or to ask him to respond to their objections.

Seaborg said that if he were elected president he would never let the conflict of interest issue raise its head.

"I would withdraw from any situation," he said yesterday, "that might involve the Atomic Energy Commission."

Meanwhile, Seaborg said he is staying in the election. "I can't withdraw now," he said. "It's too late."

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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NOV 86

COPY NO. 3
November 30, 1970

# INFORMATION MEETING 1082

10:00 a.m., Monday, November 30, 1970, Room A-458, Germantown Headquarters

1. Commissioners' Meeting with Export-Import Bank Officials, 2:00 p. m., Friday, December 4, 1970, D. C. Office

   Scheduled. (SECY)

2. Mr. O'Neill's November 25 Memorandum re Dingell Hearings

   Commissioner Larson will discuss with Commissioner Ramey. (SECY-Congr.)

3. SECY-691 - Comments on H. R. 19195: Department of Environmental Quality

   Approved subject to Commissioner Ramey's comments. (GC-Fremling-SECY)

4. Mr. Harris' November 27 Memorandum re Draft Language for State of the Union Message

   Approved with changes. (AGM)

5. December 15 Look Magazine Article "The Nuclear Threat Inside America"

6. SECY-688 - Disclosure of U.S. Classified Military Information to Foreign Governments and International Organizations

**Noted. (S)**

7. NTS Events (See General Giller's November 25 Memorandum)

**Noted. Commissioner Larson will discuss with staff. (AGMMA)**

8. Schedule for Commission Review of Fiscal Year 1973 Budget

**Approved. (SECY-OC)**

9. JCAE Authorization Hearings, 10:30 a.m., Wednesday, December 2, 1970

10. Congressman Craig Hosmer's Discussion with White House Staff re Cooperation with Europe

11. Tribute to the Memory of Commissioner Thompson, December 2, 1970

12. Mr. Flaherty's November 25 Memorandum re Interrelationship Between AEC's Uranium Disposal Policy and Operating Tails Assay for Gaseous Diffusion Plants

**Discussed and to be rescheduled. (AGMD&P-AGMP-PA-SECY)**

W. B. McCool
Secretary of the Commission

11:30 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Abbadessa
Mr. Brown
Mr. Ferguson
Mr. Rubin
Mr. Fremling
Mr. Kull
Mr. McCool
Mr. Buck*
Mr. Harris*
Mr. Quinn*
Mr. LeGassie*

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

*Attendance by Topic (s)

(Borg-Warner), D. Cullman (Borg-Warner), and James Taylor (Washington representative, B&W). The AEC staff included Bob Hollingsworth, Ed Bloch, Milt Shaw, Ernie Tremmel and Julie Rubin. Reichle and de Boisblanc gave a complete briefing on the status of the Molten Salt Breeder Reactor Group's considerations, including a design of a complete power plant and fuel reprocessing system. I indicated that I continue to be of the view that thorium will be used as a nuclear fuel, in addition to uranium, in the future and, therefore, I am happy that their Group is giving so much attention to the molten salt breeder reactor.

Harry Smyth called to suggest Milton White for consideration to fill the AEC vacancy created by the death of Commissioner Thompson.

I had lunch with George Quinn, Roger Legassie and Julie Rubin. We continued our discussion of the problem of determining the proper tails assay for the uranium enrichment process. This is very complicated when one takes into account all of the factors, political as well as technical.

Phil Handler called to say how sorry he is about the adverse publicity that appeared in the Post yesterday about my candidacy for the AAAS presidency and to inquire whether the Academy could be of any assistance. He has put this item on the agenda for the forthcoming meeting of the Council of the Academy to see whether there is any way that the Academy can assert itself. I gave him the background of how I came to agree to the candidacy. I said that one result of this is that Science magazine is losing Greenberg. Handler said he was told that Greenberg is going to start his own news service.

Helen and I went to the reception given by the Hungarian Ambassador and Mrs. Janor Nagy in honor of Vice President F. Bruno Straub and Professor Albert Konya of the Hungarian Academy of Sciences at the Hungarian Embassy (2437 15th Street, N.W.). We talked to Ambassador Dobrynin who indicated pleasure at my letter to Petrosyants and the successful conclusion of the protocol on cooperation by the USSR and the U.S. in high energy physics. He also indicated that Petrosyants still intends to lead a delegation to the United States next spring. I also talked to Bolker Felix Knoerich (First Secretary for Scientific Affairs of the German Embassy), who is replacing Wolfgang Opfermann, who is returning to Germany. We had a few words with Ed David, who indicated that the firing of Don Dunlop last Friday caught him by surprise, and he expressed some displeasure at the way in which this was done. I talked to John Lannan (science writer with the Evening Star), who wants to pursue the topic of the AAAS presidency in an interview sometime next week, to which I agreed. Helen and I also talked to the Phil Handlers, Lew Branscomb, Allen Astin, Gordon McDonald, Herm Pollack, Representative and Mrs. Charles Mosher (Ohio), Representative and Mrs. Wiley Mayne (Iowa) and Ambassador Corneliu Bodgan of Romania.

Suki and I took a short hike in the Fort Reno area.

Tuesday, December 1, 1970- D.C.- Boston- D.C.

Al Weinberg dropped in at 10 a.m. He said that he has been thinking a good deal recently about the sort of crises that nuclear power finds itself in from the standpoint of the environmentalists and even the general public. He raised the possibility of having a meeting between the Commissioners and the Laboratory directors to discuss various courses of action. He himself is worried more about the possibility of a large accident with a nuclear reactor than he is with the somatic or even genetic effects of small amounts of radiation. I said that I share some of his concerns and would certainly give his suggestion my consideration.

I called Gerald Holton (a member of the AAAS Board of Directors) regarding the controversy over the AAAS presidency. He mentioned plans for a "great leap forward" on the part of the AAAS over, say, the next three years to reach the young and engineers, to provide a social critique of technology, and to build up membership from 130,000 to one million. This will require someone who can devote a great deal of time to the work of AAAS. He said it hasn't worked in the past where a president came in only for Board meetings and executive meetings; it takes something like the National Academy of Sciences, requiring at least half of a man's time. I asked whether he thinks Bolt could devote so much time, and he said he thinks so. He said this isn't an honorary position, and he wonders whether I would be able to devote the magnitude of time and energy that would be required. I said I feel I would, otherwise I would not have accepted the position. He said that at the time the candidates' names were presented to the Board, there was a feeling that I would not be Chairman of the AEC by the time I assumed the presidency. He felt that the entire matter of handling nominations for the presidency (not only this year but in the past as well) has been handled less than satisfactorily and that the system should be overhauled. By the time of the next meeting there will be concrete plans for energizing AAAS. He is in charge of one committee and he will put me on the mailing list for whatever material they come up with. I asked if there are other people with whom I should talk; he suggested Leonard Rieser of Dartmouth particularly.

I then called Rieser on this matter and said I am puzzled because I don't know who the Board members are who are unhappy about my candidacy. He said he thinks I would be excellent as president, and that isn't the source of his dilemma. He said he thinks part of the problem is that the names of the candidates were not placed before the Board until the October meeting and that this was after a great deal of time had been spent on the possible merger with Science Service, the outcome of which "relatively outraged" Spilhaus. Another problem is the radiation standard question. It was felt that AAAS should look into the general proposition of being a resource available to society on this issue; therefore, they wondered whether it would be reasonable to have a government official as president.

The Board was informed that I would no longer be AEC Chairman by the time I would take office. I said this was never a question in the previous approaches to me, particularly in 1963 and 1968. He replied that this new attitude reflects the sensitivity of the present time. He said that Glass and Spilhaus had already left the meeting when someone asked whether Glass shouldn't be instructed to talk to me. Thereupon Rieser raised three points with Glass: (1) whether AAAS would be inhibited in some of its business as a result of having a president who was the head of a major government agency; (2) since there are a very limited number of top science positions in government, no one should be asked to combine that responsibility with the AAAS presidency; (3) Bill Bevan's thoughts that AAAS should have offices for its officers, with the officers spending considerable time in those offices.

Rieser stated that the presidency will require more time than just presiding at meetings. He felt this would be difficult, although not impossible, for me to combine with the AEC chairmanship. He then raised the question of possible conflict of interest. I said I would expect that the Gofman-Tamplin matter would be settled before I would be called to play a AAAS role. As to other matters that might arise, I said I see nothing that occurred within the past ten years where one couldn't disengage himself from any involvement. He believes the Board has been misinformed regarding my leaving the AEC; furthermore, he said that the Board is fed up with being pushed around by Spilhaus. He stated that part of the current problem may be the way Spilhaus involved me. Some of the people on the Board, including Bentley Glass, have been pressed awfully hard by Spilhaus and they want to be sure they have a president who will be independent of Spilhaus. He said that when he wrote Bentley Glass he thought it would be unfair for me not to know that these feelings exist among some of the Board members. He said that Glass was surprised to learn many of the things I told him when he came to see me a month ago.

He said the question then came up whether these issues shouldn't be raised in Science magazine. He said that his contact with Greenberg was not for the purpose that he should run an article somewhere, but he was unhappy that the editor of Science could make a decision not to publish such an article. He feels we can ride out the "headline" situation. He said he would consider no process of discussion other than within the confines of the Board itself. He also mentioned that he received a call from Tom O'Toole when he was in New York, but that he refused to return the call. I asked whether he would suggest that I talk to anyone else on the Board, mentioning that I had spoken with Holton. He said that Barry Commoner always feels strongly on matters like this. He also suggested that I call Walter Roberts, since he has been president of AAAS and thus would know what the position involves.

At 11:35 a.m. I called William L. Evers (Executive Director of the Camille and Henry Dreyfus Foundation). I said I was calling to remind him that a year or so ago we talked about the possibility of raising again the matter of a small grant to Science Service, say, something on the order of $5,000. Evers said the miscellaneous grants had been made in November from $150,000 which the Foundation had allowed in this area, but chemistry teaching activities were not included. He said they could again put this item in for next year (October 1971). I said we would appreciate it at any time. He asked me to drop him a little note to this effect. I passed this information on to Ted Sherburne.

I received a letter from George Lincoln (copy without enclosure attached) advising that the President has directed him to chair a Joint Board to identify emergency problems in fuel supply, fuel transport and coordinate remedial actions by the responsible federal agencies, and asking us to continue our progress reports on this subject, but on a quarterly basis.

I received a letter of sympathy from Sigvard Eklund on the deaths of Commissioner Thompson and Jack Rosen.

I sent a letter to the President (copy attached without enclosure) concerning subjects which might be included in his State of the Union message.

I sent my biweekly status report to the White House today (copy attached).

I had a quick lunch with Julie Rubin in the office at noon and then we flew to Boston to attend the memorial services for Commissioner Thompson. We left on American Airlines Flight No. 476 at 1 p.m. and arrived at 2:08 p.m. We were met

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EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF EMERGENCY PREPAREDNESS
WASHINGTON, D.C. 20504

OFFICE OF THE DIRECTOR

NOV 5 1970

Honorable Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Chairman:

On May 5, 1970, I wrote to you about potential summer fuel and energy problems and requested that conservation measures be taken by your office to avoid a crisis. I also asked you to advise me of any problems encountered and to provide me with a monthly progress report until further notice.

The reports I received on this matter indicated that only minimum problems were encountered in conserving fuel and energy. Some agencies indicated an average of up to 20% savings through implementation of electric power conservation measures during peak consumption periods in the summer months. Slightly higher percentages of savings were obtained during limited periods, in response to specific requests for load shedding by generating companies. These efforts were commendable.

In anticipation of potential critical problems this winter, President Nixon directed that I chair a Joint Board to identify emergency problems in fuel supply and fuel transport and coordinate remedial actions by the responsible Federal agencies. Enclosed is a copy of a September 29 joint Statement by Paul W. McCracken, Chairman, Council of Economic Advisers, and myself.

It would be appreciated if your agency would continue submitting reports, but now on a quarterly basis. The reports should show the status of conservation procedures of your agency and the effect of conservation actions taken.

I wish to express my appreciation for your fine cooperation in implementing energy conservation procedures.

Sincerely,

G. A. Lincoln
Director

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 1 1970

The President
The White House

Dear Mr. President:

My purpose in writing is to reply to your November 6 memorandum concerning subjects which might be included in your State of the Union Message.

It is our feeling that the principal AEC area which might warrant your consideration is the priority development of an advanced nuclear system which will produce more nuclear fuel than it consumes while producing electric power--namely, the "breeder" reactor. In addition, for possible use in the context of a broader statement on the environment, we are including some brief material on our research in environmental areas.

We will be pleased to provide any additional information you might wish. We do not, at this time, foresee any legislative proposals which would warrant mention in your State of the Union Message.

Respectfully yours,

Glenn T. Seaborg

Chairman

Enclosure:
Draft AEC Material for State
of the Union Message

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NOV 86

# AEC DIVISION STATUS REPORT FOR DECEMBER 1, 1970

1. Commissioner Theos J. Thompson and his special assistant, Lt. Colonel (ret.) Jack Rosen, were killed in the crash of a U.S. Park Service aircraft at Lake Mead, Nevada, on November 25. An employee of Reynolds Electric and Engineering Company (an AEC contractor) was also killed. Memorial services for Commissioner Thompson are to be held at 3:30 p.m. on December 2 in the auditorium of the Massachusetts Institute of Technology, Cambridge, and at 2:00 p.m. on December 3 in the Union United Methodist Church, Washington. Services for Colonel Rosen are still pending.

2. Chairman Seaborg will present the AEC Citation to Generals A. O. Starbird and A. W. Betts on December 3 at 4:00 p.m. in the office of Secretary of the Army Stanley Resor.

3. The revised AEC policy statement on implementation of the National Environmental Policy Act of 1969 as applied to the licensing of reactors and fuel reprocessing plants is being reviewed by the Council on Environmental Quality and the Justice Department after being approved by the Commission and before publication.

4. AEC's environmental statement on underground nuclear test program at the Nevada Test Site during FY 1971 was released to the public on November 24. Issuance of this statement is required by the National Environmental Policy Act of 1969. The statement reports that testing will add only minimally to existing environmental changes on the test site and that the effects off the site will be negligible. The principal off-site effect expected is some minor damage to a few man-made structures from a few of the higher yield tests (one megaton or less).

5. A forthcoming article in the Sunday New York Times Magazine by Dr. Ralph Lapp will describe how nuclear power plants work and some of the controversies about them. This article, expected to appear in December (perhaps on the sixth), reportedly will be basically favorable toward nuclear power, while questioning some aspects of private and governmental nuclear activities.

The National Observer is preparing an article on nuclear power reactors and their potential dangers. We have received an inquiry from the Cincinnati Inquirer about radioactive tritium released to water from AEC's Mound Laboratory at Miamisburg, Ohio. An article on the possibility of a complete nuclear test ban treaty is expected to appear on December 6 in the Washington Post's Sunday "Outlook" section.

6. Two hearings on applications by utility companies to build nuclear generating plants in which opponents of the plants are expected to intervene are scheduled to begin before Atomic Safety and Licensing Board Panels during the first half of December. On December 1 the hearing will open on the proposed plant on the Tittabawassee River near Midland, Michigan, which has drawn some opposition from conservation groups based on radiological and thermal effects. (In addition to generating 1,300 Mwe of electricity from two reactors, this plant will supply 4,000,000 pounds per hour of process steam for Dow Chemical facilities at Midland.) On December 8 the hearing will open on the proposed Davis-Besse plant on Lake Erie near Toledo, which has been involved in controversy reported in the Toledo press and which was also an issue in the recent Ohio senatorial campaign. Of the next 13 scheduled licensing actions on applications for permits to construct or operate nuclear power plants, 10 are expected to be contested.

7. Land near Lewiston, New York, in the area where low levels of radioactivity were recently discovered will be thoroughly surveyed. The land was used as a storage depot for nuclear materials during the late 1940's and early 1950's. (See AEC Biweekly Status Report for November 17, 1970.) The decision to make the survey followed recent meetings at Albany and Niagara Falls between AEC staff, New York State officials, and owners of affected private land.

at the airport in Boston by Jack Kavanagh and driven to the Massachussetts Institute of Technology campus in one of the University station wagons by Mr. Leveroni. We proceeded directly to Manson Benedict's office and for about ten minutes discussed the tragedy of Tommy Thompson's death. Elliot Pierce joined us during these discussions.

Shortly after 3 p.m. Benedict, Rubin and I walked to President Howard Johnson's office where we talked for about 20 minutes prior to the memorial ceremony. On the way to President Johnson's office we encountered some students demonstrating for aid to Pakistan. In the conversation with President Johnson I explained the circumstances involving the accident in which Tommy was killed. We also discussed some staff changes at MIT, among which was the pending selection of Dr. Edward Mason as the head of the Department of Nuclear Engineering and Manson Benedict's request to be relieved of the department head responsibility to permit concentration on some writing and other activities.

We walked to the nearby auditorium with President Johnson and met Jerry Wiesner along the way. The memorial ceremony was attended by about 150-200 people and consisted of some organ music by John Cook, followed by a prayer led by Reverend Arthur F. Fultz and a eulogy by Manson Benedict and President Johnson.

Following the ceremony the assembled group was invited to meet Mrs. Thompson at a coffee in the adjacent student building. Those attending the ceremony and coffee included: Barbara and Charles Coryell, Lee Haworth, Norm Ramsey, Wes Johnson (Manager of the New York Operations Office), Ed Giller, Wally Zinn, Charlie Keegan (Connecticut Yankee), Elliot Pierce, Bob Duffield, Peter Demos (MIT), Dennis Spurgeon, President Howard Johnson, Jerry Wiesner, Manson Benedict and Julie Rubin.

In the receiving line I also met Mr. and Mrs. Tom Olson; Mrs. Olson identified herself as a former Berkeley student from 1959-63. Mrs. Thompson's daughter was at the memorial ceremony, but I was unable to see her during the reception. Mr. Walter McCarthy of Detroit Edison introduced himself at the coffee and expressed Walter Cisler's regret for not being able to attend due to a board meeting.

Immediately following the ceremony I was driven to the airport by Mr. Leveroni, along with George Kavanagh and Julie Rubin. Rubin and I caught our scheduled American Airlines Flight No. 511, which left at 5:30 p.m. and arrived in Washington at 6:53 p.m. Henry Hinds met us at the airport and we proceeded directly home.

Suki and I took a hike in the Fort Reno area. However, the people at nearby Alice Deal Junior High School got concerned about my walking there in the dark and turned the spotlight on me, so it may be that I will have to find another place to walk. I continued my hike by walking in the neighborhood residential area.

I received a call later in the evening from Julie Rubin advising that the JCAE hearing for our supplemental appropriations, scheduled for 10:30 a.m. tomorrow, has been cancelled due to a conflict with Holifield's activities with the Rules Committee.

Wednesday, December 2, 1970- D.C.- New York

I had a call from Fred Zerkel (Chemical and Engineering News), who said he has been asked to put together a story about my candidacy for the AAAS presidency as a result of Sunday's Washington Post article. I said that I, of course, would rather that he ignored it, but did agree to give him the background, which I

did. He asked if I would have withdrawn had I known of this development earlier. I said I would have given it consideration, but do not mean to imply that I would have withdrawn. He asked if the time involved was the problem when I previously turned the offer down. I said it was, but since they were still trying to get me, I hated to turn it down a third time. Zerkel mentioned the conflict of interest issue and asked if this would involve my connection with Science Service. I said no, that matter has been settled and will not come up again. He asked if I could see any way that I could get involved in a conflict of interest. I said I would make it a point never to be involved in a situation of this kind, that I don't think my being Chairman of the AEC would interfere, and if it did, I would absent myself or abstain. I said I would be meticulous on that point.

Zerkel asked about the Gofman-Tamplin matter in connection with the AAAS, and I said that should be finished before I have any role to play in the AAAS. Obviously, I would have a "hands off" attitude on anything of this sort. He said it has been said that AAAS is critical of AEC, and asked if I feel this is so. I said not particularly, but I wouldn't recommend his stirring this up. He said he has also talked to Bentley Glass, who told him that he came to talk to me, but had no directive from the Board to ask me to withdraw. I said this is what happened in November. He asked me about my talk with Spilhaus, and I said I would rather he contacted Spilhaus about that as I never like to quote conversations; I gave him Spilhaus' telephone number. He asked me if I knew how many of the Board members were unhappy about my candidacy, and I said I know of several but not the exact number. He asked if I had any unpleasant thoughts about, or fear of, taking the post, and I said I have not. He asked if I look forward to being President of the AAAS, and I said I would rather that he didn't say anything about that. He thanked me for the information.

I called Barry Commoner and gave him the background on how I came to be a candidate for the AAAS presidency and the question of conflict of interest. He pointed out that as president-elect, I would be a member of the Board. I said if it develops that there are conflicts of interest, I would put the interests of the AAAS first; I would absent myself or abstain temporarily, or I would resign. He said he missed the Board meeting when the candidates' names were put forth. However, he said that Mina Rees, as Chairman of the Nominating Committee, reported to the Board that the offer of the nomination to me was contingent upon my not continuing as Chairman of the AEC. I said that represents a breakdown in communications- that interpretation is not even consistent with the timing. I accepted the Nominating Committee's invitation about ten days after the public announcement that I was accepting another term as Chairman of the AEC. He said that since he was not at the Board meeting he checked with a member of the Nominating Committee, who got out his notes and confirmed that this was his understanding of the basis on which the nomination was offered.

Commoner said he was told by Bill Bevan that Spilhaus does not agree that there was a contingency attached. I said that somebody should have contacted me about this, and I would have responded. He said that the "alarm bell" didn't go off because there was a bit of discontinuity due to Wolfle's leaving and no overlap with Bevan. He foresees cases of the Gofman-Tamplin variety coming up one after another in the years ahead. An independent scientific organization will be required to deal with these. He said that his own strong opinion is that it would be inappropriate for any head of a government operational agency to be head of AAAS. He stated that Spilhaus feels that the matter of conflict is a matter of personal integrity. Commoner doesn't think that's the issue, given the nature of the program that will be involved, as well as the intensity of feelings. He said it will be difficult for AAAS and for me if I am even on the

Board, much less in the chair. He feels AAAS is heading into a very difficult transitional period.

I asked Commoner what he thinks I should do. He acknowledged that they muffed the ball when it was announced that I would be continuing at the AEC. He thinks it would be bad for AAAS and for me if I should win the election. His own feeling is that I should withdraw; he sees no great difficulty in the point of view of there being only one candidate, and he doesn't think there would be any resentment against the Nominating Committee. Secondly, he feels there is a clear and very logical basis for confusion about the conditions of my nomination. He suggested that a statement could be issued stating that there was some confusion, partly through AAAS error regarding the basis of the nomination, and in order to clear up the confusion and leave no doubts, I would like to withdraw. He said he can foresee nothing but continuing trouble unless something like this is done. This issue will come up on the floor of the Council, whose meetings are open to the press. In addition to the press, about 100 young people were present at the last meeting, making their presence felt "in loud chorus." The next Council meeting will be held in Chicago.

Commoner said he feels AAAS owes me an apology for having boxed me in like this. I said I would weigh his opinions against those of some other members of the Board. He said he didn't know I was nominated until he saw the ballot. He thinks that was a terrible mistake. He said that anyone who had been at the Council meeting in Boston would know this is not the way they should be acting. He said that if he were in the government he would raise questions about the impact of my being engaged in this kind of front-line activity in connection with my government responsibility. He feels government people are asking for trouble if they become thus involved. He said that if I do decide it would be better to withdraw, he will personally push very hard for a AAAS statement accepting responsibility for what has happened.

I had lunch in the office with Evert Clark (Newsweek's Washington bureau) and John Harris to discuss the article Clark is writing concerning the controversy over the AAAS presidency. I gave him the background for this along the same lines that I had given them to O'Toole last Saturday. Clark said he feels the matter is a challenge of the "establishment" by environmentalists and young scientists. He did not seem impressed by possible arguments of conflict of interest, but indicated that my presence as an official of AAAS might well have some subtle and unintended influences on actions of the organization. He also indicated that I am winning by an overwhelming vote, based on a partial count of ballots.

Accompanied by Manson Benedict and Lincoln Clark of MIT and Julie Rubin, I walked over to the Union United Methodist Church (814 20th Street, N.W.) to attend and speak at the memorial service for Tommy Thompson. Along the way we discussed the proposed memorial fund to be established for Tommy, being initiated by Manson Benedict.

The memorial service was attended by about 200-300 people and followed the program (copy attached). I spoke, describing Tommy's many attributes and accomplishments. (A copy of the text of my remarks is attached.) I met briefly with Dorothy Thompson and her brother Colonel Ralph Sibley (from St. Petersburg, Florida), and with Tommy's two brothers and their wives (from Lincoln, Nebraska), Dr. and Mrs. John R. Thompson and Mr. and Mrs. Richard D. Thompson, and also his mother Mrs. T. F. Thompson. The family requested that I send them copies of my remarks and I am arranging to do so. Helen also attended the services. (Attached is a list of the other people who attended the memorial service.)

UNCL. BY DOE
NOV 86

SERVICE OF TRIUMPH AND TRIBUTE

at

Union United Methodist Church
814 Twentieth Street, N.W.
Washington, D. C.

Wednesday, December 2, 1970 Two o'clock

To the Glory of God
In memory of Theos J. Thompson
For the comfort and inspiration of
His family and friends

THE PRELUDE--"Larghetto: from "Sonata VI in C Major"-Händel
"Sonata V in E Minor" - - - - - - - J. S. Bach

THE INVOCATION

THE HYMN - - "O God Our Help in Ages Past" - - - - - - - 28

THE AFFIRMATION OF FAITH

Minister: Where the Spirit of the Lord is, there is the one true Church, apostolic and universal, whose holy faith let us now declare:

Minister and People: We believe in God the Father, infinite in wisdom, power, and love, whose mercy is over all his works, and whose will is ever directed to his children's good.

We believe in Jesus Christ, Son of God and Son of man, the gift of the Father's unfailing grace, the ground of our hope, and the promise of our deliverance from sin and death.

We believe in the Holy Spirit as the divine presence in our lives, whereby we are kept in perpetual remembrance of the truth of Christ, and find strength and help in time of need.

We believe that this faith should manifest itself in the service of love as set forth in the example of our blessed Lord, to the end that the kingdom of God may come upon the earth. Amen.

THE GLORIA PATRI

*****

ARIA AND CHORUS from "Messiah" - - - - - - - - - - - - Händel
"I know that my Redeemer liveth
Since by man came death"

THE SCRIPTURE READINGS - Psalms 90, John 14:1-7, 15-17, 27
I Cor. 15:20-22, 35-36, 38, 42-44, 49-50, 53-58

PASTORAL PRAYER

*****

A TRIBUTE - - - - - - - Chairman, Atomic Energy Commission

*THE HYMN "For All the Saints Who From Their Labors Rest"-536

THE MEDITATION - - - - - - - - - - - - - - - - - The Minister

*THE BENEDICTION

*THE HYMN - - "God of Our Fathers" - - - - - - - - - - - - 552

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THE POSTLUDE - - "Plein Jeu" and "Grands jeux" from
"Suite du Deuxième Ton" - - - Clérambault

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Leading in the Service:
Rev. Andrew K. Meeder, Pastor, Union Church
Rev. Dean E. Benedict, Pastor, Crawford Memorial Church
Winchester, Massachusetts
Dr. Glenn T. Seaborg, Chairman, Atomic Energy Commission
Mrs. Peggy Kelly Reinburg, Director/Organist, Union Church
Mrs. Sharon Gratto, Flute; Miss Glenys Murrell, Soloist
Union Church Choir (of which Dr. Thompson was a member)

AFTER THE SERVICE Members of the Family will receive guests at a "Coffee Hour" in the downstairs social hall of the church.

ALL ATTENDING today's service are requested to sign a Guest Book in the lower vestibule as you proceed to the social hall, so that the family may look at it later and not miss noting your presence here, which is deeply appreciated.

THE FLORAL ARRANGEMENT on the Altar has been given by the Atomic Energy Commission. Other expressions of sympathy may be made to the Memorial Fund, Union Methodist Church. They will be used to support a music and arts series at the church called "Abendmusik"; these Sunday evening programs are presented monthly during six months of the year. Dr. Thompson showed special interest and support of the programs; he had recently begun singing with the choir in the concerts. If funds allow, special concerts in the future could be in his memory and honor.

*The congregation standing *****Pause for ushering ***Congregation will please be seated during beginning of the Postlude while family members and dignitaries are ushered to the Social Hall downstairs.

Washington, D.C.
Dec. 2, 1970

UNCL. BY BOB
NOV 86

# Chairman's Eulogy for Memorial Services for Theos J. Thompson

We are here today to pay our respects and offer a tribute in memorium to Theos J. Thompson, a fellow Commissioner, a scientific colleague, a respected teacher, a fine father and a good friend, whose untimely and tragic death leaves a great void in our community and a great emptiness in our hearts./

Commissioner Thompson was one of those rare individuals who brought not only knowledge and dedication to his most important work but also an added spirit that won our admiration - an infectious pleasure in his pursuit of excellence./ And all those who were privileged to share his burdens and his counsels will remember him long and well for these qualities./

My own remembrances of "Tommy" Thompson go back almost 30 years - to the 1941 Rose Bowl game in which he quarterbacked the University of Nebraska team against Stanford University./

And how well I remember recalling good-naturedly with him, many times, the game-winning run by Pete Kemetivic against his team, an event that certainly did not blunt Tommy's enthusiasm for football, as a few years later he went on to become an assistant coach at West Point./ Red Blaik

But Theos Thompson's physical prowess and courage was more than matched by his intellectual strength./ Having received his A.B. and M.A. degrees in 1941 and 1942 from the University of Nebraska, and after several years of military service, he went on to achieve his Ph.D. in nuclear physics in 1952 at the University of California at Berkeley./ It was during his time as a graduate student at Berkeley, and concurrently as a lecturer in physics and a physicist at the Radiation Laboratory at Berkeley, that our paths crossed again./

From Berkeley Dr. Thompson was to go on to pursue a career that led him to become a leading nuclear reactor designer and one of the nation's foremost authorities on reactor safety./

From 1952 to 1955 he worked as a Staff Physicist at the Los Alamos Scientific Laboratory where he carried out important assignments in reactor design and construction which have contributed vitally to the development of safe, economic nuclear power./ His assignments at Los Alamos included the chairmanship of the design committee for the Omega West Reactor, an extremely productive research facility./ He also assumed the challenging responsibility for the dismantling of "Clementine," the world's first fast reactor, a pioneering effort which showed that even a highly contaminated reactor could be dismantled safely./

I am sure that the success of these early efforts gave Tommy Thompson the great confidence that he had in our ability to manage nuclear safety matters - a confidence which he continued to display as he became a leading writer and lecturer on nuclear safety and took on all critics of nuclear power on this issue./ In this regard he was to become a most articulate spokesman in the defense of the nation's nuclear safety standards and the safety of the reactors licensed for construction and operation by the AEC./

With the experience of Berkeley and Los Alamos behind him, Dr. Thompson's expertise and reputation grew as he went on to join the staff of the Massachusetts Institute of Technology as Associate Professor of Nuclear Engineering in 1955, and later, in 1958, to become Professor of Nuclear Engineering and Director of the MIT Nuclear Reactor Facility./ He supervised the design and construction of this reactor and took much pride in this accomplishment./ At MIT he developed and taught courses in thermal and fast power reactor design and in doing so developed students of the highest quality who were to go on to fill many responsible positions in the nuclear field.

During his years at MIT, Dr. Thompson further advanced the status of nuclear power by serving as a consultant to the nuclear power industry on the design and operation of the two types of reactors - the boiling water and pressurized water reactors - that were to become the basis for an economic nuclear power industry./

During this period he also made a great contribution toward advancing safe nuclear power by his role as a member, and later as Chairman, of the AEC's very important consultant body, the Advisory Committee on Reactor Safeguards./

This committee reviews every reactor licensed by the AEC, and Dr. Thompson's work with and leadership of that important body can be counted among his most significant accomplishments, for in his dedicated efforts to it he developed principles which still guide that Committee./ I recall well the many lunches I had with him on Saturdays, after his meetings with the ACRS, when we discussed thos two important subjects in which we had long shared an interest - nuclear power and football./

Theos Thompson received many honors for his achievements./ Among them were the AEC's Ernest O. Lawrence Memorial Award, presented to him in 1964 for his leadership in "developing safe, useful and economic nuclear reactors and for his inspired teaching of nuclear engineers."/ He was also honored by the University of Missouri with its Distinguished Service Award in Engineering./ He was a member of the American Academy of Arts and Sciences, the American Physical Society, Phi Beta Kappa and Sigma Xi./ And he served as a member of the U.S. delegation to the Second and Third Geneva Conferences on the Peaceful Uses of Nuclear Energy in 1958 and 1964 (respectively)./

When Dr. Gerald F. Tape resigned his position as Atomic Energy Commissioner in 1969 among the first to come to mind as his replacement was Tommy Thompson./ Because of my high regard for him and the high regard of my fellow Commissioners, it was his name that I offered to President Nixon as my recommendation for the man to fill that vacancy./ Tommy's outstanding qualifications were immediately recognized by the President, by his science advisor Dr. Lee A. Du Bridge and by the Senate which quickly confirmed his appointment./

Dr. Thompson took on his new assignment as an AEC Commissioner with all the vigor and enthusiasm that was typical of his approach to a new and difficult job./ His competence, initiative and high principle were immediately recognized by all his colleagues./ He gained increased respect and stature during his year and a half with us - a difficult time with difficult decisions to be made on important issues./ And he took on a large share of the burden of traveling to conduct Commission business and to speak to the public on the significant issues of the day on nuclear energy. It was on such a mission - a combined inspection and speaking tour - that the tragic accident occurred that claimed his life./

In addition to a brilliant career, Dr. Thompson leaves a fine family; his wife, Dorothy, his sons Jeff, Edward, and Robert and daughter Elizabeth. / Our hearts go out to them in this sad hour. / And we hope that it will be some small measure of comfort to them to know that the man whom they held so close (to them) as husband and father was also held in great esteem and affection by so many others. / Theos J. Thompson leaves a legacy of which they can be very proud. / As a man who served his profession, his nation and his fellowman so well, he will be missed - and he will be remembered. /

Secretariat
December 4, 1970

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

UNCL. BY DOE
NOV 86

# ATTENDANCE AT TRIBUTE FOR DR. THOMPSON

## COMMISSIONER THOMPSON'S FAMILY & CLOSE FRIENDS

Mrs. Theos J. Thompson (wife), Winchester, Mass.
Mrs. T. J. Thompson (mother), Lincoln, Neb.
Dr. and Mrs. John R. Thompson (brother), Lincoln, Neb.
Mr. and Mrs. Richard D. Thompson (brother), North Platte, Neb.
Col. Ralph Sibley (Mrs. Thompson's brother)
Mr. and Mrs. Dean Atlee Snyder (cousin), Alexandria, Va.
Mrs. Loeschner (cousin's daughter)
Mr. and Mrs. Rolf Ellis (nephew)
Miss Rita Falco
Mrs. Eric Thor and Miss Ann Thor
Rev. Dean Benedict

## COMMISSIONERS

Chairman and Mrs. Glenn T. Seaborg
Commissioner and Mrs. James T. Ramey
Commissioner Wilfrid E. Johnson
Commissioner and Mrs. Clarence E. Larson

## WHITE HOUSE

Mr. William E. Kriegsman, Staff Assistant
Dr. Heffner, Deputy Director, OST (representing Dr. David)
Mr. Robert Barlow, OST
Mr. Dwight Ink, OMB

## JOINT COMMITTEE ON ATOMIC ENERGY

Mrs. Chet Holifield (Chairman's wife)
Mr. and Mrs. James B. Graham, Assistant Director
Col. Seymour Schwiller, USAF, Technical Consultant

## GENERAL ADVISORY COMMITTEE

Mr. Anthony A. Tomei, Secretary

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

Dr. Joseph M. Hendrie, Chairman
Dr. Spencer H. Bush, Vice Chairman
Mr. Raymond F. Fraley
Mr. Marvin C. Gaske
Mr. Morton W. Libarkin
Miss Leona Blische
Miss Bessie Dundr

ADVISORY COMMITTEE FOR BIOLOGY AND MEDICINE

Miss Rosemary Elmo, Executive Secretary

ATOMIC SAFETY AND LICENSING BOARD PANEL

Mr. A. A. Wells, Chairman
Dr. John H. Buck, Vice Chairman
Mr. and Mrs. J. D. Bond
Miss Mildred Cecil

MILITARY LIAISON COMMITTEE

Mrs. Carl Walske (Chairman's wife)

FORMER COMMISSIONERS

Mr. Eugene Zuckert
Dr. and Mrs. Gerald F. Tape

FEDERAL REPRESENTATIVE TO THE SOUTHERN INTERSTATE NUCLEAR BOARD

Honorable Sterling Cole

ATOMIC ENERGY ATTACHES AND FOREIGN REPRESENTATIVES

Mr. Peter V. Crooks, Australia
Mr. Louis Groven, Belgium
Mr. Anker K. Hansen, Denmark
Mr. Curt Heidenreich, Euratom
Mr. Pierre Villaros, France
Mr. John S. V. Andrews (and wife), Great Britain
Dr. and Mrs. Gaetano Lanzano, Italy
Dr. and Mrs. Takao Nakajima, Japan
Dr. Ronald G. Shuttleworth, South Africa
Mr. Volker Knocrich, Germany

ATOMIC ENERGY ATTACHES AND FOREIGN REPRESENTATIVES
(continued)

Mr. Lawrence Middleton, British Embassy (representing the Ambassador)
Mr. Ivo Dubois, Euratom
Mr. Georgio Boggio, Euratom
Mr. C. F. Frederickson, New Zealand Embassy
Mr. Hendrickes D. DeVroom, OECD, Washington, D. C.
Mr. Duncan Janisch, UK Ministry of Defense

OTHER GOVERNMENT AGENCIES

Mr. Herman Pollack, Dept. of State
Secretary and Mrs. John Volpe, Dept. of Transportation
Mr. Nathan Seivering, Dept. of State
Mr. Troy B. Connor, Justice Dept.
Mr. Frederick Schuldt, BOB
Mr. Donovan Q. Zook, Dept. of State

SPECIAL AEC GUESTS

Mrs. Jack Rosen and family
Dr. Manson Benedict, MIT
Gen. K. D. Nichols, former Gen. Mgr.
Mr. George L. Grossmuch, Bethesda, Md.
Mr. and Mrs. Norval Carey, McLean, Va.
Dr. R. L. Bisplinghoff, NSF
Miss Ruth Anna Russell, Washington, D. C.
Miss Doris Steeves, Arlington, Va.
Mr. and Mrs. Amos Coffman, Falls Church, Va.
Col. and Mrs. Lawrence Jones, Chevy Chase, Md.

AEC STAFF

Mr. Julius H. Rubin
Mr. George Sakalosky
Mr. Sydney R. Gaarder
Lt. Dennis Spurgeon
Mr. and Mrs. Lawrence F. O'Donnell
Mr. Ulysses M. Staebler
Mr. John A. Griffin
Mr. William H. Beach
Mr. Alex G. Fremling
Mr. Wallace R. Kornack
Mr. Justin L. Bloom
Mr. Stanley D. Schneider

AEC STAFF (continued)

Miss A. Marie Janinek
Miss Thelma Fleming
Mrs. Dorothy Fauntleroy
Miss Anne Kurtines
Miss Mary Sweeney
Miss Regina Svendsen
Mrs. Margaret Service
Miss Margaret DuFlo
Mrs. Irene Buchholz
Mrs. Patricia Goodman
Mr. R. E. Hollingsworth
Mr. Howard C. Brown, Jr.
Mr. Harold L. Price
Mr. W. B. McCool
Mr. George F. Quinn
Mr. John A. Erlewine
Mr. John V. Vinciguerra
Mr. Harry S. Traynor
Mr. Donald C. Kull
Mr. M. M. Mann
Maj. Gen. Edward B. Giller
Dr. Spofford G. English
Dr. George M. Kavanagh
Mr. Ernest B. Tremmel
Mr. D. L. Crowson
Mr. Milton Shaw
Mr. E. E. Fowler
Dr. and Mrs. John R. Totter
Dr. Elliot S. Pierce
Dr. Paul W. McDaniel
Mr. John S. Kelly
Mr. W. H. Slaton
Mr. R. L. Faulkner
Mr. Frank P. Baranowski
Mr. William T. Riley
Mr. E. H. Glade
Mr. Donald E. Bostock
Mr. C. L. Marshall
Mr. E. J. Brunenkant
Mr. Jon D. Anderson
Mr. Lyall Johnson
Mr. Robert D. O'Neill
Mr. John P. Abbadessa
Dr. Martin B. Biles
Mr. L. D. Low
Mr. Eber Price

AEC STAFF (continued)
Mr. and Mrs. Joseph DiNunno
Dr. Forrest Western
Mr. Charles W. Thornton
Mr. Milton Klein
Mr. Joseph Hennessey
Dr. Paul C. Fine
Mr. John A. Derry
Mr. John A. Harris
Mr. Joseph L. Smith
Mr. John J. Flaherty
Miss Mary M. Roberts, JAIEG
Mr. Joe Deal
Mr. John P. Giacomini
Dr. William A. Wallenmeyer
Mr. Vance H. Hudgins
Mr. John H. Pender
Mr. E. E. Ferguson
Mr. William J. Minsch, Jr.
Mr. Walter G. Belter
Mr. Frederick T. Hobbs
Mr. and Mrs. Samuel W. Jensch
Mr. Robert J. Catlin
Mr. Richard Hamburger
Mr. John C. Cera
Mr. Lester Rogers
Mr. Don McBride
Mr. Angelo Giambusso
Mr. Marion A. Bowden
Mr. William A. Burke
Mr. Robert H. Engellsen
Mr. John Sullivan
Mrs. Mary Anne Frey
Mr. Robert W. Ritzmann
Mr. Abraham S. Friedman
Mr. Ralph H. DeLorenzo
Mrs. Libby Halperin
Mr. Fred Glatstein
Mr. H. Michael Hawkins
Mr. William R. Bibb
Mr. Martin J. Domagala
Mr. and Mrs. Herbert Kinney
Mr. Robert E. McKinney
Miss Barbara Moyers
Miss Roberta Ingram
Miss Marie Slater
Dr. W. W. Burr, Jr.

Miss Christine Williams
Miss Margo Bridgers
Mrs. Barbara J. Barnett
Miss Rosina LaBadie
Mr. Gordon Fowler, Jr.
Mr. Robert Newburn

REPRESENTATIVES FROM PRIVATE INDUSTRY

Mr. Tom Clark, Westinghouse
Mr. Charles H. Weaver, Westinghouse
Mr. Bradley F. Bennett, URA, Washington
Mr. Robert J. Creagan, Westinghouse
Mr. John T. Conway, Consolidated Edison Co. of N. Y.
Mr. Robert E. Harris, North American Rockwell Corp.
Mr. William J. Driver, President, Manufacturing Chemists Assoc., Inc.
Gen. R. H. Harrison, Vice President, Babcock & Wilcox
Mr. Morton I. Goldman, NUS
Mr. Jack C. Scarborough, NUS
Mr. Edward E. Pilat, NUS
Mr. R. T. Pennington, Manager, Government Atomic Power Applications, GE

OTHER GUESTS

Miss Peggy Kelley Reinburg, Union Methodist Church
Mr. Pirtavio L. Dioz, 1545 18th St., N. W.
Mr. Philip N. Powers, Argonne Univ. Assoc.
Mr. Carl R. Summers, Aberdeen, S. Dakota
Gen. C. L. Sayre, Leonardtown, Md. (representing Mr. J. Fruchtbaum)
Mr. Marion L. Prince, Union Methodist Church
Mr. Roy B. Snapp, Formerly with AEC
Mr. A. David Rossin, ANL
Mr. Lee C. White, 1156 15th St., N. W.
Dr. Stephen H. Hanauer, Univ. of Tenn.
Mr. William H. Hannum, Rockville, Md.
Mrs. Cynthia Hardin Milligan, Bethesda, Md.
Mr. Robert L. Milligan, Bethesda, Md.
Mr. David M. Bullock
Mr. and Mrs. Philippe G. Jacques
Mr. and Mrs. Frankfurt
Mr. and Mrs. Robert Sanders
L. Grossman
Mr. R. M. Ketchel

Mr. Bernard Mannirt, BNL
Mr. Octave J. DuTemple, ANS
Mr. Marvin Katz, Silver Spring, Md.
Mr. George Mueller, Classmate, UN
Miss Mary A. Ogle, Union Methodist Church
Mr. Curtis Nelson, formerly with AEC
Miss Sharon D. Gratto, Falls Church, Va.
Miss Lynette Murdy, Washington, D. C.
Miss Verna Huitman, Union Methodist Church
Rev. Andrew K. Meeder, Union Methodist Church
G. C. Ingram, Union Methodist Church
Mr. Lincoln Clark, Jr., for the MIT Reactor
Mr. Silverstraied, Faculty, Jackson Hi '34-'36

I sent a letter to Chet Holifield (copy attached) to notify him that those affected have been made aware that the "50-50" and 75% rules and the information exchange requirements applicable to the distribution of U.S. plutonium to the European community and Japan would be terminated at the end of the year. Also attached are copies of letters I sent to Wilhelm Haferkamp of the Commission of European Communities, Brussels, and to Taylor R. Briggs (Plutonium Export Association) on this matter.

Attached is a copy of a letter sent by John Harris to the White House covering current AEC activities in the public relations area.

I flew to New York to attend a reception and dinner in honor of Edvard Hambro (President of the General Assembly of the United Nations). I left on the Eastern shuttle at 4 p.m. and arrived at LaGuardia Airport about 5 p.m. I was met by Bob Saputo of the New York Operations Office, who drove me to the Hilton Hotel. Pete came by and we changed into tuxedos.

We walked to the University Club (One West 54th Street) where we met Jane. We greeted Pauline Frederick Robbins (our hostess), Mr. and Mrs. Sherman Knapp, Edvard Hambro, and others. We first attended a reception in the ground floor reading room and then went up to the dining room on the seventh floor. I sat at the head table with Pauline, Mr. Hambro, Mr. and Mrs. Woodman (he is President of the University Club of New York), Mr. and Mrs. Debevoise (he is past president of the University Club), Mr. and Mrs. Lowe, and Mrs. Dwyer (Mr. Dwyer is president-elect of the National Association of Manufacturers). Pete and Jane sat at a table with the Knapps.

After dinner William McGaughey (Vice President for Public Relations of the National Association of Manufacturers) presided. He introduced a number of the guests, including Pete, Jane and me, and then called on Pauline, who introduced Hambro. Hambro spoke on "The Future of the United Nations." He said that the future depends on the attitude of the U.S. and also countries like the USSR and France. He decried the $200 billion spent annually on armaments. His talk was followed by a question and answer session presided over by McGaughey.

Pete, Jane and I then went back to my room in the Hilton (No. 620), where Pete changed into other clothes. We talked about plans for their wedding next spring. They are thinking about a small, non-sectarian wedding, possibly in the United Nations Chapel, in the late April to June time period. I then said goodnight to Pete and Jane.

Thursday, December 3, 1970- New York- D.C.

I had breakfast in The Taverne (coffee shop) in the Hilton. I then called my Washington office and talked to Julie Rubin about material for my talk to the Energy Subcommittee of the Domestic Council on Saturday morning and about the AEC Citation ceremony for Generals Betts and Starbird this afternoon.

I then rode with Saputo to the General Dynamics building (14 West 49th St.) for my meeting with Ethan Allen Hitchcock (Chairman of the Educational Broadcasting Corporation ) in his business office on the 21st floor. He asked me if I had any suggestions regarding future operations of EBC and I said that I hope the national programming aspects will continue to be strongly supported. He told me about the negotiations to acquire the site and buildings of the Signal Corps' Army Pictorial Center at Astoria on the near end of Long Island, a total of more than 300,000 square feet of excellent space. It will cost $9 million to put it into shape. He and Burke Marshall will visit it this afternoon. He also told

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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DEC 2 1970

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

In my letter of May 18, 1970, I promised to advise you when those affected had been made aware that the "50-50" and 75% rules and the information exchange requirements applicable to the distribution of U.S. plutonium to the European Community and Japan would be terminated at the end of this year.

I should like to inform you that we have notified interested governmental and private organizations, both here and abroad, of our intention to eliminate these conditions, effective January 1, 1971. This revision in our policy should enable U.S. private producers to compete more effectively for sales of plutonium abroad and, for this reason, we believe will be welcomed by them. Of course, such sales will continue to be subject to the safeguards requirements and other applicable provisions of our agreements for cooperation.

Should you have further questions, we would be pleased to answer them for you.

Cordially,

Glenn T. Seaborg

Chairman

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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DEC 2 1970

Mr. Wilhelm Haferkamp
Vice President
Commission of the European
Communities
23-27, avenue de la Joyeuse Entree
Brussels 4, Belgium

Dear Mr. Haferkamp:

In our discussions during your visit of May 27, 1969, you raised certain points regarding plutonium utilization in the Community. In our letter to you of August 20, 1969, we advised you that we would, upon completion of studies underway, advise you of the decisions.

Although it has taken somewhat longer than anticipated, we have now completed our review of this matter and, following consultations with our Joint Committee on Atomic Energy, have concluded that private U.S. plutonium producers should be permitted to sell plutonium abroad under essentially commercial conditions beginning in 1971. Thus, the so-called "50-50" and the related 75% restrictions on source of supply, as well as the requirement for information exchange arrangements, will no longer be imposed on such sales. Of course, all transfers of plutonium to the Community will continue to be subject to the quantity limitations and safeguards requirements of our agreements for cooperation. Mr. Kratzer is writing to Mr. Cancellario d'Alena in greater detail on this matter.

I trust that these modifications in our supply policy will assist and encourage the purchase by the Community of plutonium from the United States.

With best personal regards.

Sincerely,

James R. Schlesinger

Chairman

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 2 1970

Mr. Taylor R. Briggs
Secretary-Counsel
Plutonium Export Association
Room 4800
One Chase Manhattan Plaza
New York, N.Y. 10005

Dear Mr. Briggs:

Last year we exchanged letters on the Commission's policy for the distribution of plutonium abroad. At that time I advised you that this policy was under review and that we would communicate our decision to you upon completion of our review. Although it has taken somewhat longer than originally anticipated, the review has now been completed and I trust that our decision, which I am taking this opportunity to communicate to you, will be helpful to the objectives of the Plutonium Export Association.

First, however, I should like to remind you that in addition to the "50-50" and 75% rules, the legislative history of the 1967 amendment to the Euratom Cooperation Act and the 1968 amendment of our Agreement for Cooperation with Japan to permit transfers of additional amounts of plutonium also indicated that all of the work done with the plutonium, regardless of whether supplied by the AEC or a licensee, would be covered by information exchange arrangements under which the AEC would get information derived from the use of the material. Although fully justifiable under the conditions at that time, we believe that continued imposition of this requirement also could be a barrier to plutonium sales abroad by U.S. private producers. Thus, we have considered this condition in our review, as well as the "50-50" and 75% rules.

When this legislative history was being developed, it was envisaged that essentially all of the plutonium authorized for transfer would be distributed by the end of 1970. However, it has developed that only about one-quarter of the total amount so authorized actually will have been supplied from U.S. sources by the end of this year. Therefore, following consultation with the Joint Committee on Atomic Energy, we have decided that under present circumstances--considering particularly termination at the end of this calendar year of the AEC's guaranteed

purchase price for plutonium produced by its reactor licensees--the "50-50", 75%, and information exchange requirements no longer will be imposed after December 31, 1970. Thus, beginning in 1971, U.S. plutonium producers will be able to sell plutonium under essentially commercial conditions, within the quantity limitations of and subject, of course, to the safeguards requirements of our agreements for cooperation with Euratom and Japan.

To avoid possible misunderstanding, I should like to emphasize that under the Atomic Energy Act all exports of plutonium, including those made by private organizations, must be pursuant to an appropriate intergovernmental agreement for cooperation. Private exports are, of course, also subject to AEC licensing procedures. At the present time, only Euratom and Japan have agreements which permit the transfer of significant quantities of plutonium and, even in these cases, the maximum net amounts which may be distributed from the U.S. are 1,500 and 365 kilograms of total plutonium, respectively. As of now, approximately 700 and 110 kilograms already have been distributed to Euratom and Japan.

Should you have any questions on this matter, we would be pleased to answer them for you.

Sincerely,,

Chairman

UNCL. BY DOE
NOV 86

December 2, 1970

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Our current activities include:

Monday, December 7 -- Chairman Seaborg will give the principal address at a dinner in Augusta, Georgia, marking the 20th anniversary of the selection of the site for the AEC's Savannah River Plant, a plutonium production facility on the South Carolina side of the river a short distance from Augusta. The observance is being sponsored by the South Carolina-Georgia Nuclear Council.

Also on December 7 Dr. Victor Bond of the AEC's Brookhaven National Laboratory will speak at the Environmental and Ecological Forum at John F. Kennedy High School in Bethesda at 8 p.m. His topic is "The Public and Radiation From Nuclear Power Plants."

On December 7 we plan to hold a press briefing in Port Clinton, Ohio, to discuss AEC regulatory procedures related to the issuance of construction permits and operating licenses for nuclear power plants. The briefing is designed to provide newsmen with background information which may be useful in covering a hearing, to be convened on December 8 in Port Clinton by an Atomic Safety and Licensing Board. The board will consider the application of Toledo Edison Company and Cleveland Electric Illuminating Company for a permit to construct their proposed Davis-Besse Nuclear Power Station near Port Clinton.

Yesterday we received a request from J. W. Roberts, Chairman of the Freedom of Information Committee of the Radio-Television News Directors Association, to reconsider our policy of refusing to allow television coverage during public hearings on nuclear power plants. Specifically he is protesting the policy in connection with a December 8 hearing in Port Clinton, Ohio. As you know, the Commission has a long-standing policy of prohibiting both still and motion picture photography during

the hearings which are quasi-judicial in nature. This policy was reviewed and reaffirmed recently by the Commission. We do work with cameramen to set up shots of those involved in the hearings before and after the hearings. We are again reviewing the matter in light of Mr. Roberts' request.

Thursday, December 10 -- Commissioner Ramey will give the luncheon address before the Executive Committee of the Western Energy Supply and Transmission (WEST) Associates in San Diego. WEST is a planning organization composed of public and private utilities in the Southwest.

CBS-TV in New York appears to be getting ready to do something on nuclear materials safeguards. They have been trying to get in touch with Dr. Herbert Scoville, a member of the AEC's Advisory Committee on Nuclear Materials Safeguards.

Dr. John Gofman, our perpetual critic from Lawrence Radiation Laboratory, will be in Maryland December 7 to testify before a state Public Service Commission hearing on the Calvert Cliffs nuclear power station. Gofman's appearances normally result in critical stories.

John Lannan of the Star will interview Chairman Seaborg December 9 to further explore Dr. Seaborg's candidacy for President of the American Association for the Advancement of Science.

We have had some inquiries concerning safety at the Rocky Flats plant as a result of the very distorted piece which appeared in the December 15 issue of Look magazine. Most of these queries are from the Denver area. We are preparing a letter to Look protesting the unbalanced story.

Chairman Seaborg will be interviewed on December 28 by Joseph Trento, a free-lance magazine writer, for a new interview format which True magazine is inaugurating early next year.

We will announce tomorrow that the Commission is taking further steps to assure that releases of radioactive material from nuclear power plants and exposures to radiation continue to be as low as practicable. This action will involve amending our reactor licensing regulation to specify design and operating requirements which will minimize the release of radioactive materials to the environment. Another regulation on radiation

protection also will be amended to state that licensees should make every reasonable effort to keep releases of radioactivity from nuclear power plants as low as practicable.

King Broadcasting Corporation, working through a motion picture production company, is developing a film on the environment in the Pacific Northwest and has requested permission to shoot footage of our operations at the Hanford plant near Richland, Washington. King has stations in Spokane, Seattle and Portland. We are cooperating with the film company and one of our people at Richland will be interviewed on film.

Life magazine was in touch with us again this week concerning the article it has been researching on the energy crisis.

Sincerely,

John A. Harris, Director
Division of Public Information

bcc: J. Rubin, OCM

PI PI

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me about his plan for a TV series on "Forum on Priorities," involving people like Nelson Rockefeller, John Lindsay, John Gardner and Elliot Richardson. I endorsed this idea. When he asked me for ideas as to subjects, I mentioned energy and the breeder reactor. (I said I would send him a reprint of my Scientific American article on fast breeder reactors.) Upon departing I agreed to get in touch with him before any future trips to New York to see if we could get together for lunch, which might possibly involve a larger group.

I then rode with Saputo to the McGraw Hill building (330 West 42nd Street). I went to the 31st floor office of Lewis H. Young (Editor-in-Chief of Business Week, a physicist) where I met with Jane H. Cutaia (Associate Editor) and Young. We discussed the recent Business Week article on the FFTF, and I explained the mistakes in the description of my relationship with Fred Albaugh, the non-existence of the "white paper" referred to and that Shaw didn't threaten to resign. They are going to check this out with Charlie Owens. (I also described the controversy over my candidacy for the presidency of the AAAS.)

Next I rode with Saputo to the U. N. Building, where I was met by Carl Thomas, Ed Stokely and Ed Brunenkant. We went up to the second floor where we met Sigvard Eklund. Then, in connection with the announcement by the United Nations on my appointment as President of the Fourth International Conference on the Peaceful Uses of Atomic Energy, there was a meeting with the press. Between 125 and 150 newsmen and observers attended the meeting. After a few opening remarks and announcements by Mr. William Powell (Deputy Director of Information for the United Nations), Mr. Philippe de Seynes (Under Secretary General for Economic and Social Affairs) spoke briefly on the importance of the upcoming conference and reviewed generally the reasons for it and spoke of the United Nations action on approving my appointment as President.

Dr. Eklund then spoke, expressing his delight at my choice as President and describing the nature of the conference briefly. I then spoke, saying I am honored by the appointment as President, mentioning Homi Bhabha (India), Francis Perrin (France) and Vasily Emelyanov (USSR) as the presidents of the 1955, 1958, and 1964 conferences, which I attended. I described the growth of nuclear power as projected in the United States and the world, the importance of an international conference covering this, safeguards and the IAEA and NPT, the peaceful uses of nuclear explosives, the uses of radioisotopes in industry, medicine and agriculture, the business aspects of nuclear power, and many other aspects.

This was followed by a question and answer period in which a number of topics were covered. The question was asked if the conference will deal with the ratio of nuclear energy devoted to weapons as opposed to the peaceful uses of atomic energy. Eklund responded to this by pointing out that the conference is confined just to the peaceful applications and will not deal with military subjects. The questioner persisted and asked if there is not an effect on the peaceful uses of diversion of nuclear materials for weapons use. Dr. Eklund responded in the negative.

A question directed to me concerned my projection of a nuclear power industry of an excess of 100 million kilowatts and what effect this would have on the amount of radiation which would be generated and released and whether this could be controlled and would it be safe. I said that it could be controlled and handled safely. I indicated that a sound and close regulatory program could assure public health and safety. I noted that the Atomic Energy Commission no longer sets the regulations and applauded this move. As the questioner followed up his first question regarding costs, I agreed that the solution to these problems will cost money, but they can be solved. In response to another question along the same line regarding the radiation situation in the future world growth of

nuclear power, I pointed out that we take these problems very seriously, but, in my opinion, it does not represent a menace to public health and safety. I said that the problem must be compared with the greater problems resulting from other methods of electric power generation, such as from coal, oil, and natural gas. I said I believe that nuclear power is the way we should turn for the most effect on protecting public health and safety. Questions also were asked on Plowshare and the controlled fusion process.

Some of the reporters or newspapers represented were: Bob Estabrook (Washington Post), Henry Temer (New York Times), New York Post, Christian Science Monitor, Associated Press, United Press International, Reuters, London Daily Telegraph, and a special group of newspaper writers and editors, including representatives from the Minneapolis Star, Minneapolis Tribune, Dayton Journal Herald, St. Petersburg Times, Providence Journal, Detroit News, Newsday and an Associate Editor of Editor and Publisher magazine. In addition, a United Nations television crew covered the press conference on a pool basis for all networks. The reporter who asked lengthy and leading questions was Alan Gabriel who is a free-lancer not representing any particular newspaper. Some of his associates noted that he asked this type question at all UN press conferences and press briefings.

On my way out Robert Estabrook spoke to me and said he was pleased with my performance. Sherman Knapp also spoke to me to express consternation at the article in the current issue of Newsweek, attacking nuclear power, and to enlist my personal aid in the AEC staff effort to rebut this article. He has been in touch with AEC staff and will discuss it with EEI during his trip west starting tomorrow.

I made a run for the 1 p.m. Eastern shuttle and made it. It left LaGuardia about 1:10 p.m. and arrived at Washington National Airport about 2 p.m. I then went to the H Street office.

I called Kenneth Thimann at the suggestion of Leonard Rieser regarding the AAAS controversy. The gist of his suggestion was that since this is doing to be a very difficult year for the AAAS, I might withdraw and then possibly be a candidate a year or two from now.

I had a call from Richard Lyons of the New York Times, who asked me a number of questions regarding the situation dealing with my candidacy for the AAAS presidency. He asked if I would be willing to step down if I thought it would be for the good of the organization, and I said I would. He asked whether anybody has asked me to step down and I said not in so many words, but some are concerned about a controversy within an organization like the AAAS. He asked, regarding disengagement in the event of a basic conflict of interest, if I thought this would in fact apply and I said I thought it could be applied, but that I personally would not be involved in any conflict of interest. He said the feelings are that there are bound to be incidents in which AAAS would be involved to some degree with taking a look at actions and policies of the AEC, to which I could not be a disinterested observer; I said I believe I could absent myself.

Lyons asked what I thought the next step would be if I am elected- would there be another Board or Council meeting at which the issue would arise? I said I haven't heard of any planned meeting. He asked if the Committee on Nominations had asked me to stand for president twice in the past and I said yes, in 1963 and 1968; both times I declined. Then I was asked again this year and just felt embarrassed to decline a third time. I said there was no question of conflict of interest on those two previous occasions, of course. He asked if I thought

this might have something to do with the Waterman affair and the Mohole project. He was head of both NSF and AAAS and there are stories that he did try to have stories about Mohole eliminated from the magazine. I said I doubt that he would have done that. This apparently was about the only situation in his whole three-year regime where a question arose, and I think an abstention in a case like that could be handled. Also, this one instance would have to be weighed against his leadership value for those three years.

I called Phil Abelson and told him the AAAS matter is escalating out of all proportion. I asked him what he thought I should do. His suggestion was that I stick it out. I said that for the good of the organization I wondered whether I shouldn't bow out. He said it might be a little rough to serve, but to bow out would, in fact, be to concede to the dissidents, such as Barry Commoner. He said Lyons of the New York Times also called him, and he told Lyons that the electorate has an alternative, and if the dissidents wish to organize an electioneering campaign on behalf of the other candidate, they are perfectly free to do so. I said I would continue to turn it over in my mind and would let him know what I decide to do.

I then went to the Pentagon to participate in the presentation of the AEC Citation to Lieutenant General Alfred D. Starbird and Lieutenant General Austin W. Betts.

AEC Citation Ceremony, December 3, 1970
L to R: Generals Westmoreland, Betts and Starbird

Army Secretary Stanley Resor gave some welcoming remarks and introduced me. I presented the AEC Citation to Starbird and he gave a response. I then presented the Citation to Betts, who also responded. I then made a few more remarks, after which we went to the Secretary's Dining Room for refreshments.

AEC Citation Ceremony, December 3, 1970
L to R: David Packard, General Betts and General Starbird

While I was in New York this morning a JCAE hearing was held on the supplemental appropriations. Bill Johnson and Bob Hollingsworth, who attended, both reported an opening dialogue by Holifield in which he was very emotionally critical of the Commissioners' extensive travel and "not staying at home to mind the store." Holifield made specific reference to me by name and a speech in which I admitted travelling 800,000 miles during my tenure as Chairman.

Attached is a copy of the news release that was issued today, announcing my appointment as President of the Fourth International Conference on the Peaceful Uses of Atomic Energy.



I received a memorandum (copy without enclosure attached) from Acting Secretary of State John Irwin, enclosing summary interim procedures for the handling of

AEC

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C. 20545

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FOR IMMEDIATE RELEASE

(NOTE TO EDITORS & CORRESPONDENTS: The following news release was issued by the United Nations in New York on December 3, 1970.)

# GLENN T. SEABORG APPOINTED AS PRESIDENT OF ATOMIC ENERGY CONFERENCE

The Secretary General, U Thant, today announced the appointment of Glenn T. Seaborg as President of the Fourth International Conference on the Peaceful Uses of Atomic Energy, to be held in Geneva from September 6-16, 1971.

Dr. Seaborg has been Chairman of the United States Atomic Energy Commission since 1961. He received the Nobel Prize for chemistry (with E. M. McMillan) in 1951 for his work on the chemistry of the transuranium elements. Between 1940 and 1958, Dr. Seaborg and his colleagues discovered nine transuranium elements, as well as identifying the fissile isotopes plutonium 239 and uranium 233, plus more than one hundred other isotopes throughout the periodic table. One of his major scientific contributions was the formulation, in 1944, of the concept of the "actinide" series of elements. This theory explained in a systematic way the chemical properties of the early transuranium elements, predicted the properties of these elements through 103, and extended the predicted properties of the elements of the periodic table through element 118. More recently, he has predicted the extension of the periodic table through element 168. He also co-discovered the new phenomenon of high energy bombardment, called "spallation."

Dr. Seaborg is currently on leave as Professor of Chemistry at the University of California, Berkeley, and was Chancellor of the University from 1958 to 1961. During World War II, he headed the group at the Metallurgical



(more)

Laboratory of the University of Chicago that devised chemical extraction processes used in the production of plutonium for the first atomic bomb. From 1946 to 1950, Dr. Seaborg served as a member of the United States Atomic Energy Commission's first General Advisory Committee, and from 1959 to 1961, he was a member of the President's Science Advisory Committee. A member of many national and international scientific societies, he is author of more than a dozen books and over 200 scientific papers, and has received a number of awards for his work in nuclear chemistry and in scientific and educational affairs.

Dr. Seaborg was born on April 19, 1912, in Ishpeming, Michigan. He received his Ph. D. degree in chemistry from the University of California, Berkeley, in 1937. He is married and has six children. Football and baseball are his favorite spectator sports, and his recreational interests include hiking and golf.

#

December 3, 1970

## BACKGROUND ON CONFERENCE

The Fourth International Conference on the Peaceful Uses of Atomic Energy will continue the series of earlier international meetings on this subject held in 1955, 1958, and 1964, at which emphasis was placed on the scientific and technical aspects of atomic energy.

For the 1971 Conference, the General Assembly has called for broader expert participation. In Resolution 2309 (XXII) of December 13, 1967, it stated that "Because of the growth in the practical applications of atomic energy and the importance of ensuring that such applications are made widely known, a conference whose agenda would concern public officials, economists, and planners, as well as technologists, would be desirable." The provisional agenda, prepared in consultation with the United Nations Scientific Advisory Committee and with the cooperation of the International Atomic Energy Agency (IAEA), includes six main topics: nuclear power and special applications; nuclear fuels, cycles and materials; health, safety and legal aspects of nuclear energy; applications of isotopes and radiation; international and administrative aspects of nuclear energy; and aspects of nuclear technology of particular interest for developing countries.

#

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DEPARTMENT OF STATE
WASHINGTON

December 2, 1970

MEMORANDUM FOR ALL U.S. GOVERNMENT DEPARTMENTS AND AGENCIES

SUBJECT: Summary Interim Procedures for the Handling of Requests for Political Asylum by Foreign Nationals

Enclosed is a copy of interim guidance on the handling of refugees and defectors to take effect immediately. It is being made available to you in order that all U.S. Government jurisdictions controlling and/or operating U.S. Government vessels on the high seas and/or shore installations, as well as all jurisdictions whose official responsibilities involve them in any fashion with foreign nationals who may request political asylum, will have current and valid guidance on such cases. I would appreciate your insuring that this guidance is brought to the attention of all U.S. Government officials responsible for the control and operation of such vessels and installations and all other business involving foreign nationals.

John N. Irwin II
Acting Secretary

Enclosure:

Interim guidance

requests for political asylum by foreign nationals.

The Senate today passed the Omnibus Bill, with the sections on radiation standards deleted. The Senate also voted, 52-41, to halt federal funding of the SST.

Helen and I attended a reception and black tie dinner given by the ACS in honor of Dr. W. Albert Noyes, Jr., the 1970 recipient of the ACS Charles Lathrop Parsons Award, in the Dolly Madison and Monticello Rooms of the Madison Hotel. We met a number of friends, such as the Lewis Branscombs, the Melvin Calvins, the Herman Pollacks, Norm Hackerman and Bryce Crawford. At dinner Helen and I sat at a table that included Mr. and Mrs. Michael Lock (Scientific Attaché on Civilian Affairs, British Embassy) and Mrs. Philip Handler. At the head table were Mr. and Mrs. Milton Harris, Mr. and Mrs. Melvin Calvin, Mr. and Mrs. Edward David, Mr. and Mrs. Albert Noyes, Jr., Mr. and Mrs. Fred Wall, and Mr. and Mrs. Byron Riegel. Milt Harris served as master of ceremonies. After dinner and before the program he introduced Don Hornig and me as former winners of the Parsons Award, also Ralph Connor (former Chairman of the Board of the ACS) and former presidents of the ACS John C. Warner, William Sparks, Bob Cairns, Charles Overberger, and Wallace Brode. He then introduced Albert Noyes, who gave the Parsons Award Address, which dealt mainly with the role of international scientific organizations in today's world and included a plea for continued international scientific cooperation. During the dinner Ed David came by our table and I mentioned to him the matter of the Dunlop-Seaborg study of the FCST and its continuation if Dunlop leaves. David suggested that I carry the ball on this.

Friday, December 4, 1970- D.C.

Phil Abelson called to suggest a course of action in connection with the AAAS controversy. The election isn't over until December 10th; among other things, it would be unseemly for me to withdraw now because the other candidate might win. He suggested that I might take the position: if I lose, the issue is decided; if the vote is extremely close, that's one thing; if the vote is decisive (say, 3 to 2), then this is the will of the electorate. He suggested that I might request that the count be made public. Then if people give me trouble, it's clearly those who are unwilling to abide by the democratic process.

About 20 minutes later (9 a.m.) I called to read him a few lines I wrote, using his suggested approach. I asked whether at some point later on he could write an editorial in Science. I mentioned that I had talked to thousands of students, have spoken to them at the last six or eight International Science Fair meetings, have participated in the annual Science Talent Search programs for the past ten years or so, and have been national chairman of CHEM Study for high school students. He said it might be desirable to have an editorial, and he would talk to me to get all the information. He also mentioned the many speeches I've given, including being a sort of pioneer in talking about the Scientific Revolution, Science in Society, etc. He suggested that I might want to put together a collection of my more important talks.

Philip Boffey called to interview me in connection with the article he is preparing for the December 11th issue of Science, by which time the AAAS election will be over. We spoke for about 20 minutes. He said he would call me when he had something. (Note: Boffey called me at 8 p.m. at home and we discussed further the article he is preparing.)



At 10 a.m. I presided over Information Meeting 1083, which was followed at 12:05 p.m. by Regulatory Information Meeting 436 (notes attached). We discussed the

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 3, 1970

# INFORMATION MEETING 1083

10:00 a.m., Friday, December 4, 1970, Chairman's Conference Room, D. C.

1. Chairman's Attendance at the Energy Study Subcommittee Meeting tomorrow

   The Chairman requested staff views on Mr. McCracken's December 1 memorandum re Proposed Energy R&D Tax. (OC-RDT-GC)

2. December 3 Letter from the Department of Justice re Access to Restricted Data

   Staff will discuss with Assistant Attorney General Mardian. (GC-AGMA-S)

3. November 24 Letter from John Santangelo re Suit Against the Commission

   Staff review and a report on Tuesday, December 8 are requested. (GC)

4. Proposed Letter to Dr. J. Van der Spek re Inga Project (See Commissioner Johnson's December 2 Note)

   Noted. (O'Donnell)

5. November 25 Letter from Jerome Kohl, N. C. State University, re Gofman

   Dr. Bond is to be informed and a response to the letter is requested. (OEA-AGM)

6. Secretary General U Thant's Announcement of the Chairman's Appointment as President of Geneva IV

7. Chairman's December 3 Press Conference in New York City

8. Chairman's November 19 Speech to the Associated Press Managing Editors Association Meeting in Honolulu

9. Response to OMB November 18 Letter re Reorganization Proposals

The December 3 transmittal is noted. Commissioner Johnson requested later discussion. (SECY)

10. Chairman's Letter to Mr. Edward Bauser re the Death of his Father

11. Agenda for the Weeks of December 7, 14, 21, and 28, 1970

Approved. (SECY)

12. NTS Events for the Week of December 7, 1970

Noted. (AGMMA)

13. SECY-711 - FY 1972 Draft Authorization Bill

Approved. (OC)

14. SECY-694 - PRDC Proposal for Fermi Reactor

Approved. A similar letter will be sent to Dr. Bethe. (RDT-Rubin)

15. SECY-704 - Revision of FY 1971 University of California Fixed Allowance for Overhead and Management

Further negotiation is requested. (DC)
(Chairman Seaborg did not participate in the discussion of this item.)

16. SECY-703 - Prosecution of Wahluke Slope Trespassers

Staff will proceed. Congressman Mike McCormack is to be informed. (AGMO)

17. SECY-699 - Revised Comments on S. 4092 - Commission on Fuels and Energy

Approved with revisions. (EAGM)

18. SECY-712 - West German National: Proposed Assignment to LASL

Approved. (AGMIA)

19. SECY-720 - Romanian National: Proposed Assignment at ANL

Approved. (AGMIA)

20. SECY-695 - Industry Participation in Uranium Enrichment

The Chairman will call Chairman Chet Holifield. (Rubin-AGMP)

21. SECY-696 - Industry Participation in Uranium Enrichment: Establishment of Contract Proposal Evaluation Board

Approved. (AGMP)

22. December 3 Chart re Capability of AEC Diffusion Plants to Meet Steady State Operation of Nuclear Power Plants

Discussed.

23. SECY-693 - Separative Work Pricing Policy Considerations and Chart re Comparative Unit Charges - $/kg SW FY 1971-80 Campaigns

The table with attachments is to be transmitted to the White House and discussed there today. (AGMP)

24. SECY-719 - Foreign Requirements for Enriched Uranium: NSC Under Secretaries Committee Review

Noted. (AGMIA)

25. SECY-713 - Import Duty on Uranium Concentrate

Noted. (AGMIA)

26. SECY-706 - FY 1972 Diffusion Plant Power Costs

Noted. (P-OC)

27. SECY-710 - Employment Summary

Noted. (GC)

28. Pending Contractual Matters Report No. 383

Noted. (PAR)

29. SECY-705 - Protection of AEC and Licensee Installations

Noted. (S)

30. SECY-721 - Geneva Conference

Noted. (PI-SECY)

31. SECY-709 - White House Request for Statement of Achievements and Briefing

Noted. (PI-SECY)

32. SECY-718 - Licensing Hearings: Protests Against Policy of Excluding Photographers

The staff recommendation is approved. (PI)

33. SECY-R 98 - Commission's Revised Environmental Policy Statement; and, Public Announcement Today

Approved. (GC-PI)

12:05 p.m.

**********

3:10 p.m.

34. SECY-693 - Separative Work Pricing Policy Considerations and Chart re Comparative Unit Charges - $/kg SW FY 1971-80 Campaigns

Staff reported the White House has agreed the information may be transmitted early next week. A letter to Mr. Rice, OMB, is in preparation. (AGMP)

W. B. McCool
Secretary of the Commission

3:20 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Brown
Mr. Abbadessa
Mr. Rubin
Mr. Kull
Mr. McCool
Mr. Vinciguerra*
Mr. Riley*
Mr. Kingsley*
Mr. Erlewine*
Mr. Smith*
Mr. Kavanagh*
Mr. Shaw*
Mr. Friedman*
Mr. Dowling*
Mr. Ebetino*
Mr. Quinn*
Mr. Flaherty*
Mr. LeGassie*
Mr. Minsch*
Mr. Harris*
Mr. Stokely*
Mr. Price*
Mr. Beck*
Mr. Henderson*
Mr. Hanauer*
Mr. Rogers*
Mr. Buck*
Mr. Wells*

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*Attendance by Topic (s)

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 3, 1970

# REGULATORY INFORMATION MEETING 436

12:05 p.m., Friday, December 4, 1970, Chairman's Conference Room, D. C.

1. Topics for Commissioners' December 10 Meeting with the ACRS

   Approved. (SECY)

2. Staff Analysis of the Sternglass Articles

   Requested. (BM)

3. Dr. Beck's December 3 Memorandum re Control of Gaseous Effluents at Dresden 2 and 3

   A letter to Commonwealth Edison is requested. (ADRA)

4. Participation of Mr. Lester Rogers in the Illinois Hearing on Dresden 2 and 3

   Noted.

5. Mr. Price's December 3 Memorandum re Public Meeting on Fuel Reprocessing Plant Siting Policy

   Approved. (ADRA)

6. Mr. Price's December 3 Memorandum re Proposed Revision of the Reactor Licensing Process to Include an Early Site Hearing

   To be rescheduled. (ADRA-SECY)

W. B. McCool
Secretary of the Commission

563
12:30 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Price
Mr. Beck
Mr. Henderson
Mr. Hennessey
Mr. Hanauer
Mr. Rogers
Mr. Buck
Mr. Wells
Mr. McCool

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General Counsel
Secretary

status of the Commission's proposals for industrial participation in uranium enrichment and the sharing of gaseous diffusion technology with European and other friendly countries. These proposals are all snarled up, awaiting comment from the JCAE and, particularly, from Chet Holifield. We also discussed the passage by the Senate of the Omnibus Bill with the radiation standard setting portion eliminated. In preparation for presidential action on this bill the White House has requested from the AEC the increased price for enrichment which would result from the increased cost of electricity to the diffusion plants; we will prepare this.

At 11 a.m. I received a call from Vance Cooper of General Electric in Schenectady. He said he talked to Chris Henderson in August about making a change in his employment. He is still interested. What bothered him earlier was the fact of leaving G.E. so late in his career unless G.E. could give him a special deal on the pension, which they have done in the past. Cooper said that Chris said he would consider having me or Ramey talk to Art Bueche. He asked that nothing be done at present, until he contacts us again, because he has a continuing positive indication on an infection; if it should be necessary to have an operation, he would prefer to have that done while he is still at G.E. I said the matter of his appointment is not active; however, we will be warned and will do nothing until we hear further from him.

The Commission today filed its Environmental Policy Statement, having obtained clearance from the Department of Justice and, with praise, from the Environmental Quality Council.

Jim Ramey and I had lunch with Dr. John J. McKetta (Chairman of the Department of Interior Energy Study Committee) and Dr. Donald Dunlop at La Nicoise Restaurant (1721 Wisconsin Avenue) for the purpose of being brought up to date by McKetta on the status of his committee's energy study. Dunlop told me that he has asked McKetta's committee to come up with suggestions for the Federal Council on Science and Technology study that Dunlop and I are engaged in, and he will arrange to have these suggestions sent to me. After the lunch I spoke to Dunlop about his recently being fired from his Department of Interior position; he said this has not yet been settled- they are still "hassling" over it.

At 2 p.m. Commissioners Ramey, Johnson, Larson and I met with Henry Kearns (President and Chairman), Tom Lilley (Director), Don Bostwick (Executive Vice President) and Charles E. Houston (Vice President for Project Development) of the Export-Import Bank. Bob Hollingsworth, Abe Friedman, Julie Rubin and other AEC staff were also present. Kearns explained that the impending entry of the World Bank into the field of international financing for nuclear power plants is interfering with the activities of the Export-Import Bank in this field. The World Bank calls for competitive bids which lead to extended delays, and because the same prospective customer feels that he might get a better deal from the World Bank, he, in turn, delays his negotiations with the Export-Import Bank. Kearns said this is going to be discussed with NAC (National Advisory Council on International Monetary and Financial Policies) with U.S. delegates to the World Bank present, and an attempt at resolution will be made.

I then attended a briefing by Colonel Robert Duff of DMA on the plans for the deployment of ADM's in Europe in Room 1115. This presents a difficult problem because of the possibility of DOD changing the rules so that unlocked ADM's could be deployed, which leads to a dangerous situation with respect to the possibility of unauthorized use.

I had a call from Graeme C. Bannerman (Vice President, University of California) who said he called me because he has been unable to reach Hollingsworth about a

matter he believes the Commission considered this morning (revision of FY 1971 University of California fixed allowance for overhead and management). On September 23rd Hollingsworth wrote him designating Joe Smith to conduct these negotiations. Bannerman said that was fine; he came to Washington and negotiated with Smith, and the figure they came up with was $2.775 million. I interrupted Bannerman at this point to tell him that I had absented myself from the meeting this morning when this issue was discussed, and I did not feel that it would be right for him to discuss it any further with me. He said that the Commission cut the figure this morning, and he asked how he could go about appealing it. I said I would have the General Manager call him.

About 5:15 p.m. I went up to the Hill to see Chet Holifield about a number of items. I began with the matter of the critical remarks that he made at the hearing yesterday concerning my travel of 800,000 miles during my tenure as Chairman to which I had made reference in the speech I gave before the Associated Press Managing Editors Convention in Honolulu. Chet indicated that he has had a tough week, with unusual harrassments, and probably has not been as careful in his remarks as he might have been. He said he did think that the Commissioners need to be sure they are home enough to attend to the burgeoning business. On the other hand, he conceded that the requirements for speaking out in connection with the nuclear controversy are also important. I described to him the controversy of my candidacy for the presidency of the AAAS, and he said he thought that I should stay in the race. I also told him we are hopeful that the Joint Committee on Atomic Energy would react favorably to our proposal to bring private industry into the development of uranium enrichment processes and our proposal to share gaseous diffusion enrichment technology with friendly countries. I said that we will shortly send up some tentative statements for press releases on this and would then like to have a session before the whole JCAE to go into this matter. Chet reiterated his opposition to both of these proposals, and I tried to convince him that the time has arrived when both of these steps should be taken.

I sent a check ($4,150) to Lynne and Bill for the purchase of their 1971 Volvo station wagon (copy of letter attached).

Helen bought me a bicycle exerciser today, which should help me to get exercise at night short of taking walks in the neighborhood in winter, where it is difficult to get sufficient physical action.

The House passed the Omnibus Bill today.

Saturday, December 5, 1970- D.C.

I worked in the office for a while and then went over to the Executive Office Building to attend a meeting of the Domestic Council Subcommittee on the national energy situation. Present were: Paul W. McCracken (Chairman), Edward E. David (OST), John N. Nassikas (FPC), George A. Lincoln (OEP), William Ruckelshaus (EPA), Caspar Weinberger and Don Rice (OMB), John T. Middleton (HEW), Hollis M. Dole and Fred Russell (Interior), Carl V. Lyon (Federal Railroad Administrator), Charles Walker (Treasury), Russell Train and Alvin Alm (CEQ), Dave Freeman (OST), Thomas Joyce, Joel Segall (Treasury), George Tomlinson (FPC), Milton Shaw (AEC), and Will Kriegsman and John Whitaker (White House).

The meeting was presided over by Paul McCracken. I was first on the agenda, and I spoke on the AEC proposal to establish an Administration commitment to develop a successful demonstration of a commercial sized nuclear fast breeder reactor (LMFBR) by 1980 and to demonstrate the commercial feasibility of using

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NOV 83

December 4, 1970

Dear Lynne and Bill.

I am enclosing a check for $4150.00, made out to H. W. McKevitt, for the purchase of your 1971 Volvo.

You may know that we bought our 1947 Hudson from McKevitt, probably the father of the present McKevitt.

I am particularly pleased about the safety belt feature of the Volvo, and I think you should make a deal with your mother and father (or mother-in-law and father-in-law, as the case may be) to use these every time you ride in the Volvo no matter how short the distance.

I am also enclosing a check for $136.00 to cover the first six months' insurance. Also enclosed is the certificate of ownership for the Falcon signed on the reverse side.

Things are going along fine at home. I attended a United Nations dinner in New York night before last that included Peter and Jane among the guests; in fact, they got a special introduction as VIP's.

With love,

(Signed) Glenn T. Seaborg

GTS.MJ

Encls:
Check #1406, to H. W. McKevitt Co., Inc. - $4,150.00
Check #1407, to Lynne A. Cobb - $136.00
Signed Certificate of Ownership on the Falcon

Seaborg, Lynne
Seaborg Automobiles

underground nuclear detonations to produce natural gas in the tight formations of the Rocky Mountain area by 1975. I described the nature of the LMFBR, the type of development work that needs to be done and our program for three demonstration plants (300-500 megawatt) and three 1,000 megawatt civilian breeder plants, all to be built in cooperation with industry. The former would be started immediately and within the next few years, and the latter would be started toward the end of the decade. I described the increased budgeting required in order to meet this schedule and said that the present budget wouldn't even let us meet the 1984 schedule. I told the group that I had published an article in Scientific American (November 1970 issue), describing the fast breeder program in layman's language. I then went on and described the program for producing natural gas in tight formations. I described the present rate of consumption of natural gas compared to the lower rate at which new reserves are being uncovered, indicating a serious problem of supply. I said the reserves could be doubled by the use of nuclear explosives to produce natural gas in available form from tight formations. I described the GASBUGGY and RULISON tests, which indicate substantial success. I also mentioned the problem of radioactivity and the problem of public acceptance, saying I believe that the problem of radioactivity is manageable, but that we will have a great deal of trouble with public acceptance. I described a program of four explosive development tests and five to six joint government-industry applications projects which, over the next four years, would cost about $85 billion (half to be shared by industry), leading to a recovery rate of one trillion cubic feet per year.

At the close of my remarks, John Nassikas expressed strong support for the breeder program, mentioning his letter to McCracken in this respect. Ed David also expressed support and requested that we furnish information regarding the required increase in funding for the backup programs, namely, the gas-cooled fast breeder, the molten salt reactor, and the light water breeder reactor.

John Middleton then gave his presentation on the R&D program by EPA for sulphur removal to assure the availability of commercially proven stack gas and deep coal cleaning technology within three or four years. He began by showing a chart which illustrated the need for the breeder reactor in order to reduce and, indeed, reverse the trend in the production of huge amounts of sulphur dioxide from the burning fossil fuels in the production of electricity in the years ahead. He emphasized the difficulty of removing sulphur dioxide from smoke, or recovering it directly from the fuel and indicated that such removal was not really a good long-term solution to the energy problem. He also indicated a shortage of funds for the sulphur removal projects.

The next speaker was Hollis Dole (Assistant Secretary of Interior for Mineral Resources). He spoke on a commitment to develop commercially feasible coal gasification technology by 1975 so that a full scale commercial plant could be constructed by 1978. He also mentioned expanded exploration, economic studies and measures to increase production of coal on federal lands; a program to demonstrate new stimulation techniques to increase the ultimate recovery of oil from unknown reserves; and a proposal to develop technology for converting solid waste to a heavy low sulphur oil. At the end of his presentation, I asked Dole how he rated oil shale as a potential of oil, and he indicated that this was a very important reserve that should be developed. Since he had stated that the production of oil from urban refuse also represented a solution to garbage disposal problems, I pointed out that there would have to be a process of segregation of garbage to isolate forms suitable for conversion to oil and asked what the percentage of conversion was. He responded that 40% of the segregated suitable starting material was converted to oil, that is, about two barrels per ton of segregated garbage.

At this point one of the participants asked why the government should foot the bill for these various undertakings. Nassikas responded by saying that he saw no need to plow old ground and raise the question again. The Energy Subcommittee has been asked to recommend a federal program for alleviating the energy crisis and for assuring a supply of energy in the future, and we were proceeding to respond to that assignment. David also responded by saying that in his opinion only the government could build the huge expensive demonstration reactors that are required, and that it is proper for the government to assume responsibility for this step without which the program couldn't proceed. I also indicated that we shouldn't continue as a national policy to determine our energy sources on the basis of competitive economics alone. I said that the time has come for the federal government to take on a broader policy planning function. It is a crime to consume our heritage of fossil fuels- coal, oil and gas- by crudely using the heat from their fires and, thus, destroying the irreplaceable sources of chemicals. We shouldn't convert this precious heritage to carbon dioxide and water so that our descendants would find themselves in a situation of having to reduce these back to hydrocarbon form through very expensive processes. Dole also indicated that the federal government should have a role from the standpoint of national security- a role that would assure a source of supply of energy.

McCracken, on the basis of these comments, indicated that he thought the final report should include a discussion of the strategy of national issues. Nassikas indicated that he thought the report might also go into the relationship of our national energy base to our national economic productivity. McCracken then indicated that our Subcommittee should perhaps have a broad session on national strategy in the energy field.

Lyon then spoke on the measures being taken to increase coal hopper car supplies and, in particular, on a Department of Transportation proposal to construct on-ground storage facilities at three major coal ports at a cost of $50 million, which would release 25,000 hopper cars for general use.

Dave Freeman then spoke on his paper, suggesting an energy R&D tax of $0.00015 or .15 mil per kilowatt hour of electricity and $.01 or 10 mils per thousand cubic feet of natural gas or its equivalent. The revenue thus obtained would be used for funding the federal R&D program on the type of projects that were being discussed this morning, including the nuclear breeder reactor, and also underground high voltage transmission technology, magneto hydrodynamics, better cooling techniques, controlled thermonuclear fusion, etc. Walker (Treasury) said that this tax proposal would have to be thought through very carefully. It will not be too easy to sell the Congressional Ways and Means Committee. He recalled the problems that the Administration has already had with Congress concerning the proposed tax on leaded gasoline. He suggested that perhaps the tax scheme could be related to the support of a national energy research institute. In any case, he said he has great concern both about the theory of the tax and about actually getting the tax approved by Congress.

Nassikas said he thought the idea of such a tax was premature to which Freeman responded with the query as to how else we might solve the problem.

McCracken said he thought this tax proposal should be studied further, and he appointed a subgroup, consisting of Freeman, Don Rice (representing the Office of Management and Budget), Nassikas and representatives of CEA, CEQ, and Treasury. He indicated that if others were interested in serving on this subcommittee, they should let him know.

McCracken then said that he would like to summarize the results of the meeting, which he thought had been a very productive one. We have proposed a program to cover the longer term aspects of the energy problem, which takes into account both the energy need itself and the important concomitant environmental aspects. All the items covered today have budgetary implications. He suggested that we meet next week to consider some other (non-budgetary) aspects. He also suggested that there should be another session to hear the presentation from Hank's group on long range energy requirements. He reminded us that the written report to the Domestic Council will be due on January 31st. The report to the Domestic Council should be available in alternate form so that it can be read by the general public. This will all have to be followed by an action report to Congress, perhaps in March. He concluded by identifying the issue- what are the relative roles of government and the private sector in the energy field. He asked each of us to think about this and to send him our individual views on this.

After the meeting I went to lunch with Julie Rubin at the World Buttery and then returned to the office to work until about 2:30 p.m.

I received a letter from John Ehrlichman thanking me for sending him my article on "Fast Breeder Reactors."

I sent a letter to Walker Cisler concerning his proposal of a waiver of charges for fuel use and burnup with respect to the present Fermi core and the proposed future oxide core from 1971 through 1976 (copy attached). I also sent a letter to Hans Bethe (copy attached) on the same subject.

I took a hike with Eric and Suki in Rock Creek Park. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 1, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting point.

In the evening we had a belated birthday dinner for Eric at which time we gave him his gift. Brendan Canary had dinner with us and spent the night.

During part of the afternoon and evening I read AEC papers.

Sunday, December 6, 1970

I worked on my speech, "New Frontiers of the Mind," which I will give at the AAAS meeting in Chicago on December 30th.

Helen and I attended the Independent Agency Wives luncheon at the Marriott Twin Bridges Motel. Seated at our table were: Mr. and Mrs. Arnold Ordman (General Counsel, NRLB), Mr. and Mrs. Guy Farmer (formerly NLRB), Mr. and Mrs. Kenneth Tuggle (member, ICC), and Mr. and Mrs. John Adams (member, CAB). Among those whom we spoke to during the reception preceding the luncheon and after the luncheon were: Mr. and Mrs. Sherman Maisel (FRB), Mr. and Mrs. Lewis Berry (formerly with the Foreign Claims Commission), Mr. and Mrs. William Brett (formerly with the U.S. Mint), Mr. and Mrs. Andrew Brimmer (FRB), Mr. and Mrs. Thomas Clarke (Federal Home Loan Bank Board), Mr. and Mrs. Kenneth Cox (formerly FCC), Lela Creutz (Ed Creutz is with NSF), Mr. and Mrs. Howard Fensterstock (formerly Renegotiation Board), Maurine Finnegan (formerly Federal Mediation Board), Mr. and Mrs. Howard Frea (formerly ICC), Mr. and Mrs. Whitney Gilliland (CAB), Mr. and Mrs. Robert Hampton (Chairman, CSC), Mr. and Mrs. Lloyd Humphrey (NSF), Mr. and Mrs. Everett Hutchinson (formerly ICC), Mr. and Mrs. Edward McDermott (former head of OEP), Mr. and Mrs. Preston Martin (FHLB), Mr. and Mrs. Loren Olson (formerly AEC), Mr. and Mrs. Hugh Owens (SEC), Mr. and Mrs. Harold

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 5 1970

Mr. Walker L. Cisler, President
Power Reactor Development Company
1911 First Street
Detroit, Michigan 48226

Dear Mr. Cisler:

This is in response to your letter of November 16, 1970 concerning Commission participation in a program for the continued utilization of Fermi. As the initial financial contribution by the Government, you propose the waiver of charges for fuel use and burnup with respect to the present Fermi core and the proposed future oxide core from 1971 through 1976.

The Commission has determined that it would be prepared to seek approval for such waivers starting on the effective date of a cooperative arrangement, provided that certain prerequisites can be established to support the executive and legislative approvals that will be required. As you know, these include definition of specific objectives and goals and identification of resources to be committed to meet such goals, along with reasonable assurance that the program will be executed as proposed. The staff is reviewing the material provided as an enclosure to your letter, and Mr. Milton Shaw, Director of the Division of Reactor Development and Technology, will be contacting Mr. Beekman and Mr. Donnell shortly to discuss these matters further. Among items to be discussed will be the question you raised concerning foreign vs. domestic procurement of the oxide core. Until we have more definitive information on this subject, we do not feel that we can take a position in this matter.

While we do consider that the future operation of Fermi could be a most valuable supplement to the on-going priority LMFBR program, we should like to emphasize that it should not be viewed as a possible substitute for any portion thereof such as FFTF and other test facilities. In addition, we cannot consider at this time financial participation such as suggested in your proposal for the contemplated Fermi program beyond

those arrangements that may be agreed upon in connection with the requested waivers. Accordingly, we urge that you take the above comments into account and provide to us, at an early date, a revised proposal which can be used as the basis for developing a definitive cooperative arrangement and which will adequately support our request for the waivers referred to above.

We do look forward to the future operation of Fermi and hope that it will be possible to develop the necessary arrangements in the near future to support your request for waivers of fuel use and burn-up charges.

Sincerely,

(Signed) Glenn T. Seaborg

Chairman

bcc: Chairman (2)
Commissioner Ramey
Commissioner
Commissioner Johnson
Commissioner Ives
General Manager (2)
AGMR
Secretariat (2)

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 5 1970

Dr. Hans A. Bethe
P. O. Box 451
Ithaca, New York 14850

Dear Hans:

Thank you for your letter of October 15, 1970. It is very pleasing, indeed, to know that the staff at Fermi has been able to bring the reactor into operation again -- not only at the 100 MWt level indicated in your letter, but also at the 200 MWt level as well. We all recognize that Mr. Walker Cisler and staff at PRDC and APDA have achieved a significant milestone in repairing and operating Fermi in accordance with their previous plans. Consistent with your suggestion as to recognition for this accomplishment, Mr. Milton Shaw, Director of the Division of Reactor Development and Technology, has acknowledged this achievement on behalf of the Atomic Energy Commission in a telegram dated October 22, 1970, copy enclosed. The recent ANS/AIF meeting in Washington, D. C. also gave the Commission and staff an opportunity to further publically express their admiration for the Fermi accomplishments.

You mentioned the letter from Mr. Cisler, in which he proposed to operate the Fermi reactor as a fast flux test facility, and invited the AEC to participate in the use and support of the reactor in this role. As you have noted, this invitation comes at a time of very stringent budgetary circumstances. We have been in touch with Mr. Cisler and hope to be able to work out an arrangement for waiver of charges for fuel use and burnup, provided that certain prerequisites can be established to support an AEC request for the executive and legislative approvals that will be required. While we consider the future operation of Fermi could be a valuable supplement to the on-going priority LMFBR program, we do not view it as a substitute for the FFTF or any other portion of the LMFBR program. Furthermore, we are advising Mr. Cisler that at this time we cannot consider financial participation in the proposed Fermi program beyond those arrangements that may be agreed upon in connection with the requested waiver.

Your comments are appreciated, and we will take them into consideration as we proceed in this matter.

Cordially,

(Signed) Glenn T. Seaborg

Chairman

Enclosure:
Telegram - Shaw to Cisler
dated 10/22/70

bcc: Chairman (2)
Commissioners (4)
AGMR
GM (2)
SECY (2)
OC
OGC

Scott (formerly Indian Claims Commission), Mr. and Mrs. George Stafford (Chairman, ICC), Mr. and Mrs. Laurence Walrath (member, ICC), Mr. and Mrs. William Whitehead (Renegotiation Board), and Mr. and Mrs. William Whitman (Assistant to the Governor, Canal Zone Government).

I took a hike with Suki in Rock Creek Park. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail all the way to Cross Trail 1, then back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

I also worked on the final draft of our book, Man and Atom.

I watched on TV the Washington Redskins-Dallas Cowboys football game, which the Cowboys won, 34-0. I also saw the last part of the San Francisco 49ers-Atlanta Falcons football game, which the 49ers won, 24-20.

Monday, December 7, 1970- D.C.- Augusta, Georgia

Accompanied by Julie Rubin and John Vinciguerra, I flew to Augusta, Georgia, to attend the commemoration of the 20th anniversary of the announcement of the Savannah River site for the Savannah River Plant. We left National Airport on Delta Flight No. 725 and arrived in Atlanta at 9:44 a.m., where we changed to Delta Flight No. 649 which left at 10:19 a.m. and arrived in Augusta at 10:52 a.m. Nat Stetson met us at the airport, along with Jim Hopkins of his staff who took our luggage directly to the Augusta Town House. Nat drove me and Julie to the Savannah River Plant, where we arrived about 11:45 a.m. Prior to having lunch we took a walk for about a mile and a quarter up to a slight grade leading to the cafeteria.

At lunch in the cafeteria I was joined by former Berkeley students and former colleagues that included D. A. (Don) Orth, W. R. (Bill) McDonell, E. R. (Ed) Russell, R. F. (Bob) Folger, L. H. (Lee) Meyer, D. G. (Dave) Karraker, and Clark Ice. Following lunch we walked to the laboratory and met in the conference room for a program review as identified on the attached schedule.

Clark Ice opened the meeting by welcoming the group to the first session of the 20th anniversary celebration and by describing the growing heavy isotopes production program at Savannah River. He then introduced W. C. Reinig, who spoke on the market evaluation program for Cf-252. There have been 412 expressions of interest. He described the participants in the market evaluation program, the SRL exhibit, the papers that have been given at meetings, illustrations of various uses, etc.

J. A. Smith next talked about plans for the future production of Cf-252. Contributors, in chronological order, are (1) Cf-252 I residues, (2) Pu burning and (3) Am and Cm from power reactors. These lead to potential yields of Cf-252 of kilograms per year by 1990. There is no particular advantage to using resonance reactors compared to thermal reactors. Future quantities-

| | Cf-I<br>8/69- 11/70 | Cf-II<br>9/72- 9/73 |
|---|---|---|
| Delivery | 3/72 | 5/74 |
| Cf-252 | 2.3 g | 5.5 g |
| Bk-249 | 300 mg | 1.2 g |
| Es-254 | 40 µg | 160 µg |
| Fm-257 | 6 ng | 1 µg |

R. M. Harbour described new developments in chemical processing. Based on high pressure cation exchange chromatography to recover 3 kg of Cm-244, he described the chemical separation processes for Cm, Bk, Cf, Es and Fm.

R. T. Huntoon then described the packaging processes for Cf-252 for use in neutron radiography and activation analysis. He gave me a prototype container as a souvenir.

A. S. Jennings described the multipurpose Processing Facility which can handle 15 to 100gm of Cf-252 per year. Design is two-thirds complete and the plant should be in operation in about a year.

After the short recess M. D. Boersma described the gas centrifuge program. At the end of the presentations I made a few remarks expressing satisfaction with the initiative of the Savannah River Plant scientists and engineers in developing the production of heavy isotopes, and I answered some questions regarding the AEC environmental controversy and my AAAS presidency situation.

We next toured the gas centrifuge laboratory engaged in this work. Squires, Stetson, Meyer, Rubin and I participated. Boersma showed us the gas centrifuge work. We then visited the present Cf-252 (and Am and Cm) packaging facility and the new, larger facility under construction; these were shown by R. T. Huntoon.

During the initial program review Julie Rubin received word through a telephone call from Washington that the plane in which Commissioner Thompson and Jack Rosen crashed has been located by the diving bell and attempts will be made to raise the plane later in the afternoon.

Stetson then drove us to the Augusta Town House, where I checked into room 358.

At 4:30 p.m. I held a press conference in the Boxwood Room of the Town House with the following participating: John Lites (WJBF-TV, Channel 6, Augusta), Joe Allen (WRDN, Channel 12, Augusta), Ed Florie (WBBQ Radio, Augusta), Joann Harpring (Augusta Chronicle), Joe Heiteker (Augusta Herald), Steve Deal (photographer, Augusta Chronicle), Wallace Hitchcok (The State Newspaper, South Carolina), Don Law (Editor, SRP News), and Messrs. Harvey, Johnson, and Kinard (photographers). The questions concerned: (1) my comments on the hazards of bedrock storage of high level waste mentioned in a Look magazine article last week; (2) my views on the status of storing similar wastes in salt mines in Kansas; (3) AEC programs in which SRP is involved in exploring medical and industrial uses of isotopes; (4) in light of prior layoffs at SRP, what did I see for the long range (20 year) outlook for this facility; (5) an explanation of the problem of nuclear power and thermal pollution; (6) my comments on the Look magazine article about running out of uranium fuel for nuclear power plants; (7) when will the Allied Gulf Chemical Processing Plant receive its license from the AEC; (8) how many other similar plants are planned and needed; (9) what would be the effect of closing down the entire SRP; and (10) are any other industries interested in locating at SRP.

At 6:30 p.m. Julie and I walked about two blocks to the Georgia Railroad Bank Building where Sherman Drawdy hosted a cocktail party in the Pinnacle Club on the 16th floor for about 50 special guests attending the banquet. Among those I met were the head table guests (identified on the attached head table seating arrangement); some former and present AEC employees at SRP as follows: Mr. and Mrs. James Wise, Mr. and Mrs. James Hopkins, Mr. and Mrs. Howard Kilburn, Mr. and Mrs. Gus Robinson, and Mr. and Mrs. John E. Gray (now Chairman of the Board, NUS); and also the following present and former du Pont employees: Elton Cole,

UNCL. BY DOE
NOV 26

SEATING ARRANGEMENT - HEAD TABLE

1. Congressman-elect Floyd D. Spence of the 2nd South Carolina District
2. Mrs. Spence
3. Mr. Wayne Robinson - representing Senator Strom Thurmond of South Carolina
4. General John C. F. Tillson, III - Commanding General of Ft. Gordon
5. Mrs. Tillson
6. Mr. Bernard Meng - representing Senator Ernest F. Hollings of South Carolina
7. Mrs. Meng
8. Mr. Charles E. Campbell, Adm. Asst. to Senator Richard B. Russell of Georgia and who is representing the Senator
9. Mrs. J. A. Monier
10. Dr. J. A. Monier, Plant Manager of Du Pont's Savannah River Plant
11. Mrs. Curtis A. Nelson
12. Mr. Curtis A. Nelson - former Manager of the Commission's Savannah River Operations Office (1950-1955)
13. Mrs. Louis Cassels
14. Mr. Louis Cassels - Senior Editor & Religion Editor, United Press Int.
15. Mrs. J. D. McNair
16. Mr. J. D. McNair - Chairman, S.C.-Georgia Nuclear Council
17. Dr. Glenn T. Seaborg - Chairman, U. S. Atomic Energy Commission
18. Mrs. Sherman Drawdy
19. Mr. Sherman Drawdy - Vice Chairman, S.C.-Georgia Nuclear Council
20. Mrs. Nathaniel Stetson
21. Mr. Nathaniel Stetson - Manager, Commission's Savannah River Operations Office
22. Mrs. Bryan Dorn - representing Congressman Dorn of the 3rd S. C. District
23. Dr. M. H. Wahl - Assistant General Manager in charge of Atomic Energy Division, E. I. du Pont de Nemours & Co.

24. Mayor Odell Weeks of Aiken

25. Mrs. Cecil Collins

26. Mayor Cecil Collins of North Augusta

27. Mrs. George Sancken, Jr.

28. Mr. George Sancken, Jr. - former Mayor of Augusta and who is representing the City of Augusta

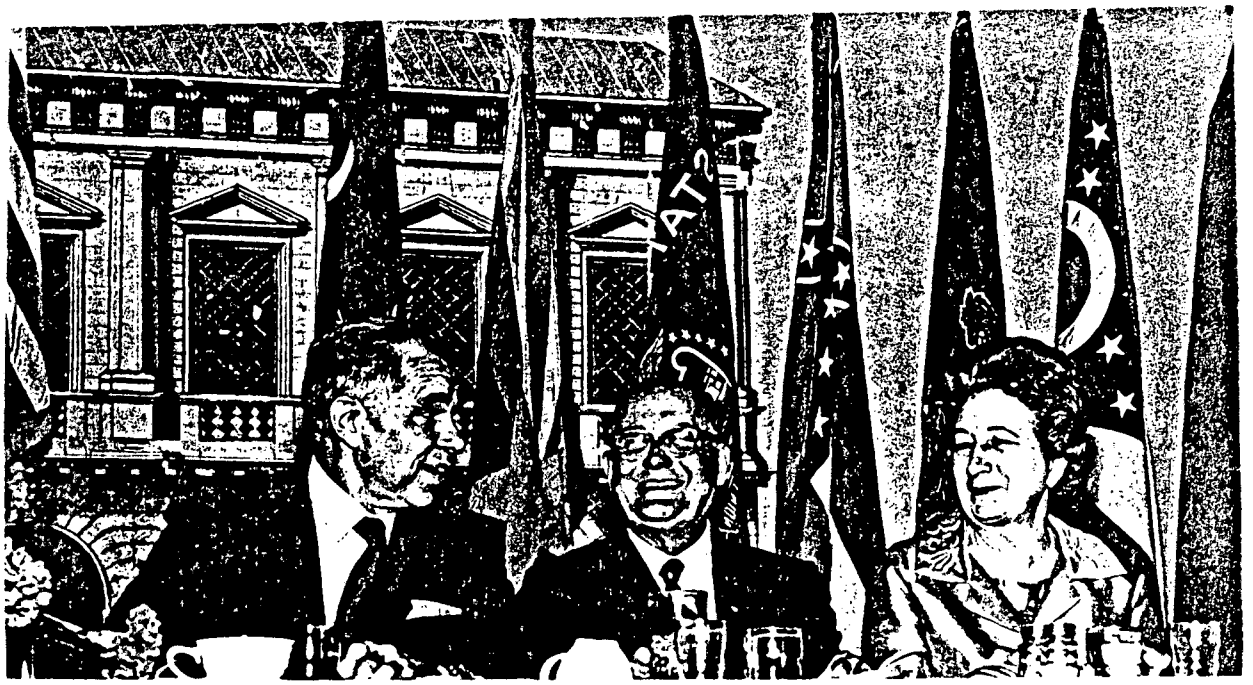
29. Senator Edgar Brown - President Pro Tempore of the South Carolina State Senate

30. Mrs. Daniel R. McLeod

31. Attorney General Daniel R. McLeod of the State of South Carolina representing Governor Robert McNair

Bill Kaye, Kenneth French, Julian Elliot, Milt Wahl, Arthur Mendolia and D. H. Dawson.

At 7:30 p.m. the group proceeded to the Augusta Town House where the banquet was held. Some 750 people attended. James McNair, as Master of Ceremonies, introduced the head table guests and this was followed by an invocation by Louis Cassels (of UPI and a former resident of Ellington, South Carolina, the town that had to be eliminated due to the location of the Savannah River Plant); some brief remarks by Curtis Nelson as the first AEC manager at SRP and Milt Wahl, as the present senior du Pont official for management of this facility, followed. I was introduced by Sherman Drawdy and, prior to giving my prepared remarks, presented the "Best Ever" safety award for AEC facilities to Dr. J. A. Monier, Manager of SRP for du Pont. My remarks, "The Savannah River Plant- A Twentieth Anniversary," followed the printed text except for a few deletions to shorten the length of delivery and also to add a special invitation for recognition of those present that had worked at Hanford during the war and were now located at SRP, plus recognition of those present during the first few years, through 1951-52, when SRP activities were first getting underway.



Savannah River Plant 20th Anniversary Celebration, December 7, 1970
L to R: Seaborg, Mr. and Mrs. Sherman Drawdy

After the banquet I spoke to a number of people and provided Mrs. Bryan Dorn, at her request, with a copy of my prepared remarks in order for them to be placed in the Congressional Record. I also met a lady who identified her mother's maiden name as Seaborg; her name is Nanette Connell and she lives in Augusta. Her mother's brother, Donald Seaborg, works at the Department of Agriculture in Washington.

Articles concerning the controversy over my candidacy for the presidency of the AAAS appeared today in the New York Times, Newsweek, and Chemical and Engineering News (copies attached).

Tuesday, December 8, 1970- Augusta- D.C.

Julie and I were driven to the airport by Jim Hopkins. We left at 8:15 a.m. on Eastern Flight No. 376 and arrived at D.C. National Airport around 10:20 a.m.

# Conflict-of-Interest Controversy Swirls in Nation's Largest Scientific Group

By RICHARD D. LYONS
Special to The New York Times

WASHINGTON, Dec. 6—Dr. Glenn T. Seaborg, Nobel prize winning chemist, codiscoverer of plutonium and chairman of the Atomic Energy Commission, is almost assured of election this week to the presidency of the world's largest scientific group, the American Association for the Advancement of Science.

But the election, on the surface almost pro forma, has sparked contentions in the association's higher councils that Dr. Seaborg cannot head both the A.E.C. and the science association at the same time without a conflict of interest.

The suppression of an article about the controversy in the association's weekly magazine, Science, has led to the resignation of its widely respected news editor, Daniel S. Greenberg, who ordered the account written.

### Broad Issues Raised

Arising beyond the little publicized controversy are broad questions dealing with the following:

¶The leadership of American science.

¶The election of leaders to positions of prominence.

Conflicts of interest within the scientific estate.

¶The emphasis that the scientific community should put on political activism, especially in environmental problems.

¶The freedom with which scientific journals are able to comment on the affairs of their own organizations.

Early last month, Philip M. Boffey, a staff writer for Science, found that some members of the 13-member board of directors of the 130,000-member association had posed serious questions about the suitability of Dr. Seaborg's standing for the presidency.

While other issues have been raised, such as Dr. Seaborg's identification in the eyes of younger scientists with the military-industrial complex because of the A.E.C.'s bomb-building activities, the main issue appears to be a potential conflict of interest. Dr. Seaborg's personal integrity is not under challenge.

The main issue was whether the "triple A.S." as the association is usually referred to locally, could be led by a man who for the past 10 years has been the Atomic Energy Commission, an agency increasingly under fire for what critics contend is callousness and indifference toward the pollution of the environment by radioactive wastes.

"The triple A.S. and the A.E.C. are bound on a collision course," said one association member. "Does it really make sense to make the head of the other, too?"

For example, he said, the association's committee on environmental alteration has already started a study on the impact of nuclear power plants on the environment.

### Neutrality at Issue

"How could Seaborg be expected to remain neutral if the committee's report becomes controversial, or critical of A.E.C. policy?" he asked.

In addition, Senator Edmund S. Muskie, Democrat of Maine, has asked the association to referee a dispute in which two scientists have accused the A.E.C. of being indifferent to hazardous levels of "permissible" radiation. The association's board of directors has not responded to the request.

Mr. Boffey and Mr. Greenberg said they had learned that a majority of the members of the board of directors were concerned over Dr. Seaborg's nomination last June and that several had written letters about it to the board's chairman, Dr. H. Bentley Glass.

The association's committee on nominations and elections usually chooses several candidates for each office. This year, the committee selected Dr. Seaborg and Dr. Richard H. Bolt, an association board member and an expert on acoustics from Lincoln, Mass. An early sampling of ballots shows that Dr. Seaborg, who is much more well known in the scientific community, holds a commanding lead.

An attempt apparently was made to have Dr. Seaborg quietly withdraw his name from candidacy, although none of the parties to the controversy will openly discuss it.

Dr. Barry Commoner, the internationally known environmentalist, who is an association member, said for example: "I printed prior to the election, am not going to make any and the voters should be statement about the situa- left to form their own conclu-

Dr. Paul R. Dr. Commoner, however, is believed to be one of those who raised the issue of the propriety of Dr. Seaborg's candidacy, according to persons familiar with the controversy.

Mr. Greenberg said he had discussed the controversy with Dr. Philip H. Abelson, the editor of Science, in November. Dr. Abelson, Mr. Greenberg said, "basically said there would be no story because it would be impossible to prepare a story that would not be unfair."

Despite Dr. Abelson's attitude, Mr. Greenberg said he ordered Mr. Boffey to write the story and that it was "right down the middle—it did not take sides." When Dr. Abelson again refused to print the story, Mr. Greenberg resigned, effective Dec. 15. In February he will start publishing a weekly newsletter devoted to scientific and governmental affairs.

According to Mr. Greenberg, the suppression of the article also raised the question of what should be printed in Science. "I think we have successfully avoided the house organ flavor," he said.

Over the last decade Mr. Greenberg has irritated some members of the scientific community with accounts of the occasional insanity and chicanery within the fraternity. He and his five-man department have been the targets of many criticisms, including one last summer from Dr. Philip Handler, president of the National Academy of Sciences.

On Nov. 6 the association's board of directors all but censured Mr. Greenberg's department for what it termed the "peculiar bias" of some of its writers.

Dr. Abelson supported Mr. Greenberg's account. "I did kill the story," he said, "because I believed that to run near election day a piece calling attention to the alleged deficiencies of one of the candidates would be manifestly unfair."

Dr. Abelson, who praised Mr. Greenberg as "one of the best reporters I know," noted that the magazine's readership was highly literate, that biographies of the candidates had been sions about the qualifications of the candidates for the presidency.

Questions have arisen as to why so few members of the association are permitted to vote in the elections. Only the 300 members of the association's council may vote, thus denying the franchise to more than 130,000 other association members. Even most of the council members are not directly elected by the membership, but represent many of the association's affiliated scientific organizations.

Dr. Abelson conceded that there was "some feeling that our elections procedings are archaic" and said that changes were being studied.

For his part, Dr. Seaborg said that he would resign "if I thought it would be good for the organization." He said he was aware of the controversy, but felt that the conflict of interest complaints were not valid because "I wouldn't be involved in any conflict — I would absent myself."

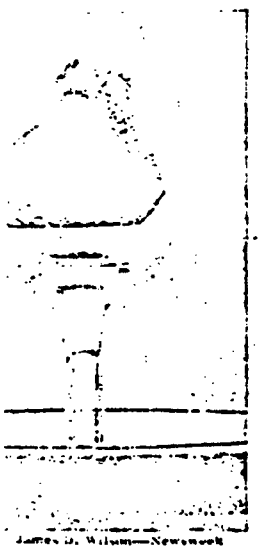
Dr. Seaborg said he had been asked to stand for the presidency in both 1969 and 1968 but had declined, "although there were no questions of conflict of interest raised the other times. I felt embarrassed to decline a third time."

Just before Dr. Seaborg declined the first time, the late Dr. Alan T. Waterman served as president, although he also was president of the National Science Foundation, a Federal agency that gives the A.A.A.S. funds. A ruling was then made by the boards of directors of both groups that there was no conflict of interest. Dr. Waterman's successor at the science foundation was Dr. Leland J. Haworth, then Dr. Seaborg's deputy at the A.E.C.

In the past similar connections have been criticized because of involvement in scientific undertakings paid for by the Government. One example was the disastrous Mohole Project to drill a hole through the earth's crust. It was killed in 1966 after $25 million in federal funds had been spent by the science foundation.

in living things on earth. have been found in mete- and some have even re- of organisms and living ... earlier fossil bugs were ... because of the possi- had been contaminated fore they were analyzed. to make a thumbprint on shake with water to obtain commented Ames's Dr. peruma, who was super- on the Murchison me- its.

articularly important in the ies was the care the team ate all possibility of such —and the chemical nature



James D. Wilson—Newsweek

her Ponnamperuma gment of meteorite

ounds they detected sug- that they had succeed- for example, the fact that mino acids detected in the ones that have no known tion on earth. Further, the one type of carbon, carbon chison meteorite is the same on in most other meteorites different from its propor- al materials on earth. Then ct that the spectra of one rocarbons from the mete- ceably different from the one compounds on earth. n from these results is that ds and hydrocarbons were gh "chemical evolution"— reactions between simpler which occurred away from

lf, this conclusion is sig- d. But it gains added im- sidered in the light of the es in radioastronomy. Last mple, a group led by Har- Zuckerman of the University of Maryland, spotted formic acid in space. And Dr. Sidney Fox, of the University of Miami, recently reported the synthesis of amino acids by simply heating formaldehyde and ammonia, two of the other chemicals known to exist in space. "It is terribly exciting that we have been able to see these intermediates of organic compounds in space," said Dr. Richard S. Young, NASA's director of exobiology and bioscience programs, last week. "Since these complex molecules can evolve in interstellar space, it suggests that we may find organic materials on the moon, and Ponnamperuma's work is very persuasive that the process occurs among the asteroids."

Certainly, the latest findings give added significance to the moon rocks to be collected by the Apollo 14 astronauts early next year. Some teams examining the Apollo 11 and 12 moon rocks have suggested that they contained amino acids, but could not be sure that the rocks were free of contaminants. Thus it begins to appear that the precursors of life exist throughout the universe. "The whole picture," said Sidney Fox last week, "is one of cosmic unity."

## The Squabbling Scientists

For most of its 122-year history, the prestigious American Association for the Advancement of Science has resembled nothing so much as a gentlemen's club—a quiet and rather dounish organization where scientists and interested laymen discussed their research and on occasion politely disagreed. But now the tumult of the times has caught up with the AAAS, and the result is a spirited controversy that threatens the biggest furor the staid society has known in years. The heart of the matter is growing dissent on the part of younger, politically militant members who for some years have been insisting that the AAAS participate more directly and vigorously in attacking the nation's social problems.

For the moment, the major symbol in the controversy is no one less than Dr. Glenn T. Seaborg, 58, chairman of the Atomic Energy Commission and the odds-on favorite to be elected this week as the AAAS's 125th president. "He's a very decent man and a fine scientist," says one anti-Seaborg AAAS member, "but it's just inappropriate for a man from an agency like the AEC to direct association activities at a time when so many of those activities are going to deal with vital social issues."

The ranks of the dissidents ranged against Seaborg reportedly include Barry Commoner, an outspoken biologist at Washington University in St. Louis; Gerald Holton, a Harvard physicist; physicist Leonard Rieser of Dartmouth and Kenneth V. Thimann, a plant physiologist at the University of California. Specialists associated too directly with nuclear-weapons research, underground nuclear tests and ecologically unpopular atomic power stations. They fear that the fallout from these associations will hit the AAAS, and thereby make it less attractive to younger scientists and less acceptable to the public. Though the insurgents concede that Seaborg will probably defeat their candidate, Richard H. Bolt, 59, a physicist and board chairman of Bolt, Beranek, and Newman, Inc., an engineering firm, the prospects are that this would only intensify the ideological conflict within the organization.

Already, in fact, the Seaborg candidacy has touched off some major shock waves among the scientists. Thus the dissidents say that some weeks ago they

Lester Sloan—Newsweek

**Seaborg: Beware the fallout**

prevailed upon incumbent AAAS chairman H. Bentley Glass to call on Seaborg and suggest that it would be best if he withdrew from the race. Both Glass and Seaborg, however, deny that there was any discussion of the latter's withdrawal.

**Protest:** Later, a reporter for the AAAS magazine, Science, wrote the story on the opposition to Seaborg but then saw it killed by editor Philip H. Abelson. "It seemed to interfere in the electoral process," said Abelson. "I think that would have been a particularly evil thing to do." But the magazine's news editor, Daniel S. Greenberg, disagreed. He resigned in protest and thereby accorded the controversy over Seaborg precisely the kind of publicity the dissidents had hoped for.

Just how the rank and file of the AAAS's 130,000 members will react to the ideological struggle at the top remains to be seen. But the dissidents are making it clear that they will keep on pressing for more activist policies, and it seems a safe bet that the AAAS is in for some notably undounish disputes when its annual meeting convenes in Chicago later this month.

Charges of a possible conflict of interest are fueling a controversy that could be more apparent than real in the American Association for the Advancement of Science presidential election. The issue, raised by a few members of the AAAS board of directors in October, questions the candidacy for president-elect of Dr. Glenn T. Seaborg, chairman of the Atomic Energy Commission.

The controversy has such a low profile in AAAS that Dr. Philip Abelson, editor of *Science* magazine, the AAAS official publication, comments that not one letter to the editor has been received protesting Dr. Seaborg's candidacy. Still, the issue has prompted Dr. Seaborg to consider withdrawing from the race.

Dr. Seaborg tells C&EN's Fred Zerkel that he didn't hear about the opposition until the time the ballots were mailed in November. Then, he says, "it was really too late to withdraw. They couldn't have found another candidate. I was urged by other members of the board that it would be embarrassing to AAAS to have a one-man race and that I shouldn't withdraw at that time."

Dr. Seaborg turned down nominations to run for president of AAAS in 1963 and again in 1968. If he wins the election, he would be president-elect next year, president in 1972, and chairman of the board in 1973. Last summer he agreed to chair AEC for another five years.

Dr. Seaborg says he hasn't had any conflict of interest problems while he has been chairman of AEC and would be "meticulous" never to get involved in a conflict of interest situation as a top-level AAAS official.

The current AAAS president, Dr. Athelstan Spilhaus, tells C&EN that the conflict of interest charge is "ridiculous" and views the whole matter as a "tempest in a teapot." He says the conflict of interest question centers on three issues. One issue, he says, concerns discussions which have been going on for about a year about the possibility of AAAS taking over Science Service. Dr. Seaborg is president of the board of trustees of Science Service. Dr. Spilhaus says AAAS has voted not to take over Science Service, so this issue is dead.

Another issue, which is yet to develop, concerns fulfillment by AAAS of a request by Sen. Edmund S. Muskie (D.-Me.) that AAAS adjudicate whether Dr. John Cofman and Dr. Arthur Tamplin—who are critical of U.S. radiation standards and some AEC policy—have received unfair treatment by AEC.

Dr. Spilhaus points out that AAAS has never gotten into the question of adjudicating between parties before and "we decided not to do this until we have discussed the question of this kind of activity as a policy."

The third issue, Dr. Spilhaus says, is a feeling that people in very high and visible public positions, in general, and in the tenor of today's charged atmosphere, might not be good to have on the board of AAAS.

It's not at all new to have distinguished people in government office as president of AAAS, Dr. Spilhaus points out. For example, in 1963 Dr. Alan Waterman was president of AAAS and director of the National Science Foundation at the same time. Dr. Richard H. Bolt, the other candidate for the office of president-elect next year, has "no comment" on the whole matter. Dr. Bolt is a lecturer in political science at MIT, and a member of the AAAS board.

The controversy was brought to public attention by a front-page story in *The Washington Post* on Nov. 29—about midpoint in the balloting which ends Dec. 10. Results of the election will be announced later this month.

sat next to Lom Squires on the plane and he rode to the H Street office with us to attend an ACRS meeting.

At 12:30 p.m. I presided over Information Meeting 1084 (notes attached). It was a luncheon session held in the Commission dining room. We were briefed by Bill Riley and Sid Kingsley on their meeting with Robert Mardian (Assistant Attorney General) regarding the clearance case that we have had under discussion with the Department of Justice. Mardian said it was the considered opinion of the Department of Justice, including John Mitchell and the White House and perhaps involving Henry Kissinger and even the President, that clearance should be denied without offering a hearing. This causes some consternation among the Commissioners because this will be the first instance in which such an action has been taken in the history of the Atomic Energy Commission. It was agreed that I would talk to Mitchell about this, apprise him of our views, and seek to determine whether some way of handling the situation through informal contacts with the man or his company might be tried.

We discussed the matter of price increase for uranium enrichment work, which the White House is reported to feel is necessary in view of the passage of the Omnibus Bill which changes the criteria. We decided to suggest a price of $31 per kilogram of separative work, but also decided to try very hard to persuade the White House not to announce a price increase at the time the President signs the Omnibus Bill (as apparently some of his advisers are suggesting that he do) because this would lead to another situation of the AEC's customers advancing purchases of separative work, with a consequent budget problem in FY 1972. We also discussed a proposed letter that I will write in reply to the recent article in Look magazine (copy attached) attacking nuclear power.

I called Alexis Johnson and said I understand that Pollack has talked to him about the possibility of the two of us (Johnson and I), and possibly including Pollack, getting together with Pastore to explain the Administration's policies and purposes in developing cooperation with the Europeans in uranium enrichment. I suggested that Johnson might invite Pastore over to the State Department for lunch- probably before Congress adjourns because it won't reconvene until about January 20th. Johnson agreed to do this and we discussed some mutually satisfactory dates for lunch.

Wednesday, December 9, 1970- D.C.

At 10 a.m. I met with John Lannan (a science reporter for the Evening Star) in the presence of John Harris to discuss the matter of the controversy over my candidacy for the AAAS presidency. I described the history of the several approaches to me by the AAAS Nominating Committee and the practical impossibility of withdrawing because the dissenting members of the Board of Directors didn't make their wishes known until November, when the ballots were due to go out. I said that I can't see any basis for a conflict of interest situation. In response to the suggestion by Lannan that the opposition might come from the young Turks, I said that I probably have as good a record of interest in the welfare of young scientists as anyone. I described my participation in the annual International Science Fair and Science Talent Search, my annual talks at the Youth and Atom symposia and my many other talks at young scientists' symposia around the country.

At 11 a.m. Ed Giller dropped in with John Rudolph; Julie Rubin was also present. Giller wanted to brief me on the controversy that is underway with respect to building a small (2-15 miliwatt) RTG for use in the weapons program. The Sandia Company wants to take on this assignment, but the private industries involved (such as 3M) are very much opposed to this, saying that this could lead

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 8, 1970

# INFORMATION MEETING 1084

12:30 p.m., Tuesday, December 8, 1970, Commissioners' Dining Room, D. C.

1. Personnel Security Matter

   Staff will prepare a check list for the Chairman's discussion with Attorney General Mitchell. (GC-AGMA-S)

2. December 4 Letter to Donald Rice, OMB, re Price for Separative Work

   Staff will meet with White House staff tomorrow as discussed. The Commission is to be kept informed. (AGMP-Rubin)

3. SECY-731 - Law Suit Against Holmes and Narver

   Approved subject to Commissioner Ramey's comments. (GC-Kornack-SECY)

4. SECY-735 - Comments on S. 4430 re National Economic Conversion Commission

   Approved subject to Commissioner Ramey's comments. (GC-Kornack-SECY)

5. SECY-745 - Claim for Compensation

   Approved subject to Commissioner Ramey's comments. (GC-Kornack-SECY)

6. SECY-739 - White House Request for Statement of Achievements and Briefing (See also SECY-709)

Approved with revisions and requests subject to Commissioner Ramey's comments. The briefing may be scheduled the week of January 11, 1971. (PI-Kornack-SECY)

7. SECY-704 - Revision of FY 1971 University of California Fixed Allowance for Overhead and Management

Staff will proceed as discussed subject to Commissioners Ramey and Larson's comments.. (DC-Kornack-Griffin-SECY)
(Chairman Seaborg was not present for this discussion.)

8. SECY-746 - Proposed Letter to Editor of Look Magazine

Approved with revisions and requests subject to Commissioners Ramey and Larson's comments. (PI-Kornack-Griffin-SECY)

W. B. McCool
Secretary of the Commission

2:55 p.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seabrog | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey* | Mr. Bloch | General Manager |
| Commissioner Johnson | Mr. Brown | General Counsel |
| Commissioner Larson* | Mr. Rubin | Secretary |
| | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Hennessey* | |
| | Mr. Kornack* | |
| | Mr. Griffin* | |
| | Mr. Kingsley** | |
| | Mr. Riley** | |
| | Mr. Gaughran** | |
| | Mr. Flaherty** | |
| | Mr. LeGassie* | |
| | Mr. Harris** | |
| | Mr. Smith** | |
| | Mr. Minsch** | |

*Partial Attendance
**Attendance by Topic (s)

LOOK DECEMBER 15, 1970 Volume 34, No. 25

# THE NUCLEAR THREAT INSIDE AMERICA

## HERE IT IS: THE ATOMIC ENERGY COMMISSION ALLOWS STRONTIUM-90 IN YOUR MILK, TRITIUM IN YOUR WATER, PLUTONIUM IN YOUR AIR AND MAKES WALLS GLOW.

For 24 years the Atomic Energy Commission has grown up fat, powerful, unquestioned. Its vast, loyal band of scientists, functionaries, businessmen and politicians talk about "nuclear enhancement," "nuclear events," and "nuclear landscaping," license and run atomic-power generators and weapons factories that dump "radwaste," which will bubble for thousands of years—lasting longer than governments, records, perhaps man himself. AEC has spent $49 billion. It's got friends.

Now AEC is under attack. More than 112 nuclear power plants are promised by 1980. Private citizens have blocked six in 1970. University of Nevada researchers checking the buildup of iodine-131 in cattle thyroids across the West conclude: "The principal known source of I-131 is exhaust gases from nuclear reactors and associated fuel-processing plants."

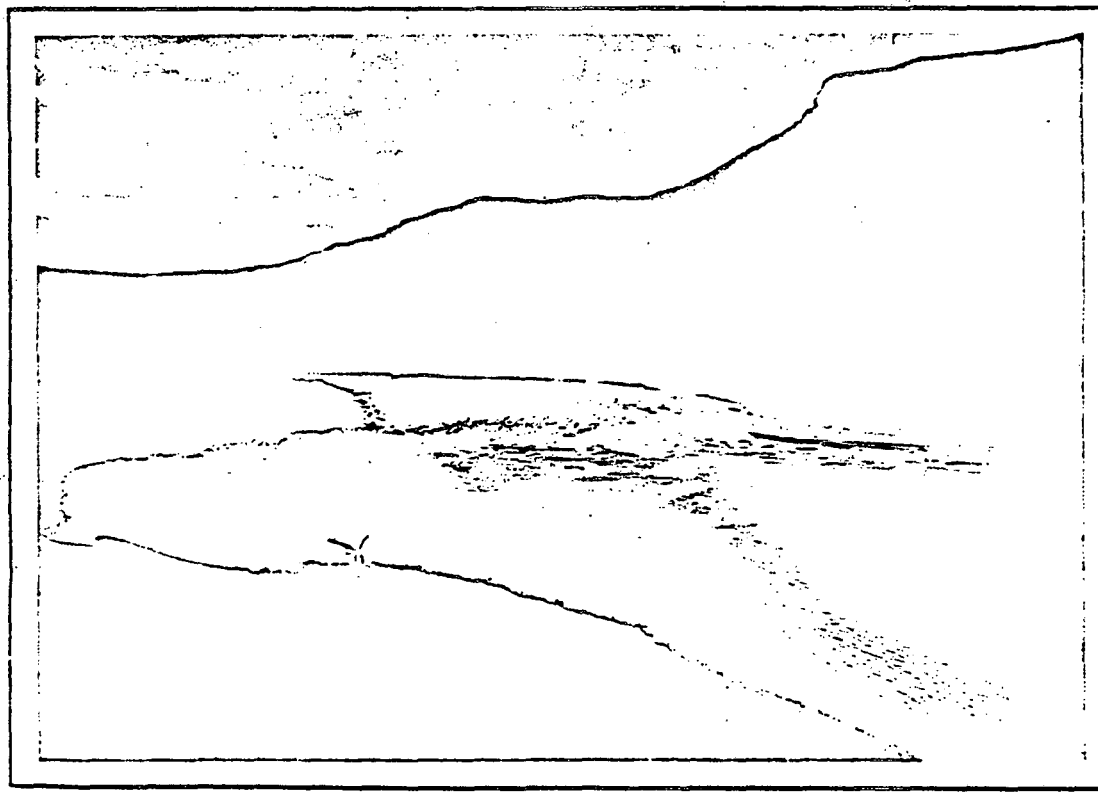
Scientists argue that our underground blasts for research—more than 23 so far this year versus two in Russia—are expensive, repetitive and careless. Radioactive plutonium now covers 250 square miles of the Nevada Test Site. AEC admits the desert is contaminated. "It's going to be contaminated a long, long time," says a spokesman. "That's why we're testing here. That's the kind of thing we have to do."

Many AEC officials are working hard to overcome their reputation. Others are skating fastest where the ice is thinnest. Critics bristle at a nuclear policy run by insiders impatient with environmental questions and want a voice in safety and radiation standards used by the AEC. They argue against AEC's dual role of promoter and regulator of atomic energy. "That," says a critic, "is like letting the fox guard the hen house."

AEC sees its mission as a crusade. Howard B. Brown, Jr., assistant general manager, says: "We have circumnavigated the globe many times over, spreading the gospel about the peaceful atom." Opponents are heretics.

Two of them, Drs. John Gofman and Arthur Tamplin of AEC's Lawrence Radiation Laboratory (Livermore, Calif.), argue that AEC's "safe radiation dose" is unsafe. If everyone got AEC's safe dose, they claim, there would be 16,000 to 24,000 more cancer and leukemia deaths a year in the U.S. They demand an immediate reduction to a tenth of the AEC level.

AEC fumes. "Gofman, Tamplin and their allies are . . . trying their case in the press and other public forums," said James T. Ramey, an AEC commis-



**The AEC spent three years wooing Western Coloradans for Project Rulison—an experimental blast for gas—above the Colorado River (left). PR men promised a boom economy, low taxes, and a tiny 40-kiloton underground nuclear blast. But the AEC's economic "shot in the arm" hasn't been felt. The other shot, however, "was like a train rushing up the canyon," says Lee Hayward of Grand Valley, "then the jolt, a terrific shake. Then the shock wave come through. Cliffs started pouring rocks. It was quite a show, really."**

BY JACK SHEPHERD LOOK SENIOR EDITOR PHOTOGRAPHS BY JOEL BALDWIN

continued

:oner. "We used to call such charac-:rs 'Opera Stars.'"

Dr. Gofman has rebutted: "There s no morality . . . not a shred of hon-sty in any one of them—none. I can ssure you, from every bit of dealing 've had . . . there is absolute duplicity, uaranteed duplicity, lies at every turn, lsehood in every way, about you per-nally and about your motives."

Any exposure to radiation may be umulative; the damage is irreversible. here are five dangers: cancer, leu-emia, genetic defects, fetal and neo-atal deaths. They may take genera-ions to show up.

Radioactivity tends to accumulate n specific tissues and organs. Iodine-31 seeks the thyroid; strontium-90 uilds into bones and teeth, Cesium-37, muscle. Krypton-85 is already con-centrating in our fatty tissues, and this ccumulation could exhaust two-thirds of AEC's "radiation budget" for man for the coming century.

Critics charge that the present standards don't consider concentration, or accumula-tion, that all radiation dam-ges cells, that there is no safe limit or threshold. AEC standards come from wo groups of scientists and the Feder-al Radiation Council, which also bal-ances risk versus benefits.

Dr. Gofman believes: "Citizens . . . will be puzzled by benefit versus risk calculations, where the benefits are ex-pressed in corporate profits and the risks expressed in cancer, leukemia and genetic diseases to themselves and their children."

On Sunday, May 11, 1969, the most expensive fire in American industrial history burned through building 776-777 at the AEC's Rocky Flats plant near Denver. That $45 million fire tells much, good and bad, about the AEC.

The fire alarm that rang at 2:27 p.m. had a familiar sound: Over 200 fires have occurred at Rocky Flats since 1953. The plant, run under con-tract by Dow Chemical Company, makes plutonium triggers for hydrogen bombs and missiles. An AEC press re-lease brags: "Rocky Flats ranks first in AEC facilities for safety and holds the fourth best all-time mark in Ameri-can industry. . . ."

Plutonium discs—3" x 1"—burned in uncovered cans in Glovebox 134-24 and spread to cellulose laminate stor-age cabinets. The fire went uncon-trolled for more than four hours. Some $20 million of plutonium burned, enough to build 77 Nagasaki-size atom bombs. AEC assured Coloradans: "No appreciable amount of plutonium es-caped from the building and no off-site contamination resulted from the fire."

That was a lie.

Dr. Edward A. Martell is a West Point graduate, a former program di-rector for the Armed Forces Special Weapons Project, and now a biophysi-cist at the National Center for Atmo-spheric Research in Boulder. Martell asked Dow for soil samples to check if plutonium had carried beyond the plant. Dow and AEC did nothing. Martell and an aide circled the plant and took 20 soil and seven water samples.

They found: Two to four miles east of the plant, plutonium "of Dow Rocky Flats origin"; that was "five to 300 times" normal readings of plutonium fallout from all nuclear testing. "The estimated total plutonium deposited in off-site areas which we have examined so far is in the range from curies to tens of curies. Depending on the amounts deposited nearer the plant and in other areas, the total could be much greater. Stack effluent data furnished by Dow Rocky Flats indicate that the total stack release during the past year . . . was less than one millicurie. The ac-tual off-site accumulation of plutonium is at least one thousand times greater."

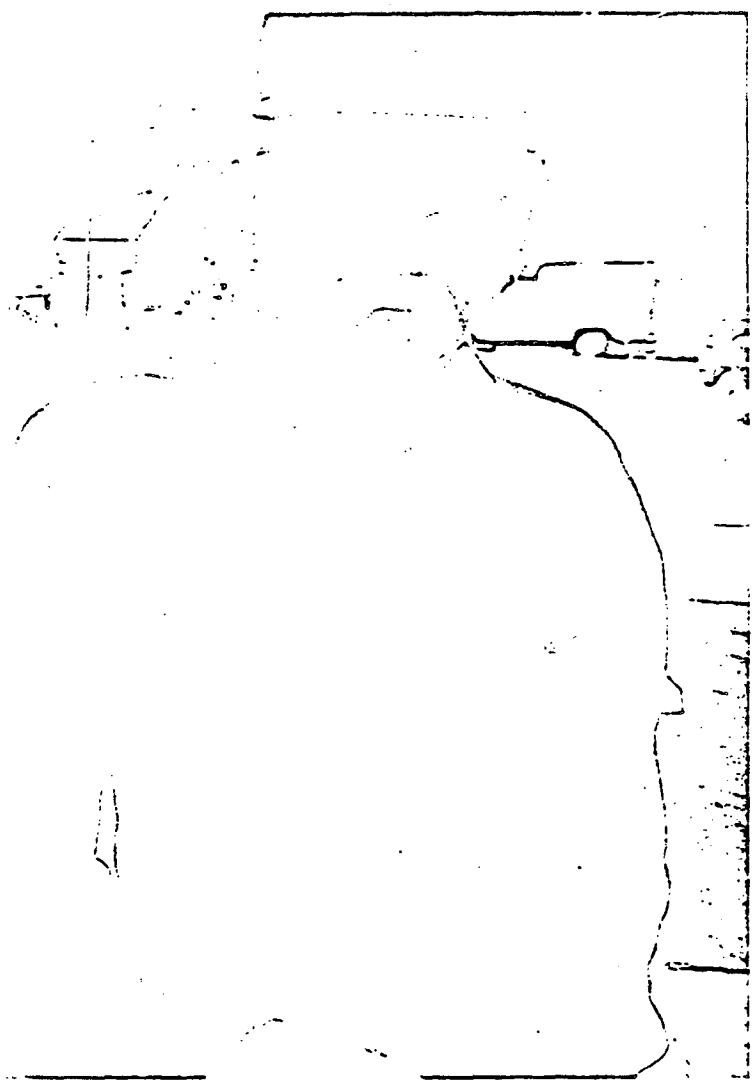
An AEC commissioner has called plutonium a "fiendishly toxic" sub-stance. Its radiation destroys lung tis-sues and may cause cancer.

Winds at Rocky Flats sometimes reach 120 mph and kick up dust clouds. Almost half of Colorado's population lives within 25 miles of the plant. Den-ver is 16 miles downwind. So are the suburbs of Westminster, Broomfield Heights and Arvada. Broomfield draws its water from the Great Western Res-ervoir. Martell found the highest plu-tonium concentrations at the reservoir.

A 1965 fire exposed 400 Rocky Flats workers to high concentrations of plutonium in the air; 25 workers got up to 17 times the permissible level. In one 18-month period, there were 24 fires, explosions, plutonium spills and contamination incidents. Some 325 workers have been contaminated by the radiation since 1953. Fifty-six work-ers got cancer; 14 have died. Still, says Lloyd Joshel, general manager of Rocky Flats, "Radiation may very well be good for you."

Martell discovered one other plu-tonium source. Since 1958, Dow had stored machine cutting oil with high plutonium concentrations outside in 1,-400 55-gallon drums. Some drums were buried. The drums corroded, the oil contaminated the soil and the winds blew plutonium dust toward Denver. In March, 1967, air-filter samples in Den-ver showed ten times more plutonium than anywhere else in the U.S. Last year, Dow covered the contaminated two-acre area with a four-inch slab of asphalt. Coloradans want Dow to dig it all up and truck it to an AEC burial site. Last spring, Dow began digging up some barrels. Not all the pits have been located. Company records are vague about the locations.

Such short-term disposal doesn't



**"YOU COULD SEE THE SHOCK WAVE,"** says Jim Drinkhouse (below), editor of the Rifle *Telegram*, "like taking a carpet, shaking it and making a roll. Nobody should use that kind of

power here. At first, people said, hell, we need the money. Anything that looks like progress looks good to us." But he, and others, found the AEC "too phony," and possible radioactivity changed their minds. Otto and George Letson (left) still don't worry: "I don't think the Government's stupid," says Otto. "Naw," says George, "look at the Japs. They didn't suffer from radiation."

work with plutonium. It takes 24,360 years for only half of plutonium's radioactivity to decay.

In discussions last April 10, at the Joint Committee on Atomic Energy offices in Washington, Rep. Chet Holifield, chairman, met with members of the Rocky Flats union, AEC and others. Holifield complained about "these professors who have been scratching around in the sand trying to find something wrong within the radius of 50 miles" of Rocky Flats. He was worried about the drums of "hot waste": ". . . You know the problems this sort of thing can create from a public-relations standpoint. It can be magnified many times by these sensationalists." Capt. Edward Bauser of the Committee spoke up: "Mr. Chairman, I don't think we know right now whether it was an authorized burial or not. It was a very poorly supervised thing."

Holifield then replied: ". . . This would be a very serious thing if Dow was taking upon itself the burial of plutonium waste without going through established procedures. I would assume if this is low-level waste that there would be probably a prohibition against this convenient burial and that it should have been put in some permanent high level waste burial ground like we have at Hanford."

Capt. Bauser: "I don't know, but I doubt if that site is an authorized burial site for any level waste." Someone thought barrels had been buried outside the plant's fence. Holifield: "Then they had better build a new fence. . . ."

The AEC can't fence its mistakes in western Colorado. Vast uranium deposits were discovered by the early 1950's, and, by 1960, there were 1,000 uranium mines across the West. AEC published its first price schedule in 1948. But it wasn't until July, 1967 that any safety standard was enforced for uranium miners. Then it was too late.

By the end of 1966, 98 uranium miners had lung cancer. A report projects 1,150 cases by 1985.

About 90 million tons of waste ore, or tailings, piled up outside 35 uranium mills from Texas to Oregon. The tailings emit gamma radiation. Excessive exposure can result in leukemia. Radium from tailings decays into radon gas and its daughter products, which cause lung cancer.

Of 26 mills still operating in 1963, ten discharged liquid effluent into streams. In 1958-59, the Animas River below uranium mills in Durango, Colo., contained almost "300 percent" of the maximum daily intake for radium. Crops raised on farms irrigated by the Animas River had twice as much radium-226 as crops irrigated with clean water.

By 1960, the radium downstream was still 20 times higher. It didn't reach acceptable limits for 60 miles. Radium from tributaries of the Colorado mixed with sediment and moved downstream to Lake Mead. Studies of Lake Mead—with its tributaries, a major drinking- and irrigation-water source for seven states—showed radium concentrations in bottom sediments three times the normal level.

By 1966, the U.S. Public Health Service was checking tailings piles. El Paso Natural Gas Company's uranium tailings in Tuba City, Ariz., on Navajo land, showed radium radiation levels up to 1,000 times the average background. Gamma radiation was 12 times the level. El Paso came in and covered the pile. Tailings at the empty A-Z Minerals Corporation mill in Mexican Hat, Utah, in May, 1968, also Navajo land, had radon-gas concentrations around the pile up to five times the maximum level.

Things were worse in Grand Junction, Colo. For 15 years, builders removed 300,000 tons of tailings from the American Metal Climax mill's pile. The gray sand-like material was used to level ground for concrete slabs, as back fill around basements, and underneath the Main Street mall and in children's sandboxes.

The Colorado Health Department first warned residents in 1966 against radon-gas seepage. Some basement walls glowed. G. A. Franz III, the state-health physicist in Grand Junction, started sampling the air in the homes. This fall, ten teams are checking all 6,500 buildings in town. So far, of 534 buildings checked, 95 have excessive gamma radiation or radon gas. One has 180 times the acceptable level.

Colorado and other states are doing an excellent job stabilizing the tailings piles by leveling and covering. AEC says of the mill tailings: "We aren't responsible for them."

Elsewhere, AEC's Nevada Test Site is riddled with fractures wide enough for a man to stand in. An internal AEC study recommended in 1968 that underground nuclear blasts above one megaton not be made at the Nevada site because of the chance of radioactive leakage through the fissures. A 1969 report by the U.S. Geological Survey said that all large tests in Nevada had been followed by earthquakes. One shot caused earthquakes out to 387 miles for 18 hours. Another created 10,000 earthquakes for nearly four months.

Operation Plowshare is AEC's idea of peaceful development of nuclear energy. There have been 14 ventings of radioactivity from underground tests since the 1963 Nuclear Test Ban Treaty. These ventings have blown 200 to one million curies into the air per explosion—equal to a Hiroshima bomb. These shots violate the National Environmental Policy Act. Project Schooner was a 1968 chain explosion of nuclear

continued

devices in an excavation test. It violated the Nuclear Test Ban Treaty. Radioactivity from Schooner was measured in Mexico and Canada.

In fact, Plowshare has found the treaty a bit of a damper. In 1969, Reps. Craig Hosmer and Chet Holifield sponsored an amendment to the Atomic Energy Act, to excuse Plowshare from Test Ban Treaty restrictions. The "Plowshare Amendment" still sits in the Joint Committee.

Project Rulison was a 40-kiloton Plowshare shot September 10, 1969, 8,431 feet below Grand Valley, Colo. It combined private enterprise with the AEC. Austral Oil Co., Inc. footed 90 percent of the bill. CER Geonuclear Corp. advised. Rulison was a test to see how much gas can be freed from the Mesa Verde rock. If Rulison succeeds, it may lead to a series of 100 kiloton shots, two a year, for perhaps ten years. Rulison was based on the argument that we are short on natural gas. Yet we export 50,000 million cubic feet of it a year to Japan alone.

Coloradans brought four lawsuits against AEC over Rulison: AEC was forced to make public daily radioactivity readings from the flaring (burning off of gas). Dr. John Emerson of the Colorado State Health Department says, "We may have picked up radioactivity two-three times the background for tritium at the site. . . . We don't expect to find any increases elsewhere. But, of course, we haven't reached the high level of flaring yet." That level comes this winter.

Strontium-90, iodine-131, krypton-85 and tritium might enter water and plants. David Evans, a geologist at Colorado School of Mines worries about radioactivity getting into the groundwater, flowing into the Colorado River and the Southwest.

Ruth Kiesler, mayor of Grand Valley, is also uneasy: "I've always felt pretty secure by what the AEC said about safeguards. . . . Now, I'm not sure. They seemed more concerned about the dollars and cents than people."

Dollars play a big role in nuclear reactors. AEC licenses nuclear reactors. (Interestingly, there are no physicians, biologists or geneticists on AEC's Safety and Licensing Boards.)

Nuclear power plants provide only 1.2 percent of the country's total electric power. But the demand for electricity is doubling every ten years. AEC estimates that nuclear power plants will furnish 25 percent in ten years, almost 60 percent by 2000.

To meet this demand, AEC has spent $2.3 billion to make nuclear power plants safe, profitable and competitive. In fact, nuclear reactors discharge low-level radioactive gas and liquids into the air and water. Highly radioactive wastes must be shipped for reprocessing or permanent burial. David E. Lilienthal, former AEC chairman, says ". . . You cannot have an atomic power plant unless you produce large quantities of radiation."

A 1957 AEC study, WASH-740, shows what would happen to a hypothetical reactor of 100-200 megawatts, near a large body of water and about 30 miles from a major city of about 1,000,000 if it became super-critical and all safety devices failed.

WASH-740 predicted an explosion that would kill 3,400 people up to 15 miles away, injure 43,000 up to 45 miles, contaminate up to 150,000 square miles—about the size of California—and damage property to $7 billion. Such a catastrophe, says AEC, is unlikely.

But plants of 1,000 megawatts—five times the WASH-740 plant—are planned for Illinois, Michigan, California, Alabama, New Jersey and Pennsylvania. By 1990, most nuclear power plants will be 1,000-4,000 megawatts, a few up to 10,000.

How safe will these plants be?

In 1966, there were 42 accidents at nuclear plants around the world, 37 in the U.S. Six U.S. plants had more than one accident. These included fuel-rod leaks, control-rod failures, explosions in beam tubes, fission gas release, fuel meltdown and plugged cores.

•On October 10, 1957, the Number One Pile (reactor) at the Windscale Works in England malfunctioned, spewing radioactivity and contaminating milk and vegetables over a 400-square-mile area. *All* the reactor's safety features failed.

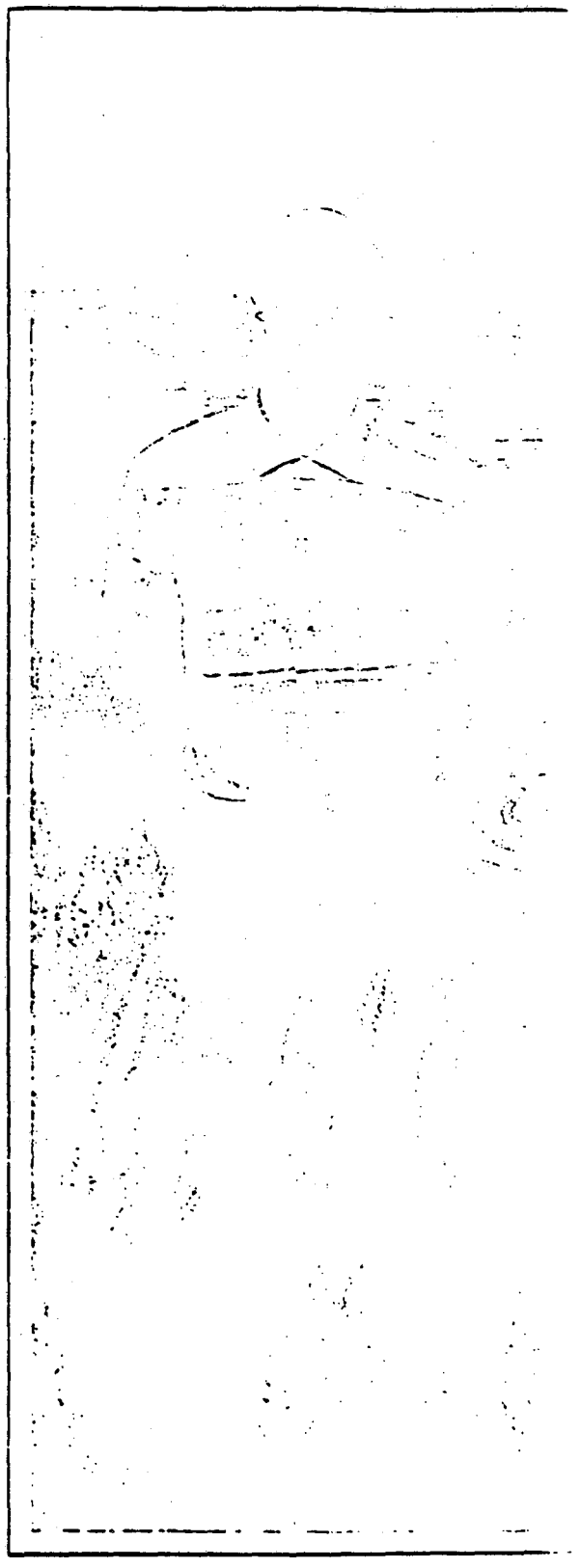
•In 1961, an accident at the SL-1 reactor in Idaho killed three workers.

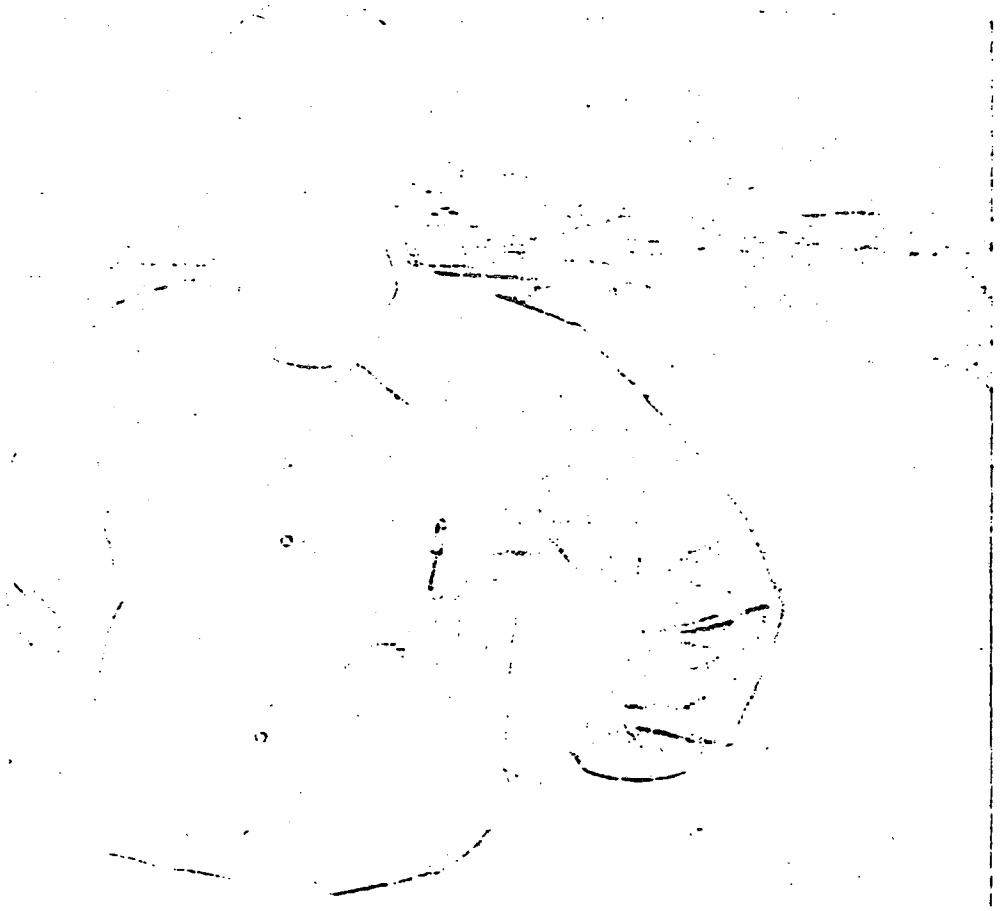
•In 1966, the Enrico Fermi plant, within 20 miles of Detroit, nearly had a WASH-740 runaway. A piece of metal blocked the liquid-sodium coolant, causing fuel to heat up dangerously. Fermi was broken down for four years.

Sloppiness, error and surprises abound. At the Big Rock Point Nuclear Plant, a reactor near Charlevoix, Mich., control rods stuck in position, studs failed or cracked, screws jostled out of place and into machinery, a valve malfunctioned, foreign material lodged in critical moving parts, welds cracked at 16 points. At Humboldt Bay in California, fuel tubes cracked because cheaper stainless steel had been used instead of a more reliable alloy. Workers repaired the cracks, and the plant broke down again. AEC files show error elsewhere: 3,844 pounds of uranium hexafluoride lost owing to a mistake in opening a cylinder; a $220,000 fire in a reactor because of accidental tripping of valves by electricians.

In Illinois, the Advanced TRIGA Reactor was humming along at 1.5 million watts last spring. Someone flushed a toilet, which dropped the main water pressure, which stopped a pump that stopped another pump, which triggered a safety device, which shut down the reactor.

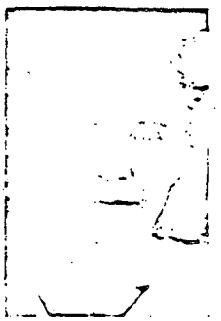
"Once a bright hope, shared by all mankind, including myself," Lilienthal said, "the vast proliferation of atomic





CHIMNEY TOPS COLLAPSED, PLASTER CRACKED,

**cisterns leaked. Bricks toppled off the Grand Valley post office. The AEC had warned about "acceptable damage." Few protested before the shot. Only Phil Antes (far left)**



**spoke out in Rifle. But property damage brought the AEC into local homes. "I don't feel they have the right to disturb one brick," says Jerry Cook (left). "If they have to do this, let them buy the whole town and bust hell out of it." The AEC got 455 complaints and 355 damage claims. By November, 1970, they had paid $90,425.99. Claims in Rifle and Grand Valley alone reached $74,223.39. Austral Oil (AEC's partner in Rulison) paid the first $10,000; AEC, the rest. Ruth Kiesler (above), mayor of Grand Valley, says, "Most people feel the oil company should pay the damages, not come out of taxpayers' pockets."**

continued

power plants has become one of the ugliest clouds overhanging America."

Nuclear reactors require enormous amounts of cooling water. A 1,000 megawatt nuclear plant needs 850,000 gallons of cool water a minute. In one day, 1.2 billion gallons will be sucked in and spewed out 10-30 degrees hotter. By 2000, power plants will cool themselves with about one-third of the daily U.S. freshwater runoff. In low-water periods it will be 100 percent. The hot water, called "thermal enrichment" by AEC friends, decreases dissolved oxygen, increases the toxicity of pollutants, cuts off sunlight to water plants, spurs the growth of noxious blue-green algae, changes the metabolic rates, behavior, reproductive cycles, defense mechanisms and eating habits of fish and other organisms.

Sixteen nuclear plants are operating or ordered for the shores of the Great Lakes. Lake Michigan gets ten. This fall, the Federal Water Quality Administration made a decisive attack on thermal pollution: It wants "no significant discharge" into Lake Michigan. The study of Lake Michigan said heat addition was cumulative and would lead to the death of all fish and plant life within 30 years.

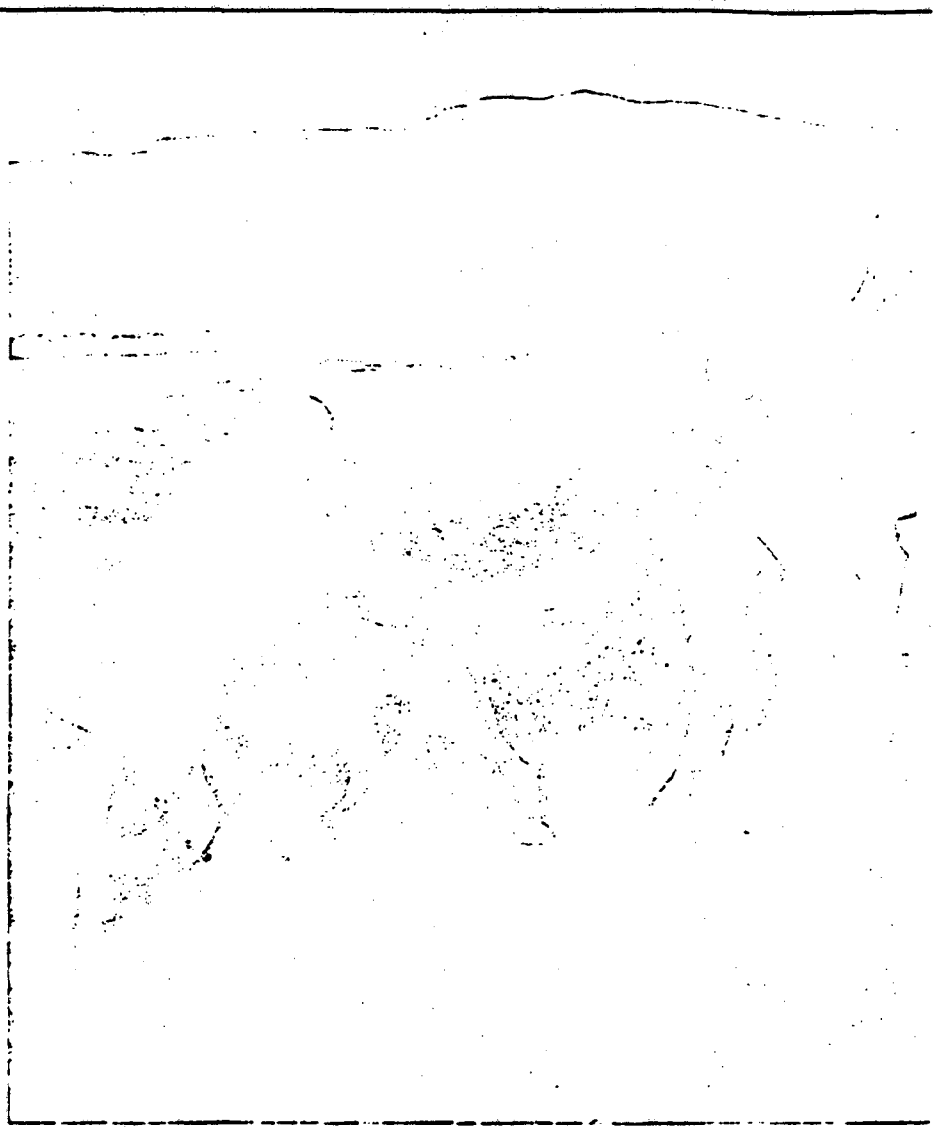
There are choices. Power plants could use cooling towers, ponds or canals instead of lakes and rivers.

Nuclear plants may run out of fuel. Dr. Dean E. Abrahamson, in a pamphlet *The Environmental Cost of Electric Power*, says: "Because the reserves of natural uranium in commercially recoverable deposits are extremely limited, today's reactors cannot operate for more than a very few decades without exhausting the total world reserves of uranium-235. . . ." Uranium demands will be about one million tons in 2000. Counting all uranium reserves and AEC estimates of undiscovered resources, there will be just 1,020,000 tons available that year. Then it's gone.

AEC, which has grabbed 84 percent of the Federal energy-research dollar for the past 20 years, is spending more than $2 billion on fast-breeder reactors that could extend the nuclear supply. Little research is being done on solar power, tidal energy, geothermal power, magneto-hydrodynamics (MHD), fuel-cell generation, gas turbines, even garbage incineration for power. The areas of most promise, fuel cells, solar power, MHD, will get just $300,000 for research this year.

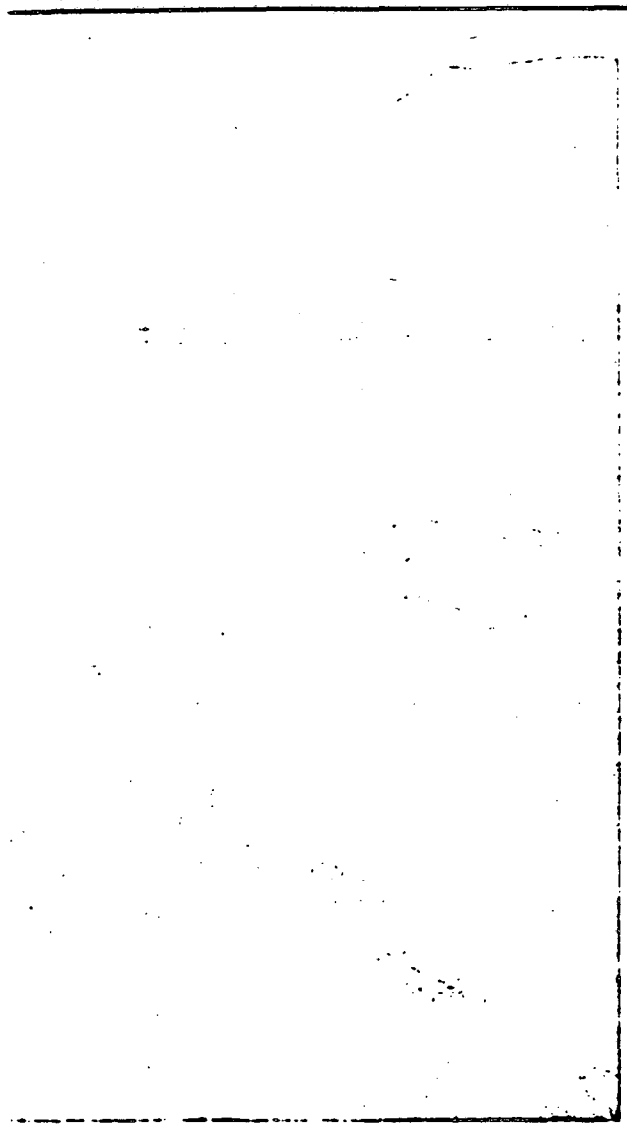
All nuclear plants and nuclear-weapons making produce waste. Fuel assemblies must be removed from reactors and shipped to reprocessing plants where contaminants are separated from the salvageable fuel. Liquid residue is highly radioactive, and must be stored until safe.

Some low-level waste is diluted and discharged into the environment. This waste, says an AEC pamphlet, can "have no more than about 1,000 times



## RADIATION COULD RUIN THE EAMES' 84-ACRE RANCH

**Willard (above) and Ruth Eames live three-and-a-half miles from the site. They want to retire to Arizona, but "the blast stopped at least two cash deals for our farm." Town officials in Rifle filed no claims on any public buildings. Townsfolk filed 114. An AEC-hired engineering firm found damage at the Rifle swimming pool and the Ezma Lewis Elementary School. L.W. "Lefty" Green, school superintendent, disagrees: "You can hardly say there was any damage. We don't feel like there was any at all." Austral Oil was very good to Rifle. In 1967, it donated $5,000 to improve the athletic field. And in 1969, Austral gave again. "We needed some outside toilets for our football field," says Green. "Told them we'd purchase them, but they insisted on donating. They were just ole portable units used at the Rulison site." Mayor Lesley Estes and his wife went to Houston for four days in 1969 as guests of Austral. Austral later gave Estes and others cuff links. His trucking company hauled all the pipe for the Rulison shot—17,000 feet of 10¾ inch. Estes also used a Ford Bronco from Austral: "I helped out in public relations." On August 27, 1969, as lawsuits held up the shot, Estes sent a telegram to Colorado politicians: "Rifle City Council . . . unanimously favors firing nuclear device in Rulison field**



**:s scheduled. Lesley Estes, Mayor." He maintains, "I had the authorization of the city council. . called 'em each up and asked if this was OK, and they upported me." At east one councilman never got the call. The shot went :! two weeks later. another councilman owned the Shaler Hotel. "A lot of Austral and AEC boys stayed there," ays Estes. "Why 'll bet they're all down there right now." Estes is retired. The new mayor, Bill Tadus, argues: "They all said there'd be radiation from the flaring [burning gas]. Well, we're flaring now, and I don't see no radiation coming down." The Rifle *Telegram* editorializes: "We certainly wish the AEC all the luck in the world, since our lives may depend on it."**

the concentrations considered safe for direct release." Some 650,000 cubic feet of low-level junk was buried at AEC-licensed plants in 1969. There will be one million cubic feet this year, three by 1980.

High-level waste contains hundreds to thousands of curies per gallon from the chemical processing of nuclear fuels. This waste, says AEC, poses "the most severe potential hazard. . . ." AEC stored 100,000 gallons this year. By 1980, commercial nuclear reactors will produce some 3.5 million gallons of high-level waste a year. AEC already has 80 million gallons of high-level waste stored in 194 underground tanks. It may boil for ten centuries.

By 1963, AEC had reported 47 accidents in waste shipments by public transport: 18 spills; 15 "severe impact accidents." Eleven storage tanks at the Hanford Atomic Products Operation have leaked "some liquid into the dry soil under the tanks." Only 180 feet separates the tanks from underground water. Hanford also dumps diluted waste into the Columbia River, where river plankton now average 2,000 times the radioactivity in the water; fish, 15,000; ducks feeding in the river, 40,000 times; young swallows fed on river insects, 500,000 times. Four ducks recovered by AEC at Hanford had radioactive phosphorus-32.

A report by the National Academy of Sciences, which AEC requested and sat on for four years, advises against dumping high-level wastes at its Savannah River Plant (SRP). Still, AEC has gone ahead with $1.3 million for a 2,000 foot shaft into the bedrock below the plant.

The NAS report warned AEC about escape of radioactivity from the bedrock and recommended that the bedrock studies be stopped. "At the same time," it said, "the entire Committee urges against any thought of permanent storage or disposal of high-level wastes above or in any of the fresh-water aquifers at the SRP site. . . . Apparently the only safe disposal for high-level wastes would be an off-site disposal, presumably involving solidification, before transportation."

Also: "None of the major sites at which radioactive wastes are being stored or disposed of is geologically suited for safe disposal of any manner of radioactive wastes other than . . . very low-level liquids. . . ."

AEC is trying to get permission to bury these wastes in a Lyons, Kan., salt mine. The Kansas Geological Survey has refused to endorse the AEC plans until completing a two-year study on the area's geological safety.

And the NAS committee? "AEC's concerns over the report were not resolved before the decision to dissolve the committee and replace it with one having a broader spectrum of scientific discipline." Like obedience.

If the AEC is lax in handling radioactive wastes, what will be the record of commercial firms?

Nuclear Fuel Services, Inc., of West Valley, N.Y., is the only private company now reprocessing irradiated nuclear-reactor fuel. It's on a 3,300-acre, state-owned site 30 miles from Buffalo. Most nuclear reactors in the Northeast ship to NFS. Every 404 days, for example, the Yankee Atomic Power Reactor in Rowe, Mass., puts 8,000 to 10,000 highly radioactive 12-foot fuel rods on a special flatcar with its own cooling system. The Boston & Maine Railroad hauls it to NFS. But B&M has its difficulties. In April, 1969, there were three accidents in a week on the line.

NFS dissolves the reactor rods in a solution and processes this nuclear soup—to reclaim the fuel—through chemicals. There's waste. "The cheapest thing to do," says the AEC, "is pour it down the nearest stream." That's Buttermilk Creek.

In 1968, scientists from Cornell went, AEC reports, "under the fence." They got samples from the holding ponds and Buttermilk Creek with 36,000 to 100,000 times the maximum permissible radioactivity.

AEC warned NFS in a letter May 31, 1968: ". . . release from the NFS plant should be significantly reduced. . . ." NFS, on July 9, 1969, applied to AEC for permission to drill a 6,000-foot well for discharge of radioactive wastes. On May 27, 1970, AEC responded by urging that NFS put in more chemical cleaning processes. NFS still has its proposals to make.

The New York State Bureau of Nuclear Engineering, formerly the Radiological Bureau, has checked NFS: "Our surveillance program has detected a reconcentration of radionuclides, such as strontium-90 and cesium-137 . . . in fish and wildlife around the facility."

There are 389 dairy herds within ten miles of NFS. About 240 square miles of the nearby land is used as a source of public-water supply. One public system is within five miles, six more within ten. The New York State Public Health Department's *Radioactivity Bulletin* lists water radiation levels near NFS at ten times the AEC limit.

How serious are all these wastes? Dr. L. P. Hatch of the Brookhaven National Laboratory says: "If we were to go on for fifty years in the atomic power industry, and find that we had reached an impasse, that we had been doing the wrong thing with wastes and we would like to reconsider the disposal methods, it would be entirely too late, because the problem would exist and nothing could be done to change that fact for the next six hundred or a thousand years."

Now we must all ask: Should ecologists be added to safety and licensing boards? Should underground weapons testing continue? Should any further blasts for gas be made? Is the state of the art advanced enough so that under highest possible safety standards, utilities can go ahead with nuclear power?

END

to a loss of their position in the field and a loss of their proprietary secrets to Sandia. This seems to have the potential for a serious controversy that could lead to another GAO investigation.

I also brought up another subject with Giller. I indicated that in the present climate it seems likely that the U.S. will become committed to a comprehensive test ban within a couple of years and, therefore, he and the directors of the weapons laboratories should think in terms of rearranging their underground weapons testing schedule with this in mind. Giller indicated that he would think further about this and perhaps explore it with the weapons laboratories' directors.

I had lunch with Julie Rubin, Stan Schneider, Syd Gaarder and George Sakalosky at the World Buttery, which we followed with a walk around Lafayette Square. It was a beautiful, sunny day.

Tom Paine dropped in to see me about 3:30 p.m. He wanted to discuss a number of matters in connection with his new responsibility as head of the Power Generation Group of the General Electric Company. He said that he is interested in the future of the uranium enrichment business. I described our attempts to get information concerning this into the private domain so that industry can get a feel for the problem in a timely manner and decide whether they want to enter the field. Tom said that he thought the nature of the uranium enrichment business is such that financing of new plants from Wall Street is quite conceivable. He also said he is interested in the future of the breeder reactor. We discussed this program in general, and I indicated that the metal-cooled reactor is still the Commission's first priority approach, although we do have some interest in the gas-cooled fast breeder as well. He said he had talked to Flanigan about the funding for the fast breeder reactor and got the impression that funding will be adequate in the FY 1972 budget. He also raised questions about delays in the licensing process. I indicated that this is of great concern to the Commission and we are spending a great deal of time on it. One of the directions we are looking is toward early licensing of reactor sites. We also discussed, in a general way, the anti-science attitude (or, at least, the general disinterest in or distrust of science and technology) that is developing. He indicated that the present Administration and its non-progressive attitude toward the space program, etc., certainly contributes to this malaise.

Helen and I attended a reception in the Arts and Industries Building of the Smithsonian Institution given by the Secretary of the Smithsonian Institution together with the U.S. Atomic Energy Commission and the General Electric Company in honor of the successful operation for one year of the first nuclear electric power device on the moon. The program consisted of a general introduction by Dillon Ripley, Secretary of the Smithsonian. He then introduced me and I made a few extemporaneous remarks. I expressed my pleasure concerning the occasion commemorating the first use of nuclear power on the moon. I recalled that I was at the NASA Manned Spacecraft Flight Center in Houston when Apollo-12 astronauts Bean and Conrad placed the SNAP-27 generator on the moon and also my moments of concern when Bean had trouble removing the Pu-238 capsule from its transport container and my relief when this problem was solved through the use of a hammer by Conrad. I said that this SNAP-27 project is in addition to the use of the SNAP devices in NASA weather satellites and will be followed by the use of SNAP devices in the Pioneer spacecraft of the Jupiter probe and on the generators that will land on Mars. I also mentioned the future role of the nuclear rocket and of multi-kilowatt electrical power reactors in potential space missions and I indicated that the Apollo-12 mission is symbolic of nuclear power in space. I said I am glad that one of the world's greatest museums, the Smithsonian, had

seen fit to place the replica on display.

Dr. George M. Low (Acting Administrator of NASA) then made a few remarks and he was followed by Chet Holifield, who gave the main address and made the presentation of the SNAP-27 replica to Secretary Ripley, who accepted on behalf of the Smithsonian. Daniel J. Fink of General Electric then presented commemorative plaques to Milton Klein on behalf of the AEC-NASA joint space effort, to George M. Low on behalf of NASA, to me on behalf of the AEC, and to Chet Holifield and Secretary Ripley. Fink also gave me a personal plaque. All of the plaques were inscribed, "in commemoration of the successful operation of the first nuclear power device (SNAP-27) on the Moon for one year, 19 November 1970."

After the ceremony I talked to Bill Anders, who indicated to me that the decision on what to do about NERVA in the FY 1972 budget is under active discussion in the White House.

After we returned home, at about 9 p.m., Pete called us from Jane's home in New York to give us the sad news that Jane's father died about noon today. The funeral will be on Friday, and Helen and I are going to try to attend.

Thursday, December 10, 1970- D.C.

I called on Vermont Senator George Aiken in his office (Room 258, Old Senate Office Building) to discuss with him his reported request for detailed information on my travels, as an aftermath of Holifield's reference to it in his opening remarks at the hearing on the supplemental budget last Thursday morning. Aiken said he hadn't made any such request, and that he would be satisfied with just general information on the AEC travel budget and the purposes of the travel.

I received a call from Herm Pollack, who said that Alexis Johnson is home due to illness so our meeting with Pastore is a little uncertain at this point. He said if Johnson comes back on Monday, they will make another try; he will let me know as soon as possible.

I had lunch with Bob Silber at the Roger Smith Hotel. He explained to me the proposal under which Science Education Associates, headed by William A. Benjamin, would take over all liabilities and assets of Science Service. It would continue Science News, Things of Science, etc., as profit-making ventures and add to them, but would also continue to operate the International Science Fair, the Science Talent Search, the Science Clubs of America, etc., on a non-profit basis. They would want to execute the agreement by January 31, 1971, contingent on raising the necessary capital by March 31, 1971. If they failed to raise the capital, everything would revert back to Science Service. I said that this contingent possibility gives me great trouble because if this took place, Science Service would be in a bad spot.

When I returned to my office, I called Sherburne and told him about my conversation with Silber and said that I would send the proposal over to get his thoughts on it.

At 2 p.m. Commissioners Johnson, Larson and I met with the following members of the Advisory Committee on Reactor Safeguards: Joseph Hendrie (Chairman), Spencer Bush (Vice Chairman), Harold Etherington, Hibbert M. Hill, Herbert S. Isbin, Warren Kaufman, Harold Mangelsdorf, Arlie O'Kelly, David Okrent, Nunzio Palladino, Chester Siess, Lombard Squires and William Stratton. We discussed the Committee's draft letter report on the use of water-cooled power reactors at

sites more densely populated than those employed to date and the Committee's review of reactor pressure vessels now in progress.

After the meeting Joe Hendrie called my attention to the fact that Isbin's term expires on January 26, 1971, and said the Committee would like to recommend that he be reappointed. There is some urgency to this due to the shortness of time. Isbin is willing to serve again.

At 3 p.m. Commissioners Johnson, Larson and I met with the following members of the Advisory Committee on Nuclear Materials Safeguards: John G. Palfrey (Chairman), Francis Cotter, John T. Conway, Roger Batzel, Ashton O'Donnell, Herbert J. Scoville, Jr., Ernest Wilkins, Charles Thornton and Del Crowson. Palfrey presented the general oral report of the Committee to the group. He called on Batzel (who gave a discussion of the activities of the Research and Development Subcommittee), on Cotter (who covered the activities of the International Subcommittee), and on Conway (who discussed the activities of the Regulatory Subcommittee). Cotter took note of the fact that Glennan has been discussing with Eklund the matter of the implementation of President Johnson's offer to place U.S. peaceful uses activities under IAEA safeguards. Palfrey took note of the Orlando bomb threat (the case of the 11th grade student), indicating that there might be more serious threats, including actual losses of large amounts of fissionable material by theft, etc., and indicating that perhaps this should be discussed with Abe Lincoln (head of the Office of Emergency Planning) in order to prepare methods of handling such situations.

I then went over to the Executive Office Building, where I met from 4:10 p.m. until 5 p.m. with Caspar Weinberger and Donald Rice in Weinberger's office (Room 252) to go over the OMB markup of our FY 1972 budget. The meeting was delayed about ten minutes while Rice went over the markup with Weinberger in a private session just previous to my joining them in Weinberger's office.

They told me that the total in outlays of $2.192 billion and cut of about $100 million below our previous OMB ceiling is made up of the following items. The CIP is to be delayed until the FY 1973 budget and there is no money in the FY 1972 budget. We are to realize $50 million through the sale of uranium concentrates. Both the KE and N reactors at Hanford are to be shut down and no Savannah River reactors would be shut down. There would be no money for the new Nuclear Artillery Shell but Atmospheric Test Readiness would be added to the budget. The Fire and Safety Improvement program would be cut to $36 million at Los Alamos. The gas centrifuge program would be increased to $18 million NOA and $15 million outlays. The NERVA program would be eliminated (the budget actually shows no dollars for FY 1972) and the Zirconium-Hydride Reactor and Compact Converter would be eliminated. There would be an increase in the budget for the LMFBR; the MSBR and the HTGR would be continued; the LWBR would be eliminated; and about $1 million would be added for the Gas-Cooled Fast Breeder. The 200 BeV Accelerator would be in for $38 million NOA and $59 million outlays. The Artificial Heart program is slated to be eliminated, but I convinced them to put it back in for about $1 million.

I protested strongly the shutdown of the two reactors at Hanford, indicating that this negated our years of hard work at mitigating the economic impact of phased shutdowns at Hanford. I also indicated that we should keep something going on NERVA, particularly at Los Alamos. I indicated that it would be a mistake to close down the LWBR after so much money has been spent and when we are now so near to our objective. I protested the deferral of the CIP program, but Rice indicated that it is the President's policy to do everything possible to encourage the private development of uranium enrichment capacity and the feeling is that the foreign and domestic commitments could be met by raising the

tails assay in the enrichment process. I indicated that the sale of uranium concentrates would raise a very difficult problem with the domestic uranium mining industry.

I strongly stated that I think it would be a mistake to increase the price for enrichment services at this time, since this would indicate a price increase of greater than 20% within one year, and the second increase would be announced before the other increase even went into effect. I also mentioned the problem of the loss of $38 million worth of enrichment revenues in the FY 1972 budget through the advance of $52 million worth into the FY 1971 budget and the hardship this would entail, but I was told that this is taken into account in the ceiling figure. I then emphasized that the new price increase for enrichment services would lead to a loss of $65 million in the FY 1972 budget due to advances into the FY 1971 budget. This did impress Rice and Weinberger and they indicated that they would add the $65 million to the $2.192 billion figure. I also mentioned the announcement of a price increase now would cause us to lose $55 million to $60 million in the German offset arrangement in the FY 1972 budget (due to advances into the FY 1971 budget). They weren't familiar with this so I explained it to them, but they did not regard this as something that should be added to the FY 1972 budget since it is a new source of revenue, not counted on in making up the FY 1972 budget.

They told me that Holifield is going to be briefed on the budget and that this would probably occur on Monday. I made a strong request that they allow me to come back with some appeals at their level before or rather than going to the President, and they finally agreed that if I could have something written by Monday morning, they would read it then and get in touch with me on Monday to discuss it with them before the conference with Holifield.

After the above meeting I met with Rice alone and discussed the question of Hosmer's conference with Kriegsman and Rice in which he suggested limiting private industrial involvement in the enrichment program to the manufacturing process (that is, Hosmer would rule out at this time operation of new enrichment plants by industry). I emphasized the importance of getting Hosmer's support, lest the Administration lose another one as they did with the uranium enrichment directorate and the new uranium enrichment criteria when Hosmer joined Holifield in opposing these items. I pointed out that if we start to do it the way Hosmer suggests, Hosmer might have a chance of convincing Holifield to go along. I indicated confidentially to Rice that a change to a broader involvement of private industry could be contemplated sometime after the program gets underway. I told Rice that the price the AEC is recommending for enrichment is $31 per kilogram of separative work. He indicated that although he would prefer something higher, he would go along (at least, I got that impression).

Suki and I took a hike in the Fort Reno area on the west (Belt Road) side.

Friday, December 11, 1970- D.C.- New York- D.C.

I called Craig Hosmer and told him I talked to Don Rice yesterday, but that I wanted to get information directly from Hosmer about what his plan would be concerning private involvement in the enrichment process. He said that he and Holifield have been discussing this. His thought, roughly, is that the issue right now is new capacity, when it's going to be decided upon, and who is going to supply it. Despite the more optimistic estimates, he thinks we are close to the wire on a decision. If one talks about 1980 for power on the line, if one goes to diffusion, then there is seven years' lead time, which brings us to 1973 when the work has to commence. If we go with centrifuge, that might be something else. Either the U.S. or the Europeans will have to do something

about it, and he thinks the overseas people would be ideal because that would give us more time. To make the decision, he said, one would have to give the Europeans a certain amount of information so that they could evaluate the choice between diffusion technology going on line in 1980 and whatever they estimate their own centrifuge capability to be. What they need to consider is whose plant to buy, which is largely economic information. To avoid the problem of giving it to the Europeans one would have to bring some Americans in on it at the same time.

Hosmer said the decision about who will pick up the next plant has to be made by the end of 1971. If we give Europe information on diffusion technology, then we have to give it to our industry, too, but they don't have to get into the centrifuge at all. If the Europeans pick up the gaseous diffusion plant, the heat is off us on developing the centrifuge; if they don't, we have to accelerate our decision on the centrifuge. This decision should be got out of the way in the next eight or twelve months. He also said that we shouldn't cloud up the situation by bringing in American industry all over the lot.

I asked whether we couldn't do something on the centrifuge without waiting for the diffusion decision. He said it will be the Europeans who will be deciding between American diffusion and European centrifuge technology. If they decide to buy the diffusion plant, that pushes back by five years the date when we Americans have to think about increments of additional capacity. If they don't buy it, then the pressure is on us now instead of five years from now to resolve between another diffusion plant or the centrifuge route. He said he doesn't want to mix up the two processes because one can begin to accelerate the need to solve too many problems: patents, anti-trust, etc. He said there will be plenty of time for American industry to come in on the centrifuge.

I said I am not sure that Don Rice understands it this way. Hosmer said Rice doesn't know about this plan yet because this has just been developed as a compromise in order to meet some of Holifield's objections. Hosmer said he and Holifield discussed this for a couple of hours on Tuesday, December 8th. He said his constant desire is to keep this issue on private ownership delayed until 1972 "when we know who will be President." He reiterated that if we wait eight to twelve months for the decision, then we can bring the centrifuge people in on a leisurely basis. I said I am not sure that I agree with that. I said I would like to prevent a confrontation and, therefore, I would like to call Rice and tell him how Hosmer stands on this, and maybe Rice could call him. Hosmer said that would be fine. He then added: If only the White House people would listen, instead of getting on their high horse and saying, "This is it." He said Congress can sit tight, too, and it just won't be run over. I said I would just plead with him to maintain a little flexibility with the White House.

I then called Rice to tell him I have got a reading from Hosmer on this private involvement in the enrichment process that Hosmer has been talking to Holifield about. I said he seems to have made progress in the process of this, but he has changed what he thinks should be done. I told him Hosmer would like to get the European thing settled first and go to them with the gaseous diffusion proposal and bring our industry in on it at the same time, and hold the gas centrifuge in abeyance until that is settled, and then go into gas centrifuge without industry. I said I asked Hosmer whether this isn't a change on his part, and he said it is because he couldn't get anywhere with Holifield with the other plan. Hosmer feels he can sell this new compromise plan. I said I made the strong point with Hosmer to maintain the maximum flexibility when he is talking to the White House and not entrench himself on something like this. Rice remarked that this adds a fourth alternative. He said this seems to present a convincing argument that we had better wait until January, after the JCAE chairmanship

changes. I suggested that before he talks to Ehrlichman he should get together with Hosmer, which he said he would do. He asked me to tell Commissioner Johnson about this so that he wouldn't be expecting a fast answer. (In fact, there is not likely to be any answer for some time.) I asked whether he still wanted to see Johnson and he said no.

Helen and I attended Jack Rosen's funeral, which was held at 10 a.m. at the Fort Meyer Chapel. Rabbi George Vida gave a eulogy and Dodd Starbird and Jerry Tape gave short statements describing Jack's eventful and impressive career.

Helen and I then went to the National Airport, where we took American Airlines Flight No. 96 to Kennedy International Airport in New York, leaving at 11:10 a.m. and arriving about noon. We were met by Roland Ruiz of the New York Operations Office, who drove us to the Jeffer Funeral Home (4620 Fort Hamilton Parkway in Brooklyn), where we attended the funeral services for Robert Rubenstein, Jane's father. Here we met Pete and Jane, Jane's mother Shirley Rubenstein, and a number of relatives, including: Mr. and Mrs. Adam Trepel (Jane's maternal grandparents), Mimi Jordan (Shirley's sister), Doris Leberfeld (also Shirley's sister, on crutches) and her husband Al, Richard Trepel (Shirley's brother), Arthur Rubenstein (Robert's brother) and his sisters Myra Purmell and Evelyn Raben, and Jane's brother Michael (Mickey) Rubenstein. The funeral service was conducted by the Rubenstein's rabbi, and he gave a very moving character picture of Robert Rubenstein that made Helen and me feel that we knew him very well. Following the service we said goodbye to Peter, Jane, Shirley and the others. They proceeded to the burial in a graveyard way out on Long Island, near Brookhaven, where they have a family plot.

Ruiz drove Helen and me to La Guardia Airport, where I took American Flight No. 406 and Helen took the Eastern shuttle, both leaving about 3 p.m. and arriving in Washington about 4 p.m. I then went to the D.C. office for the rest of the day and Helen went directly home.

Suki and I took a hike in the Fort Reno area on the Belt Road side.

Kevin Edwards and Amy Ballou were Dianne's dinner guests.

An article concerning the controversy over my candidacy for the presidency of the AAAS appeared in today's issue of Science (copy attached).

Saturday, December 12, 1970- D.C.

I worked in the office for about an hour and then went over to the Executive Office Building (Room 305) to attend a meeting of the Domestic Council Energy Subcommittee. Those present were: Paul W. McCracken (Chairman), Edward E. David, Jr. and Dave Freeman (OST), Commissioner Johnson and I (AEC), Alvin Alm (CEQ), Jim Akins (State), Hollis M. Dole and William Rogers (Interior), Lou Engam and John Pearce (Consumers Advisory Council), John Nassikas, Thomas Joyce and George Tomlinson (FPC), William Lee and Robert Miller (Commerce), George A. Lincoln, Anthony Smith and Elmer Bennett (OEP), John Lyon (Transportation), William Ruckelshaus (EPA), Charles Walker, Joel Segall and Murray Weidenbaum (Treasury), Norm Hartness (OMB), Walker B. Comegys, Roland W. Donnem and Richard W. McLaren (Antitrust Division, Justice).

The meeting was presided over by Paul McCracken from 9:30 a.m. to about 11:15 a.m., when he left and the chair was taken by Abe Lincoln. We followed the agenda which was distributed for the meeting.

Hollis Dole spoke on agenda item #1- Oil and Gas Leasing on the Outer

# AAAS Presidency: Controversy Flares over Seaborg Candidacy

The election of AAAS officers is traditionally a placid affair that causes little excitement even within the association itself. The recent pattern has been that two candidates are nominated for each vacancy to be filled, there is little or no electioneering on behalf of the various candidates, and the names which are best known to the approximately 530 voting members of the AAAS governing Council garner the most votes and are genteelly ushered into office.

But this year the election has not followed the traditional script. An unusual behind-the-scenes tug-of-war developed over the slating of Glenn T. Seaborg, chairman of the Atomic Energy Commission (AEC), as a candidate for president-elect of the AAAS. The struggle ultimately became so heated that it burst into the public press across the nation.

The struggle first came to wide public attention in a front-page story in the Washington *Post* on Sunday, 29 November. The article, which was headlined "Scientists Split by Seaborg Candidacy," stated that: "The largest and most powerful scientific organization in the United States is at bitter odds with itself over whether its next president should be Glenn T. Seaborg, chairman of the Atomic Energy Commission." The article went on to assert that "dissident directors" of the AAAS had called for Seaborg to withdraw but that Seaborg had declined. The article also said that reporters for *Science* had prepared an article on the controversy which editor Philip H. Abelson refused to run, an incident which led to the resignation of Daniel S. Greenberg as news editor of this magazine.

The story, which by its nature involved elements of conflict, almost inevitably attracted attention throughout the country. By the end of last week articles had either appeared in, or been prepared for, *Newsweek* magazine, the New York *Times*, the New York *Post*, the San Francisco *Chronicle*, and various science-oriented magazines, among others. The tone of much of the coverage was somewhat negative toward the AAAS. Probably the most vitriolic attack—one which AAAS officials consider highly inaccurate and inflammatory—was made by syndicated columnist Milton Viorst in an article in the 3 December Washington *Star* that was headlined "Science Association's Internal Rot."

### Why Controversy Developed

What had the AAAS done to merit such a bitter attack? Why was the normally obscure AAAS elections process suddenly dragged into the glare of public exposure? The answers appear to lie largely in the changing nature of the AAAS and in new attitudes that have developed among some AAAS leaders concerning the social responsibilities of the scientific community. As a result of these changing attitudes, an internal controversy developed on the AAAS board of directors as to whether it was appropriate to slate a high government official as a candidate for the top office of an independent organization like the AAAS.

The controversy led board chairman H. Bentley Glass to take the extraordinary step of visiting Seaborg to describe the concerns of board members. Ten years ago almost no one would have thought to question the appropriateness of slating an eminent Nobel laureate such as Seaborg. But today, the fact that Seaborg heads a controversial agency that is identified in the public mind with nuclear pollution and the manufacture of atomic bombs caused many directors to have qualms. None of the opposition to Seaborg seems to have been directed at him personally, but rather at the possibility of a conflict between his roles as AEC chairman and as possible head of the AAAS.

After the controversy developed on the board, the news section of this magazine prepared an article outlining the situation and urged that it be run in timely fashion so as to alert the electorate to the nature of the issues involved in the election. Editor Abelson declined to publish the article, largely on the grounds that to do so would constitute "meddling" in the electoral processes of the association in the waning days of the mail balloting. However, two factors have since led Abelson to conclude that an article would now be appropriate. For one thing, the controversy has received such wide public notice that an accurate account of all that transpired seems desirable. For another thing, the balloting ended on 10 December, the day before this issue was released, thus eliminating any question of "meddling" in the election. The winners of the various electoral contests will be announced at a Council meeting in Chicago on 30 December. At stake are seats on the board of directors and on the Committee on Council Affairs, as well as the presidency-elect.

In the contest for president-elect—the lowest rung on the 3-year AAAS presidential succession—Seaborg is opposed by Richard H. Bolt, chairman of the board of Bolt Beranek and Newman Inc., a Cambridge, Mass., consulting firm. Bolt is a distinguished acoustical physicist who has played an important role in AAAS affairs in recent years. He has been active on the board of directors and on the AAAS Committee on Science in the Promotion of Human Welfare. He is also the author of an ambitious resolution, which has been approved by the board and by Council, to expand the association's membership by an order of magnitude and to increase the scale and effectiveness of its work on contemporary problems. The winner of the Seaborg-Bolt contest will become president-elect in January 1971, then president in January 1972, then retiring president and chairman of the board of directors in January 1973.

### How Nominations Were Made

Seaborg and Bolt were originally asked to run for president-elect by the AAAS Committee on Nominations and Elections, which is responsible, under the AAAS constitution, for nominating candidates. That committee is primarily a creature of the AAAS governing Council, a 530-member body consisting largely of representatives of the AAAS affiliated societies. The nominating committee currently includes four representatives of Council and three members of the board; it is chaired by

Athelstan Spilhaus, the current president of AAAS.

Some persuasion was apparently required to get Seaborg to allow his name to be put forward. Seaborg had previously been asked to run for AAAS office in 1963 and again in 1968 (he was AEC chairman in both those years, too), but each time he had declined, citing the press of other duties. In an interview with *Science*, Seaborg said that when he was asked again this year to run for AAAS office he accepted because it would have been "embarrassing or awkward to turn them down a third time" and because he felt he could "adjust my schedule and take on a role at AAAS, if elected." In the opinion of Spilhaus, who is Seaborg's most fervent supporter among AAAS board members, Seaborg was honoring the association and doing it a service by agreeing to allow his name to be put in nomination. "He needs the presidency of the AAAS like he needs a hole in the head," Spilhaus said.

The question of a conflict between Seaborg's AEC duties and his possible AAAS role seems to have been given only slight attention by the nominating committee. Two participants in the committee's 22 June meeting, at which candidates were slated, recall that the question was briefly raised as to whether it was "appropriate" to slate a high government official, but there was little or no discussion and none of the participants indicated much concern over the matter. Nor did Seaborg himself—though he was well aware that he would remain at the AEC for another 5 years—give much thought to the possibility of a conflict. "It didn't occur to me at all—it just didn't occur to me as the remotest possibility," he recalls. Seaborg believes he can resolve any conflict which does arise in "the usual fashion" by absenting himself from discussions and by abstaining from voting on matters that involve the AEC.

Opposition to Seaborg's candidacy does not seem to have developed until after the nominations were publicly announced in the AAAS *Bulletin*, which was mailed to some 130,000 members in September. Several weeks went by with no visible sign of protest against Seaborg's candidacy, but then a highly charged discussion of the implications took place at the board's meeting in October and continued in subsequent informal conversations among board members. One informed count indicates that 11 of the 13 board members have, at one time or another, expressed some degree of concern over Seaborg's candidacy. The spectrum of concern ranged from an opinion that Seaborg should be asked to withdraw to a feeling that he should at least be apprised of the board's concerns so that he could think about the implications of his candidacy. Three board members felt strongly enough to write letters to the board chairman contending the inappropriateness of slating Seaborg. Though the board has no official role in the elections process, the upshot of the board's discussions was that H. Bentley Glass, board chairman, visited Seaborg on 3 November to describe the board's thinking. The discussion was general, and Glass made no formal request that Seaborg drop out of the election race.

Seaborg later told *Science* he "felt at a loss" after Glass's visit because "no names were identified as opposed to my candidacy and no numbers were identified—it was not clear whether one or two board members were concerned or virtually the entire board." Seaborg subsequently consulted with Spilhaus, the head of the committee that had nominated him, and Spilhaus unequivocally urged Seaborg to stay in the race. "I counseled Glenn on no account to withdraw," Spilhaus recalls, "not merely because the nominating committee thought he'd make a splendid president, but also because his withdrawal at that late stage [the ballots were about to be mailed out] would have caused tremendous turmoil." Spilhaus said he also resented the fact that board members were "interfering with the Council's prerogatives" by trying to "manipulate" the election even though the board as such has no official role in the elections process and is not supposed to be self-perpetuating. "Those board members gave themselves a terrible black eye," Spilhaus believes. Ultimately Seaborg, yielding to the urgings of Spilhaus, decided to leave his name in nomination, and the ballots were sent out on 10 November.

Just what were the issues that had the board so upset? For the most part, they involved the possibility that Seaborg's AEC position might interfere with the ability of the AAAS to play a role in public affairs that involve the AEC.

Those who oppose the slating of Seaborg, for example, note that the AAAS Committee on Environmental

Alteration is launching a study of the impact of power plants on the environment—a subject that is apt to necessitate making judgments on the AEC's standards for nuclear power plants. They also note that the AAAS has been asked by Sen. Edmund S. Muskie (D–Maine) to adjudicate charges that the AEC has harassed two dissident scientists, John Gofman and Arthur Tamplin. Though the AAAS has not yet decided whether it should accept such a judicial role, the potential for conflict between the AAAS and the AEC on a number of fronts, particularly as the AAAS expands its public affairs activities and as the AEC becomes increasingly subject to public attack, troubles some board members. They worry not only that Seaborg, being human, might somehow try to influence the AAAS in its handling of AEC matters, but also that Seaborg's mere presence at the head of the AAAS might cast a cloud of suspicion on the objectivity of certain AAAS studies even if Seaborg scrupulously absented himself from any participation.

#### Seaborg's Defenders

Seaborg's supporters, on the other hand, believe the likelihood of a conflict of interest has been blown way out of proportion. They believe he is a man of such unquestioned integrity that he will easily be able to avoid any conflicts that might arise. And they suggest that Seaborg's AEC role might actually serve a useful purpose—by enhancing the ability of the AAAS to affect AEC policies.

Seaborg's supporters also note that the AAAS has confronted similar conflict-of-interest problems in the past and seems to have surmounted them. The late Alan T. Waterman, for example, served as president of the AAAS while he was director of the National Science Foundation. Waterman accepted the AAAS presidency after gaining assurances that neither the AAAS board nor the NSF's governing National Science Board considered his dual role a serious conflict of interest. Similarly, Wallace R. Brode served as AAAS president while he was also science adviser to the Secretary of State. "You can't indict everybody in government," says Spilhaus. "You can dream up possible conflicts for anyone who has the stature to be president of the AAAS. If you exclude everyone from business, government, and academic science who might conceivably have a conflict, you end up with nincompoops who have never said anything about anything."

There is similar disagreement as to how Seaborg's leadership of the AAAS (should he win the election) would affect recently launched efforts to recruit a broader, and younger, AAAS membership. Seaborg's opponents note that the public in general, and young people in particular, are increasingly suspicious of any "interlocking directorships" between government and private organizations—a fact which might tend to drive potential members away from an organization headed by an AEC official. Seaborg's supporters, on the other hand, believe his immense prestige and his long interest in youth affairs might well attract new members.

There is also disagreement concerning two other possible conflicts. On one matter, Seaborg's opponents claim he is so heavily committed elsewhere that he will have little time to devote to AAAS activities. Seaborg's supporters, on the other hand, say that when he takes on an activity he devotes great energy to it. On the second matter, Seaborg's opponents note that Seaborg is chairman of the board of Science Service, which has been trying—thus far unsuccessfully—to merge with AAAS. Should merger talk revive, they say, Seaborg might be the head of both parties to the talks. However, Seaborg's supporters regard the Science Service merger question as a dead issue. And they note that, in any case, Seaborg will have but one vote on a 13-member board that includes 11 voting members —hardly enough to sway any particular issue by himself.

#### Debate over Whether to Publish

Behind the major issue of whether Seaborg is or is not an appropriate candidate for AAAS office, there developed a second issue concerning whether the matter should be discussed in the pages of *Science*. The controversy over Seaborg had come to the attention of the news section of this magazine and an article was prepared describing the flurry of activity on the board and the issues that had developed in the election. Editor Abelson declined to publish the article, as noted above, lest the magazine seem to be "meddling" in the election. Abelson pointed out that the electorate had already been sent biographies of the candidates, and he said it was "no secret" that Seaborg had been on the AEC for a decade. He also said that members of the electorate had had access to previous articles in *Science* concerning the controversy between the AEC and Gofman-Tamplin, and concerning the proposed merger between the AAAS and Science Service—thus the electorate could be considered already informed on the subject of some of the alleged conflicts. Furthermore, Abelson said, any directors who were opposed to Seaborg should organize a campaign and contact the voting members by mail instead of attempting to "use" *Science* for their own political purposes. "To run a story calling attention to an alleged conflict of interest at the last moment while the election was in process was simply improper," Abelson said.

However, Greenberg and his associates in the news department took the position that the issue was of fundamental importance to the electorate and should be publicized. When Abelson declined to authorize publication, Greenberg resigned in protest and announced plans to publish an independent newsletter on science and government affairs (see *Science*, 4 December, p. 1060). Greenberg subsequently described his position as follows:

"This news department has always proceeded from the principle that secrecy is anathema to the well-being of the scientific community. It is impossible to make a rational case for bending this principle to serve the interests of a narrow segment of the community, no matter how well-intentioned the motive or how well-connected that segment. The membership and Council of the AAAS had a right to be informed—prior to the election—of the AAAS board's concern about the Seaborg candidacy. The board, in fact, was so concerned that it delegated its chairman to discuss the matter with Seaborg. It was the duty of this magazine to convey this information, not only so that the Council members might weigh it in casting their votes, but also so that the rank and file of the AAAS might make its views known to the Council members who represent them. To have done so would have been a valuable contribution to the electoral process."

What effect the controversy would have on Seaborg's relations with the board and his ability to lead the AAAS, should he win the election, is not clear. Seaborg is obviously somewhat surprised by the storm that has blown up over his nomination, and he is appar-

ently not certain in his own mind whether he should accept the AAAS presidency if he wins it. In a statement to *Science*, he said: "In determining my course of action with respect to the presidency of the AAAS, I shall try to ascertain what is best for the AAAS with the help of conversations with people on both sides of the controversy. I am seriously concerned that there be some semblance of adherence to the democratic process. We must note that the Council will express its preference with the full knowledge that I have served for nearly 10 years and am continuing to serve as chairman of the Atomic Energy Commission. If I am defeated, the matter will be settled. If I am elected by a decisive margin, this should be taken into account." That statement indicated that Seaborg is still struggling over the question of whether he would make an appropriate leader of the AAAS. "I'm going to talk to more people," he said. "I really want to do what's right for AAAS."

—PHILIP M. BOFFEY

Continental Shelf. He discussed the Interior Department program for regular leasing in the next five years, which is now getting underway. Following Dole's presentation, Nassikas said he thought Interior should be given wide flexibility on establishing policy for leasing. He indicated that tax considerations, price considerations and regulatory aspects are important components of the situation.

Dole then went ahead with item #2 of the agenda- Oil Shale. He described the Interior proposal for a new leasing proposal on the federal oil shale lands, including associated measures for environmental protection. He forecast an imbalance of energy if we don't take prudent steps at this time. He emphasized that the U.S. doesn't lack indigenous supplies but the problem is that it hasn't developed them. The program he outlined aims for a large supply of oil from oil shale for 1980: 30,000 barrels per day by 1975, and one million barrels per day by 1980 (4% of the U.S. demand at that time). In an aside to me he said that they are not yet looking at underground nuclear stimulation. He indicated that a 30,000 barrel per day plant would require an investment of $150 million. I described briefly the AEC-industry program for the nuclear stimulation and recovery of oil from oil shale, and Dole quickly pointed out that this will be in the far future- beyond the first and second stages, and not important before the middle 1980's.

Dole then went on to the third agenda item- Geothermal Energy. He described a proposed leasing program and mentioned a bill has passed Congress which he hopes would be supported by the Administration, although it was later pointed out that OMB is opposed to this bill. He said there are presently 30 Mw of energy coming from geysers and that 600 Mw could be developed from this source by 1980. I again mentioned the AEC-industry program for the development of electric power from geothermal sources via nuclear stimulation. Dole said he wished I hadn't mentioned this, because nuclear explosions for gas recovery, oil recovery and geothermal energy would simply mean too many nuclear explosions. I retorted that these methods may nevertheless be the best for the tasks at hand.

McCracken then called on Walker to speak on the report that his subcommittee has developed since its appointment last week concerning a sulphur tax to abate pollution and to create an environmental trust fund. Walker described the tax which would be leveled on the sulphur contents of all fuels (oil and coal), the way it would be applied, and projected the revenues from it up to 1980, and the results that would come from it in alleviating pollution by sulphur oxides.

Johnson suggested that the home consumer wouldn't be influenced much in the direction of reducing consumption as a result of this tax. Nassikas said he tentatively felt that a better approach would be a broader based tax, leveled on all energy users. He also raised the question: if coal prices increase by 50% as a result of this tax, do we have sufficient alternate sources to meet the demand for energy? He said he likes the trust fund concept for the administration of the tax receipts, but thinks it needs broader administration than through the Council of Environmental Quality. We were asked to get comments to Walker on his plan by next Tuesday, December 15th, at noon.

McLaren then discussed item #4- Competition in the Energy Industries. He feels that antitrust laws can handle the big oil and coal company expanding activities and intrusions into each other's as well as other energy fields. He recommended a general loosening of the reins. His presentation was based on a letter he had written to McCracken which, due to its sensitivity, has not been circulated to the members of the Energy Subcommittee.

Johnson brought up the importance of stockpiling fuels in certain instances; for example, uranium.

Norm Hartness then spoke for Don Rice, who was not present because he hadn't been notified of the meeting, on item #5- Energy Conservation. His presentation was on the basis of the OMB paper which had been circulated to members of the Subcommittee and suggested various policies for conserving energy. He recommended recovering R&D costs for energy from the consumer. (A comment from Nassikas served to remind us that written comments from us are due on December 14th.)

Lincoln next spoke on item #6- Security of the Oil Supply in the United States. In this connection he spoke on oil import policy for the period 1970-1975. Among his Policy Directions he listed the encouragement of coal and nuclear energy. In this connection he made an aside that nuclear energy would be important if Seaborg could keep nuclear plants from blowing up. I immediately retorted that we could do that; in fact, it's hard to make them blow up. Someone mentioned the recent oil refinery blast, and I replied that it is easy to blow up an oil refinery. Lincoln concluded that a viable oil import program for 1970-1975 can be accomplished.

Ruckelshaus emphasized the importance of rhetoric in the final documents put out by the Subcommittee. He admonished us not to put energy ahead of the environment, and not to treat the environment as just something to get around.

As a footnote, I indicated that it might be worth clarifying the misunderstanding concerning the rate at which nuclear power is becoming available. I said that many people (including the current article in Look magazine) tend to believe that nuclear energy fell flat on its face and is way behind schedule. I pointed out that nuclear capacity now stands at 7,000 Mw, whereas we predicted in 1962 that by 1970 it would be 5,000 Mw. In 1964 we raised our prediction for 1970 to 6,000- 7,000 Mw, and in 1966 we predicted more than 10,000 Mw by 1971, a goal we will surely reach. Similarly, I recounted our early (1962, 1964, 1966) predictions for 1980 and emphasized that we will surely exceed these by a large factor by that time.

As a final comment, Nassikas pointed out that we can improve the environment through energy and made note of the fact that I have been developing this theme nationally for some time now.

After the meeting I approached Will Kriegsman and indicated that I would like to talk to him about the vacancy on the Commission. We went down to his office but because it was in disarray because a new carpet was being laid, we went to John Whitaker's office nearby. (Whitaker conferred with Abe Lincoln in another part of the room.)

I indicated as possible candidates for the vacant commissionership John Flaherty and Rolf Eliassen. I also mentioned Merril Eisenbud and Ken Davis. Kriegsman said he would pass on these suggestions to Flanigan. He mentioned the need for a man conversant in the weapons field, and I indicated that Commissioner Larson could handle that adequately. He also mentioned the possibility of an economist.

We then went on to talk about the session on the FY 1972 budget that I had Thursday with Weinberger and Rice. I indicated that I am concerned about the closing of the two reactors at Hanford because such a sudden act would tend to negate the carefully planned program, aided by diversification, that we have had underway for about seven years. I also indicated that I think it is too bad to terminate the LWBR after it has progressed so far, and that I think $10 million should be added to keep the nuclear rocket alive and, particularly, some of the Los Alamos work. I mentioned my hope that the $1 million for the pacemaker

development would be restored. I described the problems in connection with trying to sell $50 million worth of the AEC's uranium concentrates when the U.S. uranium industry is in such bad shape.

I had lunch with Rubin at the World Buttery, came back to the office and worked until about 2:30 p.m.

I took a hike with Suki in Rock Creek Park. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters and back to our starting place.

I watched on TV the Oakland Raiders-Kansas City Chiefs football game which Oakland won, 20-6, thus winning the division championship.

Dianne had Amy Ballou as a dinner guest.

Sunday, December 13, 1970

Eric and I went with Justin and Mark Bloom to Kennedy Stadium to see the Washington Redskins-Philadelphia Eagles football game which the Redskins won, 24-6. Larry Brown passed the 1,000 yard mark in rushing, a record in the history of the Redskins.

I worked on the speech, "Shaping the Future- Through Science and Technology" for the Nobel Conference at Gustavus Adolphus College on January 7, 1971.

At 5:30 p.m. William Bevan (Executive Director, AAAS) called to report that I have been elected President of the AAAS by a vote of 200-142 by the Council. He said the meeting of the Board of Directors this weekend had gone very well, and that they are pulling together. They voted to create a committee to study and make recommendations on freedom of scientific inquiry and on scientific responsibility. Their first task will be to handle the request by Senator Muskie to look into the Gofman-Tamplin accusations. He said I will receive, by hand delivery tomorrow, notification of my election, unanimous congratulations by the Board and the material on the Freedom of Scientific Inquiry and Scientific Responsibility Committee.

Monday, December 14, 1970- D.C.

At 9:50 a.m. I presided over Information Meeting 1085 (notes attached). In executive session we discussed the OMB markup of the FY 1972 budget. I described my meeting with Weinberger and Rice last Thursday afternoon, and Abbadessa described his staff meeting with Young and Schuldt of the OMB. Abbadessa gave us the picture as it stands in terms of cuts and additions. The markup now stands at $2.199 billion. We decided to appeal the LWBR, the NERVA program, and the cardiac pacemaker, partially compensated for by the Space Electric Thermionic program and reduction in the LRL Computer program. We also decided to appeal the shutdown of the K and N reactors at Hanford. These appeals were sent over to the OMB in the form of letters to Weinberger this morning (copies without enclosures attached).

We approved the criteria for uranium enrichment services based on the Omnibus Bill that passed Congress on December 4th. We also approved an increase in price from $28.70 to $32 for the proposed unit charge for separative work, which becomes effective February 22, 1971. Actually, as a result of the 45-day waiting period before Congress and the six months notification period, the $32 price won't go into effect until next July or August. Commissioner Ramey

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 14, 1970

# INFORMATION MEETING 1085

9:50 a.m., Monday, December 14, 1970, Chairman's Conference Room, D. C.

## EXECUTIVE SESSION

1. Letters to Mr. Weinberger, Deputy Director, OMB, re Fiscal Year 1972 Budget Mark-up

   Approved. (OC-Rubin)

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2. SECY-758 - Revision of Uranium Enrichment Services Criteria and Price

   Approved with a deletion in Attachment B. (AGMP)

3. AEC Charge for Enriching Services

   Approved with Commissioner Ramey dissenting. (AGMP-SECY)

4. SECY-737 - U.S. Priority Interests in the Environmental Activities of International Organizations

   Approved. (AGMIA)

5. SECY-752 - Potential Limitation on AEC Authority to Pay Consultants

The Commission noted Congressional consideration of H.R. 13000 - Federal Comparability Act of 1970 is expected to supersede further consideration of the Udall Bill (H.R. 18403), making consideration of SECY-752 unnecessary. (AGMA-PER)

6. SECY-759 - Proposed Settlement of Patent Compensation Claim

Approved. (GC)

7. SECY-757 - Financial Assistance to Richland Schools

Approved. (AGMO)

8. SECY-743 - GSA Procedures for Disposition of Excess Property

Noted with a request. (AGMO)

9. SECY-753 - Reports Sent to the Commissioners

Commissioners' comments will be addressed to staff. (PAR-SECY)

10. Pending Contractual Matters Report No. 384

Noted. (PAR)

11. December 4 Letter from Dr. Gomberg, Director, PRNC, re Lectureship Series and Commission Meeting

A response is requested. (SECY)

12. NTS Events (See General Giller's December 10 Memorandum )

Noted. (AGMMA)

13. December 10, 1970, Pending Business List

Noted. (SECY)

14. Letters to Government Officials and Press Media re Nuclear Power

Requested. (OEA-RDT)

[illegible] Riley's December 14 Memorandum re Personnel Security Matter

To be scheduled Wednesday morning, December 16, 1970. (S-SECY)

16. Recognition of Staff for Outstanding Services in Connection with the Accidental Death of Commissioner Theos J. Thompson and Col. Jack Rosen

[illegible]ved. (SECY)

Change in Grade for Secretaries to the Commissioners

Approved. (SECY-PER)

W. B. McCool
Secretary of the Commission

12:05 p.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey | Mr. Abbadessa | General Manager |
| Commissioner Johnson | Mr. Ferguson | General Counsel |
| Commissioner Larson | Mr. Rubin | Secretary |
| | Mr. Kull | |
| | Mr. McCool | |
| | Mr. Corso* | |
| | Mr. Flaherty* | |
| | Mr. Quinn* | |
| | Mr. LeGassie* | |
| | Mr. Anderson* | |
| | Mr. Friedman* | |
| | Mr. Erlewine* | |
| | Mr. Keto* | |
| | Mr. Slaton* | |
| | Mr. Siebert* | |

[illegible]ndance by Topic (s)

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NOV 96

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 14 1970

Honorable Caspar W. Weinberger
Deputy Director
Office of Management and Budget

Dear Cap:

Under the Office of Management and Budget markup of the Commission's FY 1972 budget request, production reactor operations and the associated chemical reprocessing activities at our Richland installation would be terminated. In this letter I wish to acquaint you with the extremely serious implications of this action.

National Security

Our 1970 analysis of supply and demand of reactor products demonstrated that continued operation of the five remaining production reactors (the other nine reactors having been previously shut down) would not permit us to meet projected requirements under our base planning case. We understand that the Department of Defense believes that continued operation of the five reactors is not only essential but, in fact, contemplates that restart of some of the shut down units will be required in the future. Shutdown of the two remaining Richland reactors would not permit us to meet the requirements of the minimum case in our 1970 study, even after deletion of the requirements for the 155mm AFAP system. What is even more critical, we believe, is the fact that closeout of these production operations at Richland would seriously compromise our ability to reactivate the shut down Richland units, should such be required in the future, on any reasonable time schedule and at reasonable cost.

Pacific Northwest Electric Power Shortage

Termination of AEC operation of the N reactor will deny to the Pacific Northwest the reactor's 800,000 kilowatt generating capacity, at least for a few years until arrangements can be made to provide replacement capacity. This is at a time when the Pacific Northwest, as pointed out in the recent analysis by Dr. McCracken and General Lincoln, is in a critical supply situation. It is our understanding that the area will be capacity deficient for at least the next few years. As a minimum, therefore, we believe that sufficient advance notice of the N reactor shutdown should be given to the Bonneville Power Administration and the

Washington Public Power Supply System to permit them an opportunity to make alternative arrangements to avoid aggravation of the current shortage. It would seem possible that continued dual-purpose operation of the N reactor could be the basis for additional payments to AEC for the by-product steam if dual-purpose operation would otherwise be terminated.

Economic Impact

Since 1964, the AEC has shut down seven large production reactors at Richland and one large chemical reprocessing plant. These curtailments resulted in the loss of some 3,300 jobs with AEC contractors. The Commission and the local communities initiated a program to offset to the extent feasible the impact of these reductions by encouraging private investment in diversified activities such that the heavy dependence of the Tri-Cities area on AEC production operations could be substantially reduced and ultimately eliminated since it was recognized by all that production activities could not be expected to continue indefinitely. These diversification activities have resulted in substantial, but gradual progress and currently provide about 1,200 jobs. In addition, the Commission has been able to assign some additional programmatic work to Richland. Overall, these programs have been able to offset a significant portion of the effects of the production cutbacks such that total employment reductions have netted out at about 1,100. But this has taken some six years to accomplish. The contemplated abrupt close-out of production at Richland would deal a serious blow to these continuing and promising diversification efforts. From this standpoint alone, the Commission would urge a more gradual curtailment and, particularly, sufficient advance notice to permit steps to alleviate the impact of the loss of over 2,000 additional jobs.

On the basis of the above considerations, the Commission believes that termination of production at Richland at this time would be premature and would not permit us to meet our responsibilities to the local community, the region, and the Nation as a whole.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Distribution:
1: Addee
13A: Chairman Seaborg
1: Com. Ramey
1: Com. Johnson
1: Com. Larson
2: Secretariat
1: General Manager
1: Controller
1: AGMDP

13A: Mr. Corso
14A: File

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NOV 86

DEC 14 1970

Honorable Caspar Weinberger
Deputy Director
Office of Management and Budget

Dear Cap:

Following up on our meeting of last Thursday evening, the Commission has carefully considered the FY 1972 outlay and budget authority allowances given to us. In keeping with our understanding at that meeting, we are proposing certain adjustments in those allowances as set forth on the following table:

Adjustments Proposed to FY 1972 Budget Allowances
(In millions)

| | Outlays | Budget Authority |
|---|---|---|
| Recommended restorations: | | |
| Civilian power - continue development of LMBR | $ 10.0 | $ 11.5 |
| Space nuclear propulsion - advanced technology | 10.0 | 13.3 |
| Program direction - staff associated with space nuclear propulsion | .3 | .3 |
| Radioisotope power development - cardiac pacemaker | 1.0 | 1.3 |
| Total | 21.3 | 26.4 |
| Financed by: | | |
| Reduction in LRL computer program - defer delivery of high speed printer | 1.3 | 0 |
| Termination of space electric thermionic program | 3.0 | 4.0 |
| Adjustment in allowances | 17.0 | 22.4 |
| Total | $ 21.3 | $ 26.4 |

The considerations underlying our recommendation that the indicated restorations should be provided are set forth in the enclosures to this letter. You will note that even in face of an extremely tight budget mark we did manage to develop some budget reductions to partially offset the increases we are proposing. This I believe demonstrates the priority which we attach to such increases. The Commission strongly believes that the program benefits resulting from these adjustments will far exceed the relatively minor budgetary effect caused by them.

I look forward to meeting with you personally and discussing these adjustments further.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Enclosures:
As stated

bcc: Chairman Seaborg (2)
Commissioner Ramey
Commissioner Johnson
Commissioner Larson
Commissioner
Secretariat (2)
GM (2)
Controller
VCorso, ACBu
Chron
File

dissented in this price increase vote.

We also approved settlement of the patent compensation claim by A. V. Grosse, Alfred O. Nier, Eugene T. Booth and John R. Dunning. They will be awarded $30,000 each and will receive a certificate and medal in return for which they will give an unconditional release for claims of all kinds.

At 12:05 p.m. I presided over Regulatory Information Meeting 437 (notes attached).

I had lunch with John Flaherty and Julie Rubin in the Commissioners' dining room to discuss the various pieces of information due in connection with the Domestic Council's Energy Subcommittee and the paper on national energy policy which is due for presentation to the Federal Council for Science and Technology.

I returned John Walsh's (of Science) 11:30 a.m. telephone call, but when I got on the phone it was Phil Boffey on the line. He is preparing a short story on the potential announcement of the AAAS Board's election for this Friday's (December 18th) issue of Science and in that connection he asked me several questions (copy of summary of questions and answers attached).

I called Peter S. Jennison of the National Book Committee, Inc. in New York. I told him that in response to his letter requesting an additional new book in science for consideration for the National Book Award, I would suggest Technological Man by Victor Ferkiss, published in 1969. A close second choice is Century of Mismatch by Simon Ramo, published by David Kackay. He said that the January 6th meeting will probably involve lunch and a working session in the afternoon, but he will send me exact information in a day or two.

I sent a letter to Governor Marvin Mandel of Maryland (copy attached) informing him of the AEC's approval of Maryland's program for the assumption on January 1, 1971 of certain of AEC's regulatory authority.

Tuesday, December 15, 1970- Bethesda- D.C.

I went to the Bethesda office, where a Regulatory meeting was held. In addition to the regular agenda (copy attached), we spent a good deal of time discussing the rule for making privileged documents available and the rule for subpoenaing named people for licensing board hearings. We discussed revisions in the present hearing process, such as much earlier notice of hearing (perhaps about six months), Regulatory input to public relations explanations at pre-hearing conferences, and advertisement of hearings in local newspapers. We also discussed the concept of changing the entire regulatory process to have an early site hearing, which might or might not be mandatory and which might make the hearings for construction permits or operating licenses unnecessary. We also discussed the implementation of our lowest practicable value rule and the implementation of our NEPA regulation in connection with board hearings. We received a briefing on the status of licensing applications and the description of the staff time required in this process.

I had lunch with Hal Price, Cliff Beck and Chris Henderson, along with Julie Rubin, in Price's conference room in Bethesda.

From 4 p.m. until 6 p.m. I attended a meeting of the NSC Under Secretaries Committee at the Department of State (Room 7219). Present were: Under Secretary John Irwin, Herm Pollack, Ronald Spiers, Joseph Kendrick, Arthur Hartman, Scott Custer (State Department), Ira Adler (OMB), Dr. Hubert Heffner and Gordon Moe (OST), Jim Cushman and Peter Jessup (CIA), Dr. John Foster, Warren Nutter and

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 14, 1970

REGULATORY INFORMATION MEETING 437

12:05 p.m., Monday, December 14, 1970, Chairman's Conference Room, D.C.

1. SECY-R 100 - Proposed Agreement with Maryland on Assumption of Certain Regulatory Authority

   Approved. There will be no ceremony scheduled. (SLR)

2. SECY-R 97 - Amendments to 10 CFR Parts 30, 40,70 and 170 - Revised License Fees

   To be scheduled this afternoon. (SECY)

3. Reappointment of Dr. Herbert S. Isbin to the Advisory Committee on Reactor Safeguards

   Approved. (SECY)

4. Under Secretary of Interior Train's December 2 Letter on Cannikin

5. ACRS Letter on Metropolitan Siting

   Commissioner Johnson will call Mr. Hendrie. (SECY)

6. Nominees to the General Advisory Committee and the Advisory Committee on Reactor Safeguards

   The Chairman suggested early consideration. (SECY)

W. B. McCool
Secretary of the Commission

12:25 p.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Eber Price
Mr. Ferguson
Mr. Rubin
Mr. Wells
Mr. McCool

DISTRIBUTION:

Commissioners
Dir/Regulation
General Manager
General Counsel
Secretary

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December 14 - Questions by Boffey

Q. What are your plans now that you have been elected? Have you decided to accept?

A. My present intention is to proceed with my duties in the manner of my predecessors.

Q. At one point you indicated your acceptance might be contingent upon the margin of the vote. Were you gratified by the result?

A. I don't want to dwell on that.

Q. Were you informed of the magnitude of your election?

A. Yes. I wouldn't call it a major issue, however; but it was not a tight election.

Q. What were some of the factors that led you to decide to go ahead and accept the mandate of the electorate?

A. It just seems the natural thing to do.

Q. Is there a possibility you might change your mind?

A. I don't ever make irrevocable decisions, but I have no real intention to change my mind.

Q. You said you might check with people on both sides of the controversy. Have you done that?

A. I have with some.

Q. You say "my present intention" - the implication is that you might change your mind. Do you mean to imply that?

A. You can say that my intention is to serve. I don't anticipate that it will change.

Q. Can you give me any rough idea of the vote tally?

A. I was told in confidence.

Q. Do you foresee any particular problems?

A. I don't think so. I believe I will be able to work well with the members of the board.

Q. Did you actually contact some people who were known to be opposed?

A. Yes. None of them were in the least personally antagonistic. They were really friendly. They described their concerns with the conflict of interest situation and said it was entirely that. One or two of them even said they wouldn't worry too much about that. Again, I hate to quote board members second-hand.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 14 1970

Honorable Marvin Mandel
Governor of Maryland
Annapolis, Maryland 21404

Dear Governor Mandel:

I am pleased to inform you of the Atomic Energy Commission's approval of the program of the State of Maryland for the assumption on January 1, 1971, of certain of the Commission's regulatory authority over byproduct, source, and special nuclear materials.

Enclosed for your signature are three original copies of the agreement and related memorandum of understanding which I have already signed. Please return two signed copies each of the agreement and memorandum of understanding. One copy of each will be forwarded to the National Archives, and one copy of each will be retained for our records. We will arrange to have both the agreement and memorandum of understanding published in the Federal Register after signature in accordance with the provisions of the Atomic Energy Act.

On behalf of the Commission, I wish to extend our very best wishes in the conduct of your radiation control program under the agreement.

Cordially,

Glenn T. Seaborg

Chairman

Enclosures:
1. 3 copies of agreement
2. 3 copies of memorandum of understanding

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December 14, 197

COMMISSION BRIEFING BY REGULATORY STAFF
December 15, 1970
Bethesda

1. Resume of current and proposed rules

   a. Privileged documents; subpoenas (Price's memo of Dec. 14, 1970)

   b. Early site hearing (Price's memo of Dec. 3, 1970)

   c. Implementation of NEPA - Part 2 Rule Change

   d. Implementation of "as low as practicable" Part 20-50 (Plan of meetings)

      (1) BWR gaseous effluents

      (2) Other

   e. Standards:

      (1) General design criteria

      (2) Seismic criteria

      (3) Uniform reporting requirements (Effluents & monitoring)

2. Reactor construction experience reports (Info Paper SECY-R 79)

3. A brief rundown on licensing applications in process and status of each

4. A briefing on how time is distributed, and staff members deployed, over the course of a license review; explanation of sequential steps and reasons for the length of time required.

5. A discussion of ways in which the licensing process might be shortened and activities underway or contemplated which would help to accomplish this:

   a. Revisions in present hearing processes:

      (1) Much earlier notice of hearing; with regulatory input to public relations explanations at pre-hearing conferences; advertisement of hearing in local newspapers.

      (2) Sharper definition of issues, more limitation on issues via prehearing conferences.

   b. Continue to push standardization of design and review.

   c. Improve contents of applications.

   d. Interim staff reports.

   e. Role of ACRS - more on guides, less staff time on cases not in NEPA.

   f. More safety guides - problem of application to pending cases.

   g. Additional staff and consultant help.

Lieutenant Colonel John Noland (DOD), General Bowley and Lieutenant Colonel Ben Franklin (JCS), Will Kriegsman (White House), Miss Barbara White (USIA), Spurgeon Keeny (ACDA), Russell Train and Gordon MacDonald (CEQ), Dr. Michael May and Dr. James W. Hadley (Livermore), Dr. William G. Van Dorn (Scripps Institution of Oceanography), Dr. Melvin L. Merritt (Sandia Corporation, Albuquerque), Ed Giller, Commander Richard E. Peterson and I (AEC).

The meeting was presided over by Under Secretary of State John Irwin. He opened the meeting by saying that the topic for this afternoon's meeting would be the proposed CANNIKIN test to be conducted by the AEC at Amchitka next fall. He then called on me and I presented my opening remarks. I told them about the reasons for the test, the progress that has been made to date in developing the SPARTAN warhead, that the program has been so successful that we were able to cancel the 2 MT ADAGIO test, and that the MILROW calibration test has been successful with no indication of adverse environmental or seismic effects. I said we have considered places other than Amchitka, including the Brooks Range in Alaska, for the test but have found that Amchitka is by far the best site. I then described briefly the following program, indicating that there would be five experts speaking on their various aspects concerned with safety and environmental effects of the test.

Mike May, as first speaker, described the nature of the device to be tested and the possible consequences of attempting to extrapolate to full yield without any further high yield testing. Foster next discussed the DOD views on the test, emphasizing the need for the full CANNIKIN yield and the DOD view that a lower yield warhead would be unsatisfactory. Hadley described the earthquake triggering aspects of the CANNIKIN test and decided that the chances of a large damaging earthquake are negligible. Van Dorn described the possibility of tsunami generation and indicated that this probability is negligible. Merritt discussed the possibility of groundwater contamination by tritium and indicated that this hazard is not a serious one.

A discussion followed these presentations. Russell Train and Gordon MacDonald described their concerns about induced earthquakes, tsunamis, and groundwater contamination, and questioned us closely about the possibility of getting by with a smaller yield warhead and that a delay is unacceptable. Kriegsman pointed out the importance of coming up with a very well thought out public information plan, and there was general agreement that this should be done. Irwin wound up the meeting by saying that this presents a very difficult problem and that the Committee will continue to give it high priority attention in the coming months.

After the Under Secretaries meeting I met in Irwin's office with Irwin, Spiers, Kendrick, Custer, Pollack, Keeny and Myron Kratzer to discuss the Department of State's aide memoire to the Soviets protesting the venting from their large nuclear test on October 14th. Kratzer and I suggested that this is a poor time to protest to the Soviets on this because we are in the process of discussing with them the interpretation of the Limited Test Ban Treaty from the standpoint of conducting Plowshare experiments and projects and we want to keep our relationships in the best possible shape for these discussions. We also indicated that the October 14th test vented only gaseous fission products, indicating that the Soviets had taken reasonable precautions to keep it contained. We also said we hadn't been protesting all ventings with the Soviets and they would wonder why we decided to emphasize this particular occasion.

Irwin and those with him felt that we should establish a good record of indicating to the Soviets our concern and particularly so that the Department of State could respond to queries that come up in the future from the Senate on the

subject of the venting of Soviet tests. Irwin indicated that he wants to go ahead with the aide memoire to the Soviet Union, but that it would be kept low key. He also indicated an interest in going ahead in our discussions with the Soviets in order to come to an agreement on the interpretation of the provision of the limited nuclear test ban treaty prohibiting the venting of radioactive debris beyond the borders of the country conducting the test.

I sent my biweekly status report to the White House today (copy attached).

Wednesday, December 16, 1970- D.C.

At 9:40 a.m. I presided over Information Meeting 1086 (notes attached). We discussed the study being made by the National Security Council Under Secretaries Committee on foreign requirements for U.S. uranium enrichment services. This study was requested in a memo from Dr. Henry A. Kissinger to the Chairman of the Under Secretaries Committee dated November 20, 1970, and requested review of U.S. policy on meeting additional foreign requirements for enriched uranium. Kratzer suggested an AEC position in which future extensions for agreements for cooperation would be permissive only and would no longer constitute supply commitments, hence, making it possible to proceed at least for a while even though the CIP program was not initiated. We discussed a letter from John A. Love, Governor of the State of Colorado, dated December 9, 1970, asking the Commission to develop procedure for Colorado State approval of proposed Plowshare projects (copy attached). A letter to Look magazine regarding errors in the story issued December 15th was approved and I later signed it (copy attached).

At 12:30 p.m. I had lunch at the Metropolitan Club with Marvin Zim of Time magazine. He said that Time is planning on doing a story in its next issue on the Gofman-Tamplin controversy intermixed with the AAAS controversy. I explained the whole concept of radiation standards, the low level of emissions from operating nuclear power plants compared to background radiation (which is higher in Denver and much higher in Brazil and India than in Washington) and the relatively more deleterious effect of air pollution as established by studies of Lave and Seskin. I also described how I came to be persuaded to run for the AAAS presidency and the background for the concern that developed in the Board of Directors at the last moment before the balloting. He also asked about the accomplishments of the AEC during the last ten years and I gave him a rundown on this in the fields of nuclear power; use of radioactive isotopes in medicine, industry, and agriculture; Plowshare; nuclear power in space; accomplishments in the international field, including the NPT, and so forth.

From 2 p.m. until 4 p.m. I attended a meeting of the Federal Council for Science and Technology in Room 208 of the Executive Office Building. Present were: Noel P. Ralston (Agriculture), Seymour Berlin (CSC), Lewis Branscomb (NBS), Hugh Loweth (OMB), Robert Cannon (Transportation), Donald Dunlop (Interior), Lewis Hellman (HEW), Homer Newell (NASA), William McElroy (NSF), Albert Hayward (DOD), Herman Pollack (State), Alan Siegel (HUD), David Beckler, Norman Neureiter, Frank Pagnotta, Lena Siveck and Ed David (OST), and I. The meeting was presided over by Ed David.

There was a discussion of the new concept of federal executive service, a proposal whereby supergrade personnel will lose their right to automatic tenure and will be reviewed at three-year intervals in order to determine their retention status. A description of this proposal was given by Berlin, who said that this is favored by the OMB and the President and will probably be sent up with implementing legislation in January or February. Branscomb and others expressed concern about this proposal from the standpoint of the effect it might

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# AEC BIWEEKLY STATUS REPORT FOR DECEMBER 15, 1970

1. In connection with implementing the National Environmental Policy Act, AEC has issued a revised statement on the review of applications for construction permits and operating licenses for nuclear power plants and plants that reprocess fuel from nuclear power reactors. AEC's revised statement takes into account the guidelines of the Council on Environmental Quality and the Water Quality Improvement Act of 1970, both of which became effective after the April statement was issued. It states that parties to proceedings on applications for permits and operating licenses may raise objections based on environmental concerns and that environmental requirements should be consistent with other national policy considerations, such as the growing need for electric power. Certification by the appropriate state or Federal agency that the applicant has given reasonable assurance of compliance with existing environmental standards would be considered satisfactory evidence that there would not be a significant adverse effect. The revised statement will become effective on January 4, 1971.

2. Some inquiries about safety at AEC's Rocky Flats plant in Colorado have been received during the past two or three weeks from newsmen, mostly in the Denver area where there is a special interest because of the 1969 fire but also in other parts of the country. There has been some renewal of concern about the Rocky Flats weapon production facility because of a very distorted article in LOOK magazine's December 15 issue and also as a result of the release on December 8 of testimony by the Commission about a requested supplemental appropriation to upgrade fire and safety protection at various AEC facilities.

3. A public hearing on Consolidated Edison's application for a license to operate the second reactor unit at its Indian Point Nuclear Station - located in Westchester County, New York, on the Hudson River - is scheduled to begin on December 17 in Peekskill, New York. A number of intervenors are expected to oppose the plant at the hearing. Objections that have been alleged include the potentially adverse effects on the environment from radioactive and thermal discharges, the possibility of an accident involving a nuclear reactor that would have widespread consequences, and deleterious effects on marine life in the Hudson River.

4. National Education Television is preparing two programs for January showings that are expected to be critical of AEC's radiation protection standards. Another television organization, King Broadcasting Corporation, which has stations in Spokane, Seattle, and Portland, has engaged a motion picture production company to produce a film about the environment in the Pacific Northwest. They plan to make some films of operations at AEC's Hanford installation near Richland, Washington.

5. A television program about the Project RULISON natural gas stimulation experiment in Colorado may be shown any day. ABC-TV news did considerable filming at the RULISON site during the first week in December, and we think the program is being put together in Chicago. Meanwhile production testing continues on the natural gas, which was stimulated to flow by a nuclear device detonated underground in September 1969. During this month the gas is being flared at a rate of five million cubic feet per day for up to 20 days. Since the well was reentered last August, several flaring periods have occurred, and 122 million cubic feet had been flared through November. Radiation levels are expected to continue to be well below Federal guidelines.

6. Chairman Seaborg will serve as President of the Fourth International Conference on the Peaceful Uses of Atomic Energy, which will be held in Geneva, Switzerland, during September 6-16, 1971. This appointment was announced on December 3 by United Nations Secretary General U Thant.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 16, 1970

INFORMATION MEETING 1086

9:40 a.m., Wednesday, December 16, 1970, Chairman's Conference Room, D. C.

1. Chairman's Appointment Today With Time Reporter Marvin Zinn

2. AERWA Christmas Parties Tuesday, December 22, 1970

   The Commission requested rescheduling at Germantown for 1:30 p.m. and 3:00 p.m. at Bethesda. (SECY)

3. Personnel Security Matter (Mr. Riley's December 15 Memorandum)

   A copy of Mr. Riley's memorandum of December 15 will be made available to the Department of Justice today. (AGMA-S)

4. Proposed Letter to Editor-in-Chief, Look Magazine

   Approved with revisions. (PI)

5. Commissioner Thompson's Unsigned Memorandum of Dissent on Siting of Commercial Fuel Reprocessing Plants and Related Waste Management Facilities (SECY-160)

   To be made available to appropriate staff. (SECY)

6. Seinosuke Hashimoto, JAIF, December 10, 1970 Letter of Condolence and Invitation for Annual JAIF Conference, Tokyo, March 15-17, 1971

   Recommendations of staff to attend are requested. (EAGM)

7. Commissioner Johnson's Comments on Licensing of Plutonium Handling Facilities (Oral)

Commissioner Johnson will discuss with the Director of Regulation. (O'Donnell)

8. Status of Enrichment Pricing

Commissioner Ramey requested his dissent on this matter be attached to the letter to the JCAE when sent. (AGMP-CONG)

9. Leo Goodman Request For Document (See Also SECY-528 and Secretary's October 28, 1970 Memorandum to File

The full report will be made available to Mr. Goodman and Mrs. Ann Mayo of the "Village Voice" (SECY-528), if followup request received. (Fremling-OGC-I-PI

10. SECY-765 - Proposed Announcement of Rio Blanco Project Definition Agreement Signing and Governor John A. Love's December 9, 1970 Letter

Approved. Commission requested staff, prior to the announcement, prepare an appropriate letter to Governor Love agreeing to his request and advise him by phone prior to dispatch of the letter. (AGMD&P-PI-PNE)

11. Chairman's Oral Report On December 15, 1970 Meeting With Under Secretary of State Irwin On Aide Memoire

12. Chairman's Oral Report On Meeting December 15, 1970 With Under Secretaries Committee on CANNIKIN

13. SECY-763 - Foreign Requirements For Enriched Uranium: NSC Under Secretaries Committee Review; Summary Statement "U.S. Policy On Meeting Additional Foreign Requirements For Enriched Uranium"; Suggested Language For The Fuel Article For Agreements For Cooperation; Revised Page 47 - Table 5 - Capability of AEC Diffusion Plants To Meet Steady State Operation Of Nuclear Power Plants

Approved as a basis for further discussion with the Interagency Group. Commissioners Johnson and Larson requested additional review of the matter with staff. The Chairman will coordinate with the White House the question of informing State on price change. (AGMIA-Rubin)

14. SECY-768 - Declassification of Gaseous Diffusion Enrichment Technology

The letter is not to be sent; Mr. Behr, NSC, is to be informed instead. (Rubin-AGMIA-C)

W. B. McCool
Secretary of the Commission

11:40 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Hobbs
Mr. Rubin
Mr. Harris *
Mr. Quinn *
Mr. Vinciguerra *
Mr. Riley *
Mr. Kratzer *
Mr. D. Hoyle *
Mr. Friedman *
Mr. Marshall *
Mr. Kull *

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

* Attendance by Topic (s)

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NOV 86

THE STATE OF COLORADO
EXECUTIVE CHAMBERS
DENVER

JOHN A. LOVE
GOVERNOR

December 9, 1970

United States Atomic Energy Commission
Washington, D. C.

Dear Mr. Chairman:

On behalf of the State of Colorado, I wish to request that the Commission develop a procedure for approval of proposed "Plowshare Projects" to be undertaken in Colorado which will include appropriate official contact with the State of Colorado prior to entering into a contract for any operational testing of Plowshare applications of nuclear energy. Pending the outcome of the production testing on the Rulison Project, and adequate evidence that commercial exploitation of atomic stimulation is indeed economically feasible, I believe it premature for Colorado to become committed to another atomic explosion.

I understand that a "Rio Blanco Project" is under study which would involve a multiple-device explosion. I request that no experiment involving the detonation of a nuclear device in the State of Colorado be conducted without a prior consultation with the State and that further, no such event be conducted without official sanction by the state.

We would be most interested to work with you in the development of suitable procedures to take into account the state's concern and responsibility in future Plowshare projects.

Sincerely,

John A. Love

JAL:TTE:u

UNCL. BY DOE
NOV 86

DEC 16 1970

Mr. Gardner Cowles
Editor in Chief
Look Magazine
488 Madison Avenue
New York, New York 10022

Dear Mr. Cowles:

There are so many factual errors in Look's story "Nuclear Threat Inside America" (December 15 issue) that we hardly know where to begin this letter. The story is a repetition of charges which have been made in other publications and which have been repeatedly proved false by the AEC and public health authorities.

The author stated that he spent many months gathering material for the story. It is obvious that very little of this time was used to research the facts, although he did take the liberty of quoting a speech by Commissioner Ramey badly out of context.

Illustrations of some inaccuracies or omissions in the story include:

1. Look's story questions the safety of nuclear power plants, but ignores the quality assurance programs and the engineered safety features of these plants which provide a defense-in-depth to protect the public. I know of no other industry in which the potential hazards were realized in the beginning or in which such stringent measures are taken to protect the public. The value of the defense-in-depth concept is borne out by the fact that there never has been an accident in an AEC-licensed nuclear power plant which has affected the public. Both the nuclear industry and the AEC are working hard to preserve this excellent record.

2. Look says that in 1966 the Enrico Fermi plant near Detroit nearly had a serious runaway. The Fermi plant

did not nearly have a serious runaway. The nuclear reaction was under control at all times. What happened was that a loose piece of metal blocked the coolant flow to two fuel elements, causing them to overheat and melt. No measurable amount of radioactivity escaped from the building.

3. Look discusses the AEC report "WASH-740" which is a 1957 study done for the Commission by the Brookhaven National Laboratory on the "Theoretical Possibilities and Consequences of Major Accidents in Large Nuclear Power Plants." WASH-740, the so-called Brookhaven Report, was published in early 1957 when the technology in central station power reactors was in its infancy and even before the first central station plant, Shippingport in Pennsylvania, went into operation. The study was not a prediction that a serious accident such as those postulated would or could occur. Rather, the study attempted to assess the consequences of such an accident, no matter how remote the possibility of its occurring might be. Dr. Herbert Kouts of Brookhaven, who worked on the 1957 study, has compared the probability of a serious reactor accident such as the one assumed in the Brookhaven Report to an accident involving a collision of a good fraction of all aircraft simultaneously stacked up over Kennedy, LaGuardia and Newark Airports, the debris falling into Shea Stadium during a Sunday doubleheader.

4. Although we are working with Colorado authorities on radon problems arising from uranium mill tailings, Look's implication that "some basement walls glowed" as a result of radon gas seepage is extremely farfetched. Even if the basement walls were deliberately coated with luminizing phosphor, the amount of radioactivity in air which would be required to produce a visible glow would be hundreds of thousands to millions of times higher than current standards for uranium mining. No such levels have ever been measured in any home or mining location.

5. Look's remarks that uranium reserves will give out by the year 2000 completely ignores the development of the breeder reactor which will produce more nuclear fuel material than it consumes while producing power, thus providing a virtually unlimited energy source for future generations lasting thousands of years.

6. Look raises questions about the safety of operations in connection with the Rulison gas stimulation experiment near Rifle, Colorado, a part of the Commission's Plowshare program. The lawsuit is cited in your story. Look ignores the opinion of Chief Judge Arraj of the United States District Court for Colorado. After listening to all the evidence, the court found:

> "...The AEC has planned its activities and is carrying them out with all due regard to the health and safety of the public..."

7. Look's discussion of the handling of high level wastes ignores the Commission's planned program--based on many years of research and development--to convert liquid wastes from the nuclear power program into solids which then can be sent to a Federal repository--such as an abandoned salt mine--for permanent storage. It also ignores the current program of solidifying all the waste in tanks at Richland, Washington. Tank storage has been a safe interim means for handling high level wastes but it has never been considered a permanent solution.

I understand that the management at Rocky Flats has supplied you with detailed comments on the many erroneous aspects of that portion of the article dealing with the Rocky Flats plant. I must take issue, however, with Look's charge that the AEC "lied" about the situation there. That simply is not the case, and the record--ignored by your writer--is abundantly clear on that point. What is less apparent is the difficulty which confronted the AEC in determining certain facts about the fire--and thus we were unable to give instant and unqualified answers in the first few days afterward. Certainly we issued factual information as soon as it became available to us.

We have issued a statement on the plutonium in the soil around the Rocky Flats plant. Public health authorities agree that these quantities of plutonium in the soil do not present a health hazard.

Look's article has raised unwarranted fears about the safety of the nation's nuclear energy program. We regret that the author did not spend the time necessary to understand the safety precautions which are taken in all phases of our program. Radiation is probably the best studied and most

thoroughly understood of all environmental stresses. This accepted fact as stated by many prestigious authorities could not even be guessed from Look's story.

I recently spoke to the Associated Press Managing Editors Association on the role of the press in today's society. I said, in part:

> "...the press must recognize its vital role in the creating of a public attitude that will sustain and direct this nation in a time of great psychological need. Without exaggeration, let me say that by its effect on this attitude--by the efforts of its public education--the country's news media may well determine the course of history. I am not a believer in trying to present a foolishly rosy picture of a world full of real problems. Neither do I want to see a public so loaded with despair and lack of hope that it chooses a suicidal course of retreat from reality or violent and self-destructive reaction. To avoid this the press must learn to balance its reporting of existing and impending problems with that of the progress being made to handle or head them off. They must learn to put problems and projected problems into perspective..."

Sincerely,

Chairman

P.S. We would be pleased to meet with you and with Look's senior staff to discuss the nuclear energy program in detail and to answer any of your questions.

bcc:

| | | |
|---|---|---|
| Chr. Seaborg (2) | AGM | SECY |
| Cmr. Ramey | EAGM | PNE |
| Cmr. Johnson | AGMMA | RDT |
| Cmr. Larson | AGMRD | OEA |
| Cmr. | AGMR | OS |
| GM | Dir/REG | |
| DGM | Mgr/AL | |

| OFFICE ▶ | PI | PI | OCM | |
|---|---|---|---|---|
| SURNAME ▶ | JFouchard:pc | JHarris | | |
| DATE ▶ | 12/16/70 | 12/16/70 | | |

have of repelling high level scientists from government service, especially those who might otherwise join the government from the outside. The proposal, as presently formulated, would not include the AEC and NSF.

The second item discussed was international science with the discussion based on a paper read by Herman Pollack in which he listed numerous objectives and advantages of international cooperation in science and technology. David asked me to provide some input into this paper based on experience in the AEC.

Attached is a copy of a memorandum sent by John Harris to the White House covering current AEC activities in the public relations area.

Suki and I took a hike in the Fort Reno area on the Belt Road side.

Thursday, December 17, 1970- D.C.

I received a telephone call from Chet Holifield at 9:40 a.m. He said he keeps getting reports that we're going to be dealt with severely by the Budget Bureau, and he wanted to be sure that I am handling the discussions personally. I said I am, and I urged patience lest we jeopardize what chances we have. He said he had an hour's talk with Shultz sometime ago and he wondered if it helped. He said that Commissioner Johnson tipped him off the other day that the White House has ordered an increase in the fuel enrichment cost up to $32. He said he realizes there are cost factors which make this necessary, and he won't make any big deal about it if it's fairly close to something like $31.60. I offered to have Weinberger or someone else come up to talk to him, but he said he saw Weinberger the other night and he might call him himself. Of the various programs that might be cut, he said his number one concern is for the LMFBR; I said I realize that very clearly. He is also concerned about CIP; he understands that they have $16.1 million in reserve, with the threat of cutting it off completely. He has a letter prepared, and he will send it to me even though we have discussed it now, "just as a matter of record, but you know pretty well how I feel about it."

I received a telephone call from Bob Silber at 10:05 a.m. He said that Bill Benjamin is in England until mid-January. He asked whether Benjamin had been in touch with me. I said that he had called on Monday (December 14th) when I was out, and he was to call back at a specified time, but didn't. Silber said that he would meet in New York tomorrow with the lawyer and draw up a letter of intent with regard to Science Service and would send it to us in draft from. I told him it did not seem possible that we could do anything by January 31st. I mentioned that there are problems with respect to eliminating the non-profit portions; in fact, we could probably not even take the Westinghouse Science Talent Search portion. (Note: I called Ted Sherburne regarding Silber's call. Sherburne told me that yesterday he had a call from a Benjamin Linsky (Professor at New York University), who is involved with Pergamon Press. He asked whether Science Service would be interested in selling Science News or else in working out some kind of cooperative arrangement. Sherburne told him that this is a matter that would have to be decided by the Board of Directors, but if he wished to speak to someone, he should call me. Sherburne also pointed out to me that Spilhaus was involved with Pergamon some time ago. He said that the NSF proposal went in today.)

At 11 a.m. I attended a meeting of the American Chemical Society Committee on Chemistry and Public Affairs in the Board Room of the American Chemical Society headquarters building. We discussed the activities of the Committee and future directions until about noon and then went over to have lunch in the Board Room of the Madison Hotel where we were joined by Ed David. Present during the

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December 16, 1970

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Here's a rundown on activities next week:

Sunday, December 20 -- An article on nuclear power by Dr. Ralph Lapp is scheduled for publication in the New York Times Sunday Magazine. Dr. Lapp has also done a three part series for the New Republic on the role of nuclear plants in the overall power picture. The series will begin in January.

Monday, December 21 -- We expect to announce that the AEC has signed an agreement with CER Geonuclear Corporation of Las Vegas to conduct a study of a possible gas stimulation experiment using nuclear explosives. The study and resulting report are expected to take about six months to complete and will be designed to determine the project's technical feasibility and safety, and whether the project would offer the prospect of significantly enhancing the production of natural gas.

Wednesday, December 23 -- Chairman Seaborg will meet with Tom Kimball, head of the National Wildlife Federation, to discuss environmental matters.

Thursday, December 24 -- We plan to issue a year-end statement featuring highlights of AEC programs during 1970.

KCOP-TV in Los Angeles is preparing a program on the beneficial uses of nuclear energy for use on January 10. Officials of Atomics International, Inc., and the AEC's Argonne National Laboratory have been interviewed.

KOMO-TV in Seattle is working on a program on nuclear power. The reporter has been in touch with our Richland office in Washington State and our Idaho office.

The Canadian Broadcasting Corporation is researching a television report on commercial nuclear power plants for its "Weekend" program. Emphasis will be on plants operating, being constructed, and planned for sites located on the Great Lakes. The report may include a filmed interview with Chairman Seaborg.

We will announce tomorrow that we are proposing amendments to our regulations which would permit the Commission to impose a fine for violation of the Atomic Energy Act and the AEC Rules and Regulations. Fines could be imposed in cases where suspending or revoking a license is not in the public interest, but where the situation requires more than a notice of violation or a cease and desist order.

We announced yesterday that the Commission has approved a proposal from the State of Maryland to assume part of the AEC's regulatory authority over the use of radioactive materials in that state. The agreement will be effective on January 1, 1971, and will make Maryland the 23rd state to assume such authority from the Commission.

Newsweek continues to work on an article dealing with nuclear activities. We have been told that it will be published in the next week or two.

An underground nuclear test in the yield range between 200 kilotons and one megaton is scheduled to be conducted at the Nevada Test Site at 11 a.m. EST, tomorrow. The test was pre-announced Tuesday night in Las Vegas.

Sincerely,

(Signed) Joseph J. Fouchard for

John A. Harris, Director
Division of Public Information

| PI | PI | PI |
|---|---|---|
| RMNewlin:ak | JJFouchard | JAHarris |
| 12/16/70 | 12/16/70 | 12/16/70 |

meeting or during lunch or both were: Franklin A. Long, Robert W. Cairns, Theodore L. Cairns, Herbert E. Carter, Lloyd M. Cooke, James D. D'Iani, George S. Hammond, William F. Kieffer, Richard A. Carpenter, Stephen T. Quigley, Wallace Brode, James H. Stack, Richard L. Kenyon, Rod N. Hader (Secretary of ACS), and Dr. Robert E. Henze.

At the luncheon Frank Long explained to David the purpose and the activities of CCPA and asked David for suggestions. David mentioned the problems that we are having with chemicals in food and food additives, then described the issues in the President's programs in the social area. The latter had surfaced at a meeting of the Domestic Council that he attended this morning. I mentioned the meeting of the Federal Council for Science and Technology that David chaired yesterday in which problems of national energy policy and public understanding of science had been discussed. David was also asked about possible contributions in solving the problems of environmental pollution and David suggested that the CCPA talk to Bill Ruckelshaus and also Russell Train and Gordon MacDonald on this.

Following lunch I went back to the CCPA meeting which continued in the ACS Board Room. Long asked me if I had any suggestions as to problems that the Committee might concern itself with that I wanted to describe before I left and I said that I had one which I consider to be serious. This is the growing public disillusionment with science. I said this has even taken on an anti-rational or anti-intellectual aspect. I mentioned as examples the war criminal trials being conducted by students on various campuses and the candlelight wake in front of Melvin Calvin's Berkeley home and the march on Ed Teller's home with the threat to burn it down. There was general agreement that this trend can become very serious if continued and the implication, as I left, was that perhaps the Committee would at least give it some thought although solutions are not apparent.

At 2:45 p.m. I attended one of our regular sessions with laboratory directors, involving Maurice Goldhaber of Brookhaven. Present were Commissioners Johnson, Ramey and Larson, Bob Hollingsworth and Julie Rubin. Goldhaber described the increasing amount of work at Brookhaven financed by agencies other than the AEC (for which we expressed general approval); the problem of how to handle employees with tenure in the face of a decreasing budget; the problem of a cost overrun on the AGS; a number of interesting investigations, particularly in the biological area; and the general status of the laboratory.

I signed a letter to Governor John Love of Colorado (copy without enclosure attached) replying to his letter of December 9th in which he asks the Commission to develop a procedure for state approval of proposed Plowshare projects.

I also signed a letter to George P. Shultz (copy attached) commenting positively on Enrolled Bill S. 4557 involving an increase to AEC appropriations for fire protection, etc., at various nuclear weapons facilities.

I received a memorandum from President Nixon asking that I lend my support, along with others, to provide maximum employment opportunities for veterans (copy attached).

Attached is a copy of a memo to the Commission from Kratzer regarding SEABEDS Arms Control Treaty-U.N. Action.

Suki and I took a hike in the Fort Reno area on the Belt Road side.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 1 7 1970

Honorable John A. Love
Governor of Colorado
Denver, Colorado 80203

Dear Governor Love:

Thank you for your letter of December 9, 1970, by which you made certain requests having to do with any nuclear explosions in the State of Colorado under our Plowshare program. I am happy to have the opportunity to respond to you on this subject.

As you are aware, "Project Rio Blanco" is under study by the Government with CER Geonuclear Corporation of Las Vegas, Nevada. In this connection, a project definition contract agreement will be executed shortly with CER. Project definition is a program of investigation, study, evaluation and planning to determine the technical feasibility and safety of a proposed, potential project. No proposal for a project is to be considered until the project definition plans resulting from the study have been completed, fully reviewed and accepted.

Under our currently established procedures, we plan to seek the assistance of officials of the State of Colorado early during this project definition period, particularly in specifying and evaluating the information and data to be collected by CER. We would not plan to conduct Project Rio Blanco, or any other Plowshare experiment involving the detonation of a nuclear device in the State of Colorado, without prior consultation with State officials. Indeed, the National Environmental Policy Act of 1969 and its implementing Executive Order and guidelines require no less than this. In any event, I can assure you that the AEC will not proceed with any detonation in connection with the Rio Blanco experiment without the concurrence of appropriate State officials.

Subject to other advice from you, our contacts with the State would be by personnel of our Nevada Operations Office, working with Mr. TenEyck, Dr. Emerson, Mr. Rold and others we have come to know through Project Rulison.

A copy of our public announcement regarding Rio Blanco is enclosed for the purpose of providing further information concerning the project definition study. The study will require about six months. In the meantime we would hope to have substantial information from Project Rulison production tests, the results of which we will continue to provide to you.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Enclosure:
Rio Blanco Announcement

bcc: Chairman (2)
SECY (2)
Commissioner Ramey
Commissioner Johnson
Commissioner Larson
Commissioner
GM (2)
AGMDP
OCR (2)
OGC
DPI
A. D. Thornbrough, NV

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 17 1970

Honorable George P. Shultz
Director
Office of Management and Budget

Dear Mr. Shultz:

You have requested our views on Enrolled Bill S.4557, an Act "[t]o amend Public Law 91-273 to increase the authorization for appropriations to the Atomic Energy Commission in accordance with Section 261 of the Atomic Energy Act of 1954, as amended, and for other purposes."

This bill amends Public Law 91-273, the Atomic Energy Commission Fiscal Year 1971 Authorization Act, by increasing the authorization for appropriations by $25.5 million for the construction of improvements to implement the Commission's fire protection, safety, and operating conditions program at various weapons production and nuclear research facilities.

To get an over-all picture of the vulnerability of weapons-related facilities to fire, the Commission engaged two independent industrial inspection teams to conduct a detailed fire protection survey at eleven major AEC facilities. Simultaneously, the Commission conducted its own survey to determine what improvements would be required to convert each inspected facility to what is known in the fire insurance trade as a "highly protected risk" (HPR). An HPR is an expensive facility in which a fire loss could be limited to $1 million or less. As a result, the Commission decided to take steps to significantly reduce the probability of the occurrence of fire and consequent damage by the installation of fire prevention and retarding improvements. In addition to modifications to existing structures, the Commission plans to replace certain facilities with new facilities using modern materials.

For these reasons the supplemental request for $25.5 million was submitted by the Commission for Title I and Title II design work and the procurement and installation of certain critical items for the ten highest priority projects. The eventual cost for these ten items is expected to be $118 million subject to the more detailed examination under Title I and Title II.

On September 14, 1970, and following completion of the surveys described above, the President transmitted an executive communication to Congress requesting these funds.

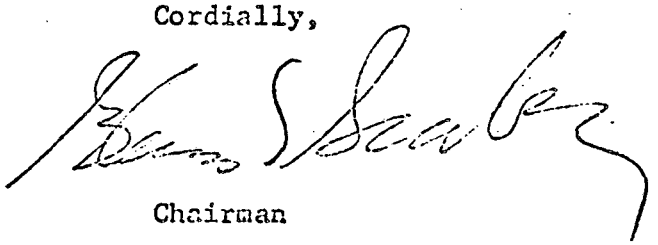
The bill is in two sections. Section 1 amends subsection 101 (b) of Public Law 91-273 by adding paragraph (9), line item for construction project 71-9, at an authorized level of $25.5 million. Section 2 of the bill contains a technical amendment to subsection 102 (a) of Public Law 91-273, containing limitations applicable to the authorization to reference the new paragraph.

The bill does contain one typographical error, to wit:

> "(9) Project 71-9, fire safety, and adequacy of operating conditions . . ." should read "(9) Project 71-9, fire, safety, and adequacy of operating conditions . . ."

The Enrolled Bill is identical to the bill as approved by the Office of Management and Budget. The Commission recommends approval of its Bill.

Cordially,



Chairman

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NOV 86

THE WHITE HOUSE

WASHINGTON

December 15, 1970

MEMORANDUM FOR THE HEADS
OF DEPARTMENTS AND AGENCIES

I am calling upon American business, organized labor, veterans organizations, and state and local governments to lend their support to a national effort -- Jobs for Veterans -- designed to provide maximum employment opportunities for veterans.

Each veteran deserves the opportunity to find his place in our economic system. Jobs for Veterans is a nationwide effort to highlight the veteran and to make effective use of the talents and skills he has acquired in the military service.

I expect the Departments and Agencies of the Executive Branch to lead the way in this important effort and to support the program fully within their areas of responsibility.

I have appointed Mr. James F. Oates, Jr. as National Chairman of Jobs for Veterans and I have asked him to cooperate with you to insure that the resources of the Federal Government are utilized to the fullest extent possible.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 17 1970

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson
Commissioner
General

SEABEDS ARMS CONTROL TREATY - UN ACTION

Reference: SECY 378

On November 17, 1970, the United Nations General Assembly's Committee I in a plenary session, by a 91 to 2 vote with six abstentions, recommended that the General Assembly commend the Seabeds Arms Control Treaty and requested that it be opened for signature and ratification at the earliest possible date. The treaty text, contained in the reference, is identical to the treaty text commended by the Committee I. The purpose of the Seabeds Arms Control Treaty is to prohibit emplacement of nuclear weapons and other weapons of mass destruction on the seabed and the ocean floor and in the subsoil thereof beyond a specified limit. The two negative votes were cast by Peru and El Salvador, countries which claim a 200 mile territorial limit and are not satisfied with the 12 mile outer limit of the seabed zone established by the Treaty. The six abstentions were: France, Kuwait, Indonesia, Ecuador, Senegal and Thailand.

On December 7, 1970, the UN General Assembly favorably voted 104 to 2 with two abstentions to adopt the Committee I's recommendation on the Seabeds Arms Control Treaty. The two negative votes were cast by Peru and El Salvador and the two abstentions were taken by France and Ecuador.

It should be noted that the Seabeds Treaty does not prevent a coastal state from placing the proscribed weapons within the 12 mile limit of the seabed zone established by the Treaty. Additionally, it has been written in such a way that it does not prevent a coastal state from permitting (within the 12 mile limit) another state to place weapons beneath the coastal state's territorial waters. Also the Treaty is not intended to cover submarines armed with nuclear weapons.

At this time, it is planned to hold joint ceremonies in Washington, Moscow and London to open the Treaty for signature. It is expected that the ceremonies will be in early February although no specific dates have been discussed. The depository governments for the Seabeds Treaty are to be the United States, U.S.S.R. and the United Kingdom. Ratification by 22 governments is required before the Treaty will go into effect.

We will notify the Commission when the Treaty will be opened for signature and when future congressional action is planned.

Myron B. Kratzer
Assistant General Manager
for International Activities

Friday, December 18, 1970- D.C.

I received a telephone call from Jerry Tape at 9 a.m., asking who would be giving the paper on the broad subject of nuclear power at Geneva IV that originally was planned for former Commissioner Thompson and me. We discussed Commissioner Larson and I agreed to check into the matter with him. (Note: I called Commissioner Larson and asked that he give the paper, to which he agreed. I said I would take it up at the 9:45 a.m. Information Meeting this morning. At 3:45 p.m. I notified Dr. Tape that Commissioner Larson had agreed to give the paper.)

At 9:45 a.m. I presided over Information Meeting 1087 (notes attached). We discussed a proposed statutory amendment to define nuclear explosive devices.

At 10:30 a.m. I presided over Regulatory Information Meeting 438 (notes attached). We discussed the proposed rule changes regarding production of AEC documents and the attendance of AEC personnel at licensing hearings. With respect to the latter, we will make provision for the appearance of named AEC personnel such as the General Manager or the Director of Regulation, even the Commissioners themselves, under very exceptional circumstances. We got word that a weapons test, BANEBERRY, conducted by the Livermore Laboratory (a line of sight test) is leaking to an extent that may cause problems.

At 11:50 a.m. I attended a briefing by Dr. J. Carson Mark and Joseph K. Landauer of LASL on safety factors in weapons testing. Also present were Commissioners Ramey, Johnson and Larson, Bob Hollingsworth, W. H. Beach, E. J. Bloch, M. J. Domagala, Alex Fremling, Fred Glatstein, Fred Hobbs, John A. Griffin, Libby G. Halperin, Lawrence O'Donnell, John H. Pender, Julie Rubin, and F. R. Tesche. We discussed the question of the benefits versus risks of testing weapons that are not "one point" safe.

From 1 p.m. until 2:45 p.m. I attended a luncheon given by Pat Moynihan in honor of Sir Solly Zuckerman in the Madison Room on the eighth floor of the State Department building. Also present at the luncheon were Chris Herter, Bill McElroy, Russ Train, Heffner, Herm Pollack, John Middleton, Lock (British Embassy) and one other. After lunch Pat called on Sir Solly for anything that he might want to say regarding the state of science and related matters in England. Solly described the new efforts on environmental research, the recent decision of the British government to participate in the Cern 300 BeV accelerator, the background of the recent strike of the electric power people, the problems in the financial support of science in England, and so forth. I rode back with Sir Solly to Blair House. On the way he told me that he is finally leaving his official position as Chief Science Advisor to the British government, but he will continue to serve on a confidential basis as advisor in nuclear matters. He gave me a copy of a preface to an English edition of Stern's book, The Oppenheimer Case, for me to read in order to give him any suggestions that I might have.

The nuclear test of low yield (BANEBERRY), which was conducted underground at the Nevada Test Site today at 10:30 a.m. and which vented, apparently released relatively large amounts of radioactivity in a large cloud. We received hour by hour reports on this as it left the test site and travelled to neighboring states. Some 600 employees had to be evacuated and decontaminated, but none received exposures above the permissible limits for employees. This event was reported in a rather sensational manner on the evening national TV news programs. This will clearly be a very troublesome matter.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 18, 1970

INFORMATION MEETING 1087

9:45 a.m., Friday, December 18, 1970, Chairman's Conference Room, D. C.

1. Chairman's Report On Telephone Call From Mr. Eugene Zuckert Re KMS Matter (Oral)

2. Chairman's Report of Conversation With Dr. Tape Re Commission Paper For Geneva IV (Oral)

   Commissioner Larson will present. (Griffin/DTI)

3. Proposed Letter to Chairman Holifield Re Uranium Enrichment Technology

   The Commissioners' comments are requested. (AGMP/O'Donnell)

4. Agenda For The Weeks of December 21, 28, January 4 and January 11, 1971

   Approved. (SECY)

5. Commissioner Ramey's Query Re Letter To Senator Jackson, December 14, 1970, on FFTF (Oral)

6. SECY-769 - Gift of SNM to IAEA

   Approved. (AGMIA)

7. SECY-775 - Proposed Statutory Amendment to Define Nuclear Explosive Device

   Approved. (OGC)

8. Pending Contractual Matters Report Number 385

   Noted with requests. (EAGM)

9. Seinosuke Hashimoto, JAIF, December 10, 1970 Letter of Invitation for Annual JAIF Conference, Tokyo, March 15-17, 1971

   The Manager, Oak Ridge Operations Office, is designated to represent the Commission. (AGMIA)

10. General Manager's Report On Pay Increase Pending Presidential Approval

* * *

11. General Manager's Report on BANEBERRY (Oral)

W. B. McCool
Secretary of the Commission

10:30 a.m.

PRESENT:

| COMMISSIONERS: | STAFF: | DISTRIBUTION: |
|---|---|---|
| Chairman Seaborg | Mr. Hollingsworth | Commissioners |
| Commissioner Ramey | Mr. Bloch | General Manager |
| Commissioner Johnson | Mr. Hennessey | General Counsel |
| Commissioner Larson | Mr. Rubin | Secretary |
| | Mr. Hobbs | |
| | Mr. Kull | |
| | Mr. Flaherty * | |
| | Mr. Pender * | |
| | Mr. Kratzer * | |

* Attendance by Topic (s)

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 18, 1970

REGULATORY INFORMATION MEETING 438

10:30 a.m., Friday, December 18, 1970, Chairman's Conference Room, D. C.

1. Mr. Price's December 17, 1970 Memorandum on Proposed Rule Changes: Production of AEC Documents and Appearance of AEC Personnel At Licensing Hearings

   Approved with revisions. (ADRA)

2. Draft Press Release On Proposed Rule Changes - Production of Documents In Licensing Proceedings

   To be revised and scheduled for consideration Monday, December 21, 1970. (PI-SECY)

3. Mr. Price's Report On Consumers Power Company (Palisades Plant), Docket No. 50-255 (Oral)

W. B. McCool
Secretary of the Commission

11:15 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Wells
Dr. Buck
Mr. Rowden
Mr. Henderson
Mr. Low
Mr. Mann
Mr. Price
Mr. Shapar
Mr. Hanauer
Mr. Hobbs

DISTRIBUTION:

Commissioners
Dir/Regulation
General Manager
General Counsel
Secretary

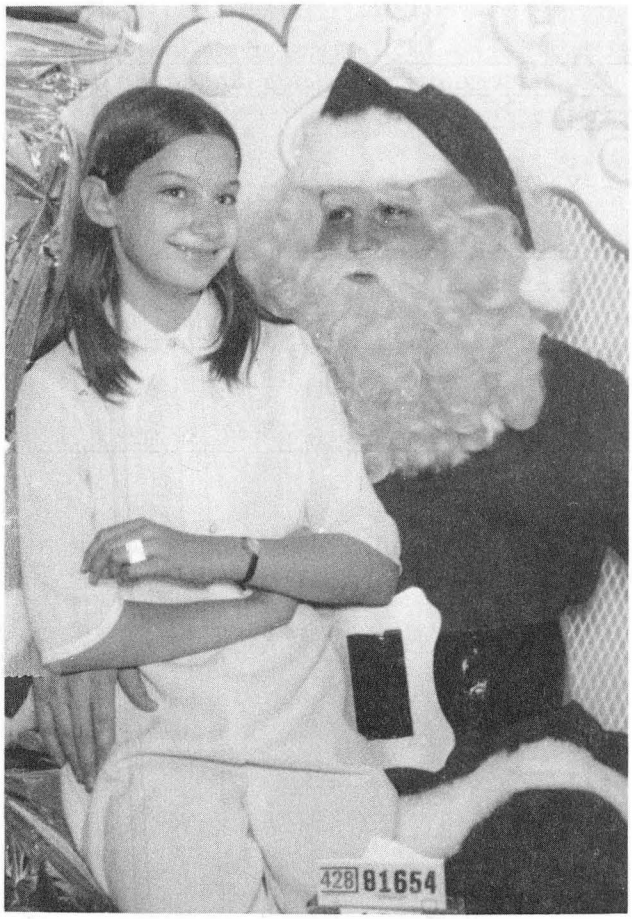
Suki and I took a hike in the Fort Reno area on the Belt Road side.

Saturday, December 19, 1970- D.C.

I worked in the office until 12:30 p.m. Dianne visited the office this morning and she and I had lunch with Doris Knief at the World Buttery.

Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters and returned to our starting point.

I then took Dianne to Woodie's to see Santa Claus. She claims this is going to be her last visit with Santa Claus. We went to buy our Christmas tree at the usual place near Chevy Chase Circle.




Dianne Seaborg and Santa Claus
December 19, 1970

The President signed the Omnibus Bill today. This eliminates the need for practical value legislation, restores the criteria for uranium enrichment (those based on full cost recovery, replacing President Nixon's commercial criteria) and introduces more flexibility into the Atomic Safety and Licensing Board membership.

We continued to get news from Nevada on the BANEBERRY venting. It was featured as front page news in the Washington Post and was mentioned in large news stories in papers across the country. No member of the public received radiation exposures above radiation standards and it doesn't look like it will

lead to any except extremely small amounts of radioactivity beyond U.S. borders.

Sunday, December 20, 1970

I worked on the final draft of Man and Atom.

Eric and I went to Kennedy Stadium with Syd Gaarder and his son Jim to see the Washington Redskins-St. Louis Cardinals football game. Washington won, 28-27, by holding on for a thrilling finish.

Suki and I took a hike in Rock Creek Park. We started at Oregon and Nebraska Avenues, went along the White Horse Trail and Cross Trails 3 and 4, past the police headquarters and returned to our starting point.

Monday, December 21, 1970- D.C.

At 9:45 a.m. I presided over Information Meeting 1088 (notes attached). We discussed the venting of the BANEBERRY test last Friday. Apparently one of the problems is that it may have gone at a higher yield rather than the designed yield. There was a large surface fracture 300 feet long and 20 feet wide. We had to evacuate 600 people and the highest film badge reading was 1 r with no one exposed above the permissible limits. The aircraft lost contact with the radioactive cloud Saturday night. The count at Salt Lake City is substantially higher than background and will certainly create a problem.

We discussed the impending problem with respect to laser-induced fusion posed by the work of Dr. Winterberg of the University of Nevada and by planned work on this subject at Gulf General Atomic. We learned that all the invited persons (with the exception of Jim Fisk) accepted our invitation to sit on a panel to consider a possible change of policy in classification in this area. The first meeting of the panel will be held on February 4th and the members are Robert F. Bacher, J. Carson Mark, Marshall Rosenbluth, Jack W. Rosengren, Fred Seitz, Robert L. Sproull, Gerald F. Tape and Charles H. Townes.

We sent to the Federal Register the rule on amending the regulations on the production of documents and making available AEC personnel in licensing proceedings.

I sent the letter to JCAE Chairman Holifield, informing him of our revision of the uranium enrichment services criteria and our establishment of the new price of $32 per kilogram unit of separative work (copy attached without enclosures). Ramey sent a letter of dissent on the establishment of the $32 price.

Commissioners Ramey, Johnson, Larson and I were briefed from 11:50 a.m. until 12:50 p.m. by John Kelly on the results of the RULISON test. Kelly described in detail the economics for the use of nuclear explosives to recover gas from tight formations. On the basis of his presentation, it looks like an economically sound proposal.

I had lunch in the Commissioner's dining room with Julie Rubin, Justin Bloom, Stan Schneider and Syd Gaarder.

At 2:45 p.m. I presided over Commission Meeting 2446 (action summary attached). We discussed the final Federal Register notice on amendments to 10 CFR Parts 20 and 50, implementing the practical value aspects of the bill signed by the President last Saturday. We will publish this in the Federal Register next Tuesday.

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

COPY NO. 3
December 21, 1970

INFORMATION MEETING 1088

9:45 a.m., Monday, December 21, 1970, Chairman's Conference Room, D. C.

1. Letter of December 21, 1970 to Chairman Holifield, JCAE, Re Revision of Uranium Enrichment Service Criteria

2. Briefing on BANEBERRY Venting, December 18, 1970

   A report for the White House is requested; the Commission noted suspension of further testing until difficulties explained. (DMA)

3. SECY 785 - Draft Response to GAC Letter re 114th Meeting

   Approved. (AGMR&D)

4. SECY-777 - NAL Draft Environmental Statement

   Approved as revised. (AGMO)

5. SECY-787 - National Estuary Protection Act Implementation

   Approved. (GC)

6. SECY-790 - Pure Fusion Reaction Explosions: Winterberg Research (See also SECY-568)

   Letter to Dr. Winterberg is approved with revisions for dispatch after check with laboratories. (AGMMA)

7. SECY-786 - December 9, Staff Meeting with GGA on Laser Applications

   Noted. (C)

8. SECY-783 - Laser Classification Panel

   Noted. A Commission meeting with the Panel is to be scheduled February 4, 1970. (C/SECY)

9. SECY-784 - Settlement of LACBWR Claims

Noted. (DC)

10. SECY-788 - Midland, Michigan, Citizens' Visit and Workshop November, 1970

Noted: an appropriate letter is to be sent to the JCAE; a reassesment of budgetary needs is requested. (DTI/OC)

11. General Manager's Report on NERVA Program (oral)

12. Private Industry Access to Uranium Enrichment Technology

Based on White House coordination the letter is now to be sent to the JCAE and is to include a reference to the Commission's meeting with the Committee (probably sometime after January 25). Congressman Hosmer is to be informed. (AGMP/O'Donnell)

13. Personnel Security Item

Mr. Vinciguerra will check with Mr. Mardian of Justice. (AGMA/S)

W. B. McCool
Secretary of the Commission

11:40 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson

STAFF:

Mr. Hollingsworth
Mr. Bloch
Mr. Hennessey
Mr. Rubin
Mr. Hobbs
Mr. Ryan
Mr. Tesche *
Mr. Harris *
Mr. McGee *
Mr. Fava *
Mr. Erlewine *
Mr. W. J. McCool *
Dr. T. Elioff *
Mr. Marshall *
Mr. Vinciguerra *
Mr. Hirsh *
Mr. Pender *
Mr. Coles *
Mr. Kratz *
Mr. Stewart *

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

* Attendance by Topic (s)

LIMITED ACCESS

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NOV 86

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 21 1970

Honorable Chet Holifield
Chairman, Joint Committee on
Atomic Energy
Congress of the United States

Dear Mr. Holifield:

Revision of the Uranium Enrichment Services Criteria is required to establish Criteria in compliance with the recent amendment to Subsection 161v. of the Atomic Energy Act of 1954, as amended. Attachment "A" is the proposed amendment to the Criteria which has been developed to effect this change. This amendment of the Criteria is herewith submitted to the Joint Committee on Atomic Energy for its review pursuant to Subsection 161v. of the Atomic Energy Act of 1954, as amended.

It has further been determined, with Commissioner Ramey non-concurring, that the charge for enriching services on the basis of the amended Criteria will be set at $32.00 per kilogram unit of separative work. Major assumptions used as a basis for this charge are presented in Attachment "B". Commissioner Ramey's views are presented in Attachment "C".

The $32.00 charge is within the limitation of the ceiling charge which was $32.91 as of July 1, 1970, and is currently estimated to increase to approximately $36.50 by July 1, 1971. An increase in the recently established charge of $28.70 which will go into effect on February 22, 1971, is necessary because of increases in the projected costs of separative work, principally the cost of electrical power.

Upon establishment of the amended Criteria, the Commission will announce this charge by publication in the Federal Register. The new charge will go into effect 180 days after such publication, in accordance with paragraph 5(j) of the Criteria.

As Attachment "D" we are enclosing a copy of a public announcement which we plan to make on this action in the next day or so. We would be pleased to provide any further information in this connection as the Committee may require.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Attachments:
A, B, C & D

652

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

December 23, 1970
FG

R. E. Hollingsworth, General Manager
H. L. Price, Director of Regulation

COMMISSION MEETING 2446, MONDAY, DECEMBER 21, 1970, 2:45 P.M., ROOM 1115, D. C. OFFICE

MEETING SUMMARY

1. SECY-770 - Contract for Operation of NRTS, Idaho

   Approved. (DC)

2. SECY-R 110 - Certain Federal Register Notices and Amendments to 10 CFR Parts 2 and 50: Practical Value Legislation

   Approved, as revised.

   The Commission requested:

   a. publication of the Notice of Rule Making on December 29, 1970;

   b. staff transmit, according to priorities, license applications to the Department of Justice over a several week period;

   c. applicants be informed in writing on December 24, 1970 of the forthcoming Federal Register Notice;

   d. staff revise the last paragraph on page 26 to the effect that the utilities consult with the appropriate agencies before informing the Commission;

   e. staff consider obtaining the servies of an economist; and

   f. preparation of a joint memorandum (GM, DR, Chairman, AS&LBP and OGC) on staffing requirements under the Practical Value legislation.

   (OGC)

3. Comments on Enrolled Bill S. 1079

   Approved, as revised. (OGC)

4. Commissioners' Meeting with JCAE Staff on Uranium Enrichment Criteria

   Scheduled for 8:30 a.m., December 22, 1970. (ACMP)



W. B. McCool
Secretary of the Commission

cc: Commissioners

I then left for the White House, where I attended a Cabinet meeting in the East Room from 4:10 p.m. until 5:15 p.m. This meeting for Cabinet members, a large number of sub-Cabinet members and agency heads was a year-end briefing similar to a briefing held about this time last year to which I wasn't invited.

President Nixon opened the meeting with a statement on the importance of change and the philosophy of his Administration to meet new issues and to carry on in the spirit of innovation. He said there would be three speakers, the third of which would be a mystery guest acting as a sort of cleanup hitter. He then called on Secretary Bill Rogers for the first talk.

Rogers began his statement with his familiar story about his aide briefing him every day with nothing but bad news in the foreign affairs field. He asked his aide if he ever had any good news to report and the aide replied that he only had bad news for which we weren't responsible- he said that the Aswan Dam was leaking. Rogers emphasized three areas of foreign affairs in which he thinks the Nixon Administration has been quite successful, operating in different ways and illustrating the flexibility of response. (1) The Administration stayed out of trouble in Nigeria. This illustrated a success for the principle of non-involvement. We came in with the most human aid given by any country at the end. (2) The Middle East situation represents an example of political initiative. This led to the cease-fire which gave rise to tremendous improvement in the situation and the prospects for a peaceful settlement are good. (3) The situation in Indochina. Here the Administration inherited a situation and it is being rapidly de-escalated. He gave examples of decreasing manpower involvement (e.g., a reduction from 740,000 in January 1969 to 420,000 by June 1971). He also gave examples of decreased casualties and decreased cost of the war during the Nixon Administration and indicated that the Cambodia incursion was very successful in making possible these decreases.

Rogers said that these three examples reflect the Nixon doctrine, which he defined as embodying the following three points: (1) keep treaty commitments, (2) the U.S. will provide a shield for non-nuclear nations against attack by nuclear powers, and (3) Asians must provide the manpower to withstand attacks by non-nuclear nations. He reiterated that the Nixon doctrine has led to reduction in forces, in costs and in casualties in Asia and makes possible the scheduled withdrawal of American forces by May 1st of next year.

The President then called on George Shultz (head of the OMB). Shultz said that President Nixon had established the budgetary rule that expenditures should never exceed revenues at full employment. He said that the Johnson Administration's expenditures had exceeded such revenues and this was a primary cause for inflation in our present precarious situation. The Nixon Administration came in to face a situation of off balance stretching through numerous areas of society, such as the college campuses, school desegregation, crime, etc. He said that we are now striking a new balance and the trouble on the campuses has decreased, the schools in the South quietly underwent desegregation this fall, the crime rate has decreased in the District of Columbia, etc. He ended with a tribute to the President for these accomplishments and deplored the fact that the American people did not give true credit to the President and his Administration.

The President then called on Pat Moynihan whom he introduced as his mystery speaker. Moynihan gave a brilliant talk from a prepared text. He said that President Nixon entered office at a time when the nation was fragmented by involvement in a serious war in Asia. Other problems included the travail of race, imperiled economic stability and even spies sent to the national party conventions the previous summer. He said that the President made a brilliant

inaugural address, advocating reconciliation, restraint and reserve- in line with these promises, what have been the achievements of the Nixon administration? These have been great in many area. In the area of foreign affairs, the Cold War has been lessened, the war in Asia is drawing to an end and progress is being made in arms limitation. We have prospects now for a generation of peace. In the domestic area the President has met his commitments to ease the lot of the poor and oppressed. The President has offered a critique of government that is the best, in his opinion, since that of President Woodrow Wilson. Mass urban violence has disappeared and racial segregation in the South has been dismantled, yet he has been given very little credit for these accomplishments. This reminded Moynihan of J. F. Kennedy's statement, "Life is not fair." The President has exhibited a surplus of moral energy in the face of a public which is tending to reduce all problems to their most simplistic solutions, a public where moralizing is now tending to drive out thought. The rhetoric of the day is that of crisis and this tells on the presidency itself. Moynihan said that in leaving he wanted to make three exhortations for us to ponder: (1) be of good cheer and conscience; (2) resist the temptation to respond in kind; and (3) be far more attentive to what the President says and more helpful in interpreting this to the American people.

As his closing statement, President Nixon paid tribute to Moynihan, who received a standing ovation for his remarks.

The President then suggested that we join our families, who were assembling in the other part of the White House. I found Helen, Eric and Dianne in the general entrance area as I walked from the East Room to the State Dining Room. We then went through the reception line which wound its way through the Green Room to the Blue Room, where President and Mrs. Nixon were greeting guests in the presence of a huge, beautiful Christmas tree. I introduced Eric and Dianne to President and Mrs. Nixon. The President asked about the other members of our family. I said that Dave and Steve are now students at Davis and that my daughter Lynne and her husband Bill are now living in the Berkeley area, preparatory to starting graduate school there.

Helen, Eric, Dianne and I visited all the rooms, meeting friends as we went through the State Dining Room, the Pink Room, the main entrance area, the East Room, the Green Room, the Blue Room, and later the rooms downstairs, including the library, the room containing the gold dishes, etc. Helen and I introduced Eric and Dianne to a large number of people and, in most cases, their children. These included: Agriculture Secretary and Mrs. Clifford Hardin, Transportation Secretary and Mrs. John Volpe, Commerce Secretary and Mrs. Maurice Stans, Mr. and Mrs. John Irwin (Under Secretary of State), Treasury Secretary David Kennedy, Mr. and Mrs. Paul McCracken, Mr. and Mrs. George Shultz, Mr. and Mrs. John Foster, Mr. and Mrs. Gerard Smith, Mr. and Mrs. Abe Lincoln, Mr. and Mrs. George Stafford (ICC), Mr. and Mrs. Harold Finger, Mr. and Mrs. George Low, Bill Anders, Mr. and Mrs. Roger Egeberg, Mr. and Mrs. Henry Kearns, and Ed David.

I took a hike with Suki in the Fort Reno area on the Belt Road side.

I sent a letter to Howard Vesper, furnishing the Commission's comments on the GAC's report on their 114th meeting (copy attached).

Tuesday, December 22, 1970- D.C.- Germantown- Bethesda

Commissioners Ramey, Johnson and I (and later, Larson) met from 8:30 a.m. until 9:40 a.m. with Ed Bauser, George Murphy, Jim Graham and Colonel Shwiller (JCAE staff) and, towards the end of the meeting, with Congressman Holifield, to discuss the new criteria and suggested price increase that we had forwarded to

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DEC 21 1970

Mr. Howard C. Vesper, Chairman
General Advisory Committee to the
U. S. Atomic Energy Commission

Dear Howard:

Supplementing my letter of November 24, we are furnishing the Commission's comments on the report of the 114th Meeting of the General Advisory Committee which was set forth in your letter of November 11, 1970.

The reports of the Weapons and Reactors Subcommittees were most informative. We, of course, appreciate the complimentary comments regarding the management and future of the NERVA program. Additionally, we are in agreement with your comments with regard to the contacts on the Canadian HWOCR program.

Regulatory Matters

In connection with Regulatory matters, you identified "delays" or lengthening periods of time required for the safety review and hearing process as a matter of some concern. We share your views on this matter. As you are aware much attention has already been given to this problem and further action with respect to possible improvement of the situation is now underway. These improvements include revisions being contemplated in the hearing process itself. With respect to compliance, inspection, and quality assurance during construction a number of revised procedures are now being developed to increase the effectiveness of these processes.

Environmental Effects Program

We appreciate the Committee's expression of support for the work of the Office of Environmental Affairs, and we will continue to keep you advised of significant activities under this program.

With respect to the preparation of a public report on releases of radioactive materials from atomic energy sites, we agree that the format for such a report will require careful attention. We are looking into various possibilities, and we will plan to provide the Committee the opportunity to review any report before it is released.

Cascade Improvement Program and Gas Centrifuge Program

The Commission appreciates the Committee's endorsement of current AEC plans regarding uranium enrichment, including the proposed cascade improvement and

uprating programs, the gas centrifuge development program and our current thinking as to establishing arrangements under which privately financed research and development on uranium enriching can be undertaken. We shall be pleased to keep the Committee advised as to our progress in these areas.

Reactor Development

We agree that the matter of support for continued operation of Fermi requires prompt resolution and we are attempting to develop a basis for participating in the Fermi program recognizing that the future successful operation of Fermi could be a valuable supplement to the ongoing LMFBR program. At present, the Commission has determined that it would be prepared to seek approval for waiver of charges for fuel use and burnup provided that certain pre-requisites can be established to support the executive and legislative approvals that will be required.

Safeguards and Materials Management

The Commission is pleased to note that the Committee agrees with the AEC philosophy of gradual implementation of IAEA inspection procedures under the President's Offer. We note the expressed hope that in the near future the Offer can be completely honored, particularly because of the impact on reluctant nations. We plan to watch this situation closely and remain somewhat flexible with respect to the development of the U. S. posture so that optimization of the situation can continually be sought in light of possible changes in international factors.

We are pleased with the Committee's observation that very encouraging results have been obtained in the non-destructive measurements of fissionable material waste and scrap with the two mobile units, the LASL and CGA NOMALS. We share the Committee's view that work on measurement of spent fuel is not as important initially because of the small probability of diversion of highly radioactive fuel bundles and, accordingly, such work will be given a relatively low priority.

The Commission agrees with the Committee's concerns about safeguards during transport and is prepared to support the development of necessary countermeasures. Steps are underway in the Office of Safeguards and Materials Management to recommend improvements and also to identify further development plans.

Subject only to unforeseen, more severe budgetary limitations, the Commission hopes to be able to provide more OSM budget support in Fiscal Year 1973 as compared with Fiscal Year 1972. We are pleased that the Committee received information with regard to the September 1971 Geneva Meeting and we agree with the Committee's endorsement of the decision not to send a NOMAL for exhibition.

AEC Citation and Lawrence Award Discussions

Thank you for your submission of nominees for the U. S. Atomic Energy Commission Citation. These are, indeed, outstanding people and will receive serious consideration by the Commission for this award. We note your reiteration of the Committee's position regarding the proposed change in criteria for the Ernest O. Lawrence Award.

Forthcoming Sherwood Review

The Commission welcomes an in-depth review of its Controlled Thermonuclear Research Program by the General Advisory Committee. In view of the multitude of recent successes in the area of plasma confinement, the outlook for practical fusion power has improved considerably and therefore such a review is very timely. Conversations on this subject have already taken place between Drs. Lombard Squires, GAC, Spofford English, Assistant General Manager for Research and Development, Paul W. McDaniel, Director of Research, Roy Gould, Assistant Director (for Controlled Thermonuclear Research), and Mr. Anthony Tomei, Secretary to GAC. A formal presentation was made to the GAC on December 16, 1970, and it was agreed that the Committee will visit the four major CTR laboratories in the succeeding four months. Dr. Robert Hirsch of the CTR staff will act as technical liaison officer for the review.

We are looking forward to the next meeting of the Committee which will be held at the Los Alamos Scientific Laboratory on February 23, 24 and 25, and are in agreement with the suggested agenda. Commissioner Larson plans to join the Committee for this meeting.

Cordially,

Signed
Glenn T. Seaborg

Chairman

bcc: 1A - Addressee
2A & 3A - Chairman
4A - 7A - Commissioners
8A & 9A - General Manager
10A & 11A - Secretary
12A - AGMRD
13A - AGMDP
14A - DiNunno
15A - SAGM

(Commissioner Larson concurred in draft.)

the JCAE yesterday and which is going to be announced publicly tomorrow. Also present were John Flaherty, George Quinn, Bob Hollingsworth, Roger Legassie, Joe Hennessey and others. Bauser began with inquiries as to why we hadn't given the JCAE more notice, why we are continuing to put the commerical criteria into effect on February 22nd, what the basis is for our calculation of a price of $32 per unit of separative work, etc. Murphy made quite a point of whether we understood Section 202 of the Atomic Energy Act, which requires the Commission to keep the JCAE informed on pending as well as current matters. All in all, it was a rather difficult session.

When Holifield arrived it was better handled. Holifield emphasized the question of whether the legal criteria, as he called them (those based on full cost recovery), shouldn't displace the rubber or illegal criteria (the commercial criteria) before the latter go into effect on February 22nd. He said that he had a number of other questions, but these could be handled with the AEC staff. The net result of the meeting was that we will go ahead as planned and announce the criteria, as passed in the Omnibus Bill, and the $32 price tomorrow, a point that I made clear to Holifield.

After I returned to my Germantown office I received a call from Herm Pollack about the new price for enriched uranium. He expressed concern about the implications to our international clientele. I cautioned him that this is sensitive and that this is what the White House wanted and that we were not given any permission to get into the State Department aspects. He said he will be seeing Under Secretary Irwin on this at 11 a.m. and that Irwin is tempted to get to Flanigan on this. I told him that the decision has been made and that it will be announced at 10 a.m. tomorrow; we were told that the President himself is involved in this. Pollack said he knows there is a great deal of unhappiness at the White House with the JCAE, but he doesn't think this is a wise way to run a railroad. He said there will be an awful lot of inquiries, speculations, and visits from abroad as a result. He said that Alexis Johnson (who has an infection) is back for a couple of hours a day, and he will try again to set up a luncheon with Pastore in January.

At 11 a.m. I met with Terry Herrick, Marion Bowden, James Klein, and also Julie Rubin, to discuss the progress on the TAT (Training and Technology) program at Oak Ridge. They are going to have a dinner at Oak Ridge in February for contractor personnel, with the aim of exhorting them to increase their cooperation. I agreed to be the speaker at this dinner. Herrick said it is his opinion that this is probably the best program in the country in the area of training minority people to upgrade their job capability, a point of view that I have heard confirmed in discussions with a number of people.

I had lunch with Julie Rubin, Justin Bloom and Stan Schneider in the little conference room adjoining my office.

I then attended the annual AERWA Christmas party in the cafeteria and spoke briefly in a somewhat humorous vein, making reference to our problems of the last year and to the controversy over the AAAS presidency. Lee Sellers made comments on Operation Needy Family and then the AEC Chorus led us in Christmas songs.

I went to our Bethesda headquarters to attend their Christmas party. I spoke briefly in a vein similar to that at Germantown. I met a large number of the people who work in our Bethesda office.

From Bethesda I went directly to the Executive Office Building (Room 415) to attend a meeting of the Energy Subcommittee of the Domestic Council. Present

were: Paul McCracken (Chairman), John Nassikas and Tom Joyce (FPC), Hollis M. Dole (Interior), Robert Miller (Commerce), Virginia Knauer (Consumer Affairs-for a while), George A. Lincoln (OEP), Don Rice (OMB), Will Kriegsman (White House), Joseph Segal (Treasury), Dave Freeman (OST), Alvin Alm (CEQ), Hendrik S. Houthakker and Edward Mitchell (CEA) and John Flaherty (AEC).

McCracken handed out a report of the Working Group on Energy Demand and Supply, which attempted to summarize the total energy situation as of 1970 and to predict it for 1975 and 1980. He asked Mitchell to interpret Table I in which these energy statistics are summarized. The projections for nuclear power for 1980 are about 10% below our projections. The question of whether there will be an energy surplus or deficit in 1975 and 1980 seems to hinge on whether there might be a 10¢ per thousand cubic foot increase in the price of natural gas. This illustrates the specialized nature of the predictions, and I have the impression that many other scenarios could be devised, which would lead to different results. There was a great deal of discussion of the validity of the individual predictions for nuclear, coal, gas, domestic oil, etc. McCracken indicated that there would have to be another meeting pretty soon to continue to discuss the report that the Committee would issue.

Minnesota District Judge Edward C. Devitt today held that the Minnesota Pollution Control Agency was without authority to impose regulations far stricter than AEC's on Northern States Power Company's nuclear plant at Monticello, Minnesota. (Attached is a clipping from the St. Paul paper.)

Helen and I held our annual Christmas buffet supper for the members of my staff, the other Commissioners and their staffs and other key AEC personnel. Seventy-two guests attended. Steve also attended, having arrived home from California on a plane this morning.

After the party Stan and Renee Schneider, Valerie Humphries (Stan's cousin, visiting from Honolulu), Julie and Em Rubin, and Justin and Robbie Bloom stayed for a while to talk.

Wednesday, December 23, 1970- D.C.

Admiral Rickover, accompanied by David Leighton and Bob Hollingsworth, dropped in to see me at 9:30 a.m. Rickover wanted to express his strong feelings on the OMB decision to drop the light water breeder reactor program. He asked whether I would mind if he called Weinberger directly to discuss this with him, and I said that I would have no objection. (Rickover called Weinberger immediately from our offices and obtained an appointment to see him at 10:30 a.m. this morning.)

At 10 a.m. I presided over Information Meeting 1089 (notes attached). I had a rather spirited discussion with Commissioner Ramey over the majority opinion that we added to the package we are sending to Holifield concerning the Commission's decision to bring private industry into the uranium enrichment field. We are sending this package to Congressman Holifield today (copy of letter without enclosures attached).

At Regulatory Information Meeting 440 (notes attached), which followed at 11:30 a.m., we discussed the plans to hold meetings with power reactor suppliers, environmentalists, nuclear architect-engineer firms, utilities, etc., to explain the Commission's new rules for keeping radioactive effluents as low as practicable, and also, in the case of environmentalists, to discuss our implementation of NEPA and our high level waste policy. These meetings will be held in January. We also approved Harold Price's recommendation that Gene

# A-Plant Curbs Limited By Court to U.S. Norms

By Austin C. Wehrwein
Special to The Washington Post

ST. PAUL, Dec. 22—A federal judge ruled today that Congress had given the U.S. Atomic Energy Commission exclusive control over regulation of radioactive waste from nuclear power plants.

District Judge Edward C. Devitt held that the Minnesota Pollution Control Agency was therefore without authority to impose regulations far stricter than AEC's on Northern States Power Co.'s nuclear plant at Monticello, Minn.

Environmentalists have expressed alarm that the radioactive discharge the AEC would allow from the plant, 40 miles upstream on the Mississippi River from Minneapolis and St. Paul, would contaminate the drinking water of the Twin Cities, which is drawn from the Mississippi.

Minnesota's proposed restrictions were estimated to be up to 50 times more strict than the AEC's standards, and the state set up the key case in this new "state's rights" field with its challenge.

With the encouragement of the AEC and major corporations in the atomi energy equipment supply business, Northern States Power Co. brought action against the state claiming that the AEC had pre-empted jurisdiction.

Seven states, including Virginia and Maryland, and attorneys for the Southern Governors Conference filed briefs supporting Minnesota.

The state contended that controlling the discharge of radioactive wastes into the river fell squarely within the traditional concept of state "police power," that the "reserve clause" of the 10th Amendment to the Constitution protected Minnesota's responsibility to protect public health and safety, and that Congress in fact had not pre-empted the field.

"The fact that Congress has directed, and not merely authorized, the AEC to effect a comprehensive licensing program for atomic energy is a strong indication of pre-emptive intent," Devitt said in a declaratory judgment.

Devitt, who is chief judge of the Minnesota district, said that it might be that "prudence dictates" the stricter state standards against radiation hazards to insure maximum public safety. But he said that was not the issue in this case.

Both sides had agreed on the technical facts and Devitt said the only issue was whether Congress had pre-empted the field.

He said the 1959 amendment to the 1954 Atomic Energy Act provided a "clear expression" of congressional intent to give AEC exclusive authority.

"At the time of the enactment of the 1959 amendment Congress was aware of the beginning efforts of the state of Minnesota to regulate the field," Devitt said.

Devitt said Congress expressed its "unambiguous mandate" to pre-empt the field for AEC and he said he was "satisfied" that the Supreme Court would agree with his decision.

Both the outgoing Republican and incoming Democratic attorneys general of Minnesota said they expected the state to appeal.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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COPY-NO. 3
December 23, 1970

INFORMATION MEETING 1089

Wednesday, December 23, 1970, 10:00 a.m., Chairman's Conference Room, D. C.

1. Letter to JCAE on Industrial Participation in Uranium Enrichment Technology

   Approved. (AGMP/Rubin)

2. Agenda

   Approved. (SECY)

3. Mr. Klein's Report on NERVA Funding Discussions

4. PEWEE Test

   Staff will insure established environmental statement procedures are followed. (SNS/AGM/O)

5. SECY-797 - Possible Additional FRC Purchases of Enrichment Services Under Offset Agreement

   Discussed and to be rescheduled; Commissioner Johnson requested information in itemized format. (AGMIA/SECY)

6. SECY-798 - Use of Closed-Circuit Television at Geneva-IV

   Approved. (DTI)

7. Geneva IV Representation Funding

   The Commission noted staff is assessing impact of cut in State Department funds and requested consideration of invitations to appropriate industrial representatives (DTI)

8. SECY-799 - Proposed Extension of Memorandum on Cooperation with Romanian State Committee for Nuclear Energy

   Approved. (AGMIA)

9. SECY-800 - Proposed Export of Computers to Israel

Approved. (AGMIA)

10. SECY-803 - FFTF Sodium Dump Heat Exchanger

Approved. (RDT/DC)

11. SECY-792 - December 11 Staff Meeting with PRDC Officials

Noted. (RDT)

12. SECY-793 - Atlantic Richfield Patent Application

Noted. Commissioner Johnson requested early examination of the AVCO item. The Commission noted the GM may submit a proposal for the establishment of a broader group to examine such matters. (C/OGC/EAGM)

13. SECY-795 - Potential AEC Claim Under Hanford Contract Pension Fund

Noted. (OGC)

14. SECY-794 - International Working Sessions on Fusion Reactor Technology, ORNL, June 28-July 2, 1971

Noted. (AGMA/AGMIA)

15. Pending Contractual Matters Report #386

Noted. (EAGM)

W. B. McCool
Secretary of the Commission

11:30 a.m.

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Larson *

STAFF:

Mr. D'Agostino
Mr. Griffin
Mr. Hollingsworth
Mr. Bloch
Mr. Rubin
Mr. Hobbs
Mr. Kull
Mr. Hennessey
Mr. Kleam *
Mr. D. Hoyle *
Mr. Kratzer *
Mr. Stokely *
Mr. Wood *
Mr. Gutchman *
Mr. Marshall *
Mr. Shaw *
Mr. Smith *
Mr. Hirsch *

DISTRIBUTION:

Commissioners
General Manager
General Counsel
Secretary

* Attendance by Topic(s)

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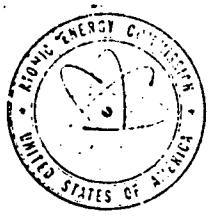

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

UNCL. BY DOE
NOV 86

DEC 2 3 1970

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

The Atomic Energy Commission has developed a plan to provide access to its uranium enrichment technology to a limited number of U. S.-owned companies who may wish to carry out independent development work on uranium enrichment. Participating companies would have access for up to five years to AEC data on both the gaseous diffusion and gas centrifuge processes for enriching uranium.

Current forecasts indicate that new enriching plant capacity will be required about 1980 to meet the fuel needs of the rapidly growing nuclear power industry. The proposed access program would provide private industry with the opportunity to become familiar with the status of uranium enriching technology and contribute to the development of that technology and its application to additional enrichment facilities required to meet future demand for nuclear fuel.

Under the plan, sensitive uranium enrichment technology would continue to be classified and access to it would be offered only under specific contracts with AEC. Those contracts would not involve AEC funding, nor would they permit routine production activities.

Copies of the proposed public announcement and request for proposals are enclosed.

The majority of the Commissioners are in favor of proceeding with this program at this time. The separate views of Commissioner Ramey are explained in enclosure 3. There is also attached as enclosure 4 an extended statement of considerations expressing the view of the majority of the Commission.

We will be pleased to provide any additional information you may wish to have with regard to this program and are prepared to meet with you should you so desire.

Cordially,

Signed
Glenn T. Seaborg

Chairman

Enclosures:
1. Public Announcement
2. Request for Proposals
3. Commissioner Ramey's views
4. Extended Statement of Considerations

bcc: Chairman (2)
Commissioner Ramey
Commissioner Johnson
Commissioner Larson
Commissioner

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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COPY NO.
December

# REGULATORY INFORMATION MEETING 440

11:30 a.m., Wednesday, December 23, 1970, Chairman's Conference Room, D. C.

1. Mr. Price's December 21 Memorandum re Draft Refuse Act Permit Program

   Noted. Commissioner Ramey requested consideration of an ad hoc group at the Federal level to review such matters. (ADRA)

2. Mr. Price's December 22 Memorandum re Plans for Consultation with Indus Public re 10 CFR Parts 20 and 50, Waste Disposal and NEPA and Proposed Announcement

   Approved with revisions. The Director of Regulation will submit a prop on meetings with other individuals and will revise the public announcem and clear it with the individual Commissioners. (ADRA)

3. Staff Meeting With AEF Group On AEC Implementation of NEPA, January 20

4. Personnel Item

   Approved. (ADRA/PERS)

5. Commissioner Ramey's Conversation With Mr. Cole Re SINB Annual Meeting

W. B. McCool
Secretary of the Commission

12:

PRESENT:

COMMISSIONERS:

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson

STAFF:

Mr. Henderson
Mr. Price
Mr. Rogers *
Mr. Hennessey
Mr. Rubin
Mr. Wells
Mr. Beck
Mr. Hobbs
Mr. Griffin

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Secretary

* Attendance by Topic(s)

Blanc, formerly of the California Nuclear Commission, head up an environmental reporting group for EPA matters. He will work under Les Rogers.

I had lunch with Jerry Tape at the Roger Smith Hotel. He wanted to discuss the general situation with respect to energy policy studies. He mentioned the misunderstanding that he has found among members of PSAC as to the relative importance of the breeder reactor and controlled thermonuclear fusion. He is particularly worried about Ed David's negative attitude toward retaining the north tract of Brookhaven, which is in danger of being declared excess. He felt that David should not have said that such retention wouldn't have scientific value in the face of other considerations that might demand it be declared excess. He hopes that when I or Commissioner Larson (and he hopes I'll do it) meet with the Committee to discuss our appeal of this decision, I will ask Ed David to attend, too.

At 2 p.m. I met with Thomas L. Kimball (Executive Director, National Wildlife Service), John Harris and Joe DiNunno; Justin Bloom was also present. We discussed the general role of nuclear power, the breeder reactor and controlled thermonuclear fusion in the long-range future of the energy and environmental picture. Kimball seemed to agree that nuclear power has a central role to play and that we need to explain this to the general public.

Then I received a call from Ed Teller. Teller said he is one of 120 so-called governors of Tel Aviv University and, in this capacity, he received a call from the President of Tel Aviv University asking for help to make an appeal to the AEC and DOD. The University had a CBC-3400 computer and they ordered a CBC-6600. Unfortunately, they returned the 3400, expecting delivery of the 6600 and not expecting that there would be any opposition to its sale. However, either an opposition has been raised or there is some reason for delay in delivery, and the suspicion is that the delay is due to the AEC and/or DOD. Teller said that this will be a completely open facility at all times. He has heard the statement made that perhaps the computer was too large for them; he pointed out that Berkeley had at one time two 6600's and for Tel Aviv's 10,000 students the 6600 is the right size. Another point: there is a negotiation going on between the University and CDC whereby CDC may take back 2,000 hours per year (one-fourth of the total computer capacity). I pointed out that this type of sale goes through the Department of Commerce and all we can do is to interpose an opposition, if we deem it necessary. I said I would check into this immediately and if I do not call him back today, that means that the AEC is interposing no objection.

Carl Walske called and said he has been investigating the deletion of AFAP from our budget; this came up before Packard as recently as two weeks ago and he decided to go ahead with it (AFAP). Walske, John Foster and the Army are also in favor of it. He said that Don Rice (who is anti-AFAP) got together with James Schlesinger (the DOD contact in OMB) and promoted this deletion. Walske says he has talked this over with their comptroller and as soon as Packard gets back, he will have a memo suggesting that he approach Schlesinger on this and if that is not successful, that he approach Weinberger. Walske urged me to give this AEC support. I said that when I get over to see Weinberger I will say something about this.

Attached is a copy of a memorandum sent by John Harris to the White House covering current AEC activities in the public information area.

Suki and I took a hike in the Fort Reno area on the Belt Road side.



David called during the day and said he isn't coming home for Christmas. He is

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NOV 86

December 23, 1970

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Here are some of our current activities:

Monday, December 28--Chairman Seaborg will be interviewed by Joseph Trento, a freelance magazine writer, for an article on atomic energy in True magazine.

Tuesday, December 29--We plan to announce that we are amending our regulations to implement recently enacted changes in the Atomic Energy Act. The new legislation eliminates the requirement for a finding of practical value before nuclear power reactors and fuel reprocessing plants can be licensed under the commercial section of the Act. One of the main effects of licensing under the commercial section is that it provides for antitrust review of applications for construction and operation of these nuclear facilities.

Wednesday, December 30--Chairman Seaborg will speak at the American Association for the Advancement of Science Symposium in Chicago on the subject "Science and the Federal Government in 1970."

Yesterday, a Federal Judge in St. Paul, Minnesota, ruled that states cannot set stricter standards than those set by the Federal Government for the operation of nuclear power plants. The ruling came in a suit by Northern States Power Company to stop the Minnesota Pollution Control Agency from enforcing stricter regulations. Northern States already has a permit from the AEC to operate its Monticello plant. Other states and nuclear industry officials followed this case closely because of its significance in establishing a precedent on the controversial matter of setting standards for nuclear power plants.

We understand that the Look magazine article, "Nuclear Threat Inside America," in the December 15 issue brought about enough reaction to cause Look editors to consider doing a pro-nuclear

article, possibly co-authored by a nuclear authority. We understand that Look will make a decision soon on this matter.

Today we announced that we plan to increase the charge for uranium enrichment services to $32 based on amended criteria provided for in the Omnibus Bill signed December 19 by the President. The current charge is $26 per unit of separative work, but an increase to $28.70 was already scheduled to become effective February 22, 1971. A 45-day period is required for consideration of the new criteria by the Joint Committee on Atomic Energy and then formal notification of the new charge will be made in the Federal Register and it will become effective 180 days later.

We are also announcing today an amendment to our regulations which provides that the maximum amount of AEC records and documents will be made available to parties in AEC licensing proceedings. This policy is consistent with sound Governmental practice and with the principles of the Freedom of Information Act.

Tomorrow we will announce that the Commission is amending its facility licensing regulations to define the general information on emergency planning which must be provided in applications to construct facilities such as nuclear power plants. The amendment also will define the minimum requirements which an operating license applicant must provide in the plans for handling an emergency.

On Monday we announced the issuance of a construction permit for a nuclear fuel reprocessing plant to be located near Barnwell, South Carolina. The permit was issued to Allied-Gulf Nuclear Services, Allied Chemical Nuclear Products, Inc. and Gulf Energy & Environment Systems, Inc.

We appreciate all the help you have given us during the past year. Hope you have a good holiday season.

Sincerely,

/s/ E.E. Stokely for

John A. Harris, Director
Division of Public Information

bcc: Julius Rubin, OCM

PI PI

RWNewlin:bh JAHarris
12/23/70 12/ /70

going to spend it with Lynne and Bill and then perhaps spend some time with Carol at her parents' place in Nevada (which we later learned he didn't do). He and Carol have reconciled their differences.

Thursday, December 24, 1970- D.C.

I worked in the ofice until about 12:45 p.m. I then went to the Metropolitan Club with Julie Rubin and Justin Bloom for the traditional Christmas Eve buffet luncheon.

I wrote Lynne and Bill (copy attached).

I took a hike in Rock Creek Park with Steve, Eric and Suki. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, came back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

Dianne spent most of the day with George and Paul Sakalosky going to Libertyville to help deliver packages in connection with AERWA's Operation Needy Family.

Allyne Snyder joined us for our traditional Christmas Eve dinner which included potato sausage. After dinner we opened our presents in the traditional manner, deciding not to wait for Pete, and Jane and Shirley Rubenstein because their train was late. I took movies during dinner and the present opening.

Pete, Jane and Shirley Rubenstein (Jane's mother) arrived at home about 11:30 p.m., having travelled from New York on a much-delayed train.

Friday, December 25, 1970- Christmas Day

The presents which Santa brought during the night were opened in the morning.

I took a hike in Rock Creek Park with Jane, Dianne and Suki. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, back on the Black Horse Trail to Cross Trails 3 and 4, by the police headquarters, to our starting point.

I worked on the final draft of our book, Man and Atom, a good part of the day.

All of us (Helen, Dianne, Eric, Steve, Pete, Jane, Shirley and I) had our traditional Christmas turkey dinner at about 6 p.m.

Later in the evening we had a phone call from Lynne and Bill and Dave, who were having dinner with the Akols in our Lafayette home.

Saturday, December 26, 1970

I worked on the final draft of our book, Man and Atom, a good part of the day.

I took a hike in Rock Creek Park with Suki. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, came back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

We were all home during the day. In the evening Steve, Pete and Jane went to a party at the home of Larry Novey's aunt in Baltimore, and Eric went to a party with Scott Luria at a nearby home.

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NOV 86

December 24, 1970

Dear Lynne and Bill:

I am enclosing a clipping from today's Wall Street Journal that I am sure you will find interesting. Tell David hello for us if he is still with you. We hope that you all had a Merry Christmas.

We had our annual Christmas party for AEC staff last Tuesday, and many people asked about you. Steve arrived home on the night plane Tuesday morning and, hence, was able to attend the party.

Pete and Jane are coming in on the train about 9:30 tonight, and we will wait until then to have our traditional Christmas Eve present opening.

With love,

/s/ Dad

GTS:HG
Seaborg, Lynne

I watched on TV the AFC football game between the Cincinnati Bengals and the Baltimore Colts which the Colts won, 17-0, and the NFC game between the Detroit Lions and the Dallas Cowboys which the Cowboys won, 5-0.

Sunday, December 27, 1970

I worked a good part of the day on our book, Man and Atom.

I took a hike in Rock Creek Park with Suki. We started at Oregon and Nebraska Avenues, went north on the White Horse Trail to Cross Trail 2, came back on the Black Horse Trail to Cross Trails 3 and 4, past the police headquarters, and returned to our starting point.

I watched on TV the NFC playoff football game between the San Francisco 49ers and the Minnesota Vikings which the 49ers won, 17-14, and the AFC playoff between the Oakland Raiders and the Miami Dolphins which the Raiders won, 21-14.

Pete, Jane and Shirley caught the 6:05 p.m. train back to New York.

Monday, December 28, 1970- Germantown

Articles concerning my AAAS presidency (copies attached) appeared in Saturday's and Sunday's New York Times and the latest issue of Time magazine.

I had lunch with Justin Bloom in the cafeteria.

At 2:30 p.m. I was interviewed by Joseph J. Trento of True magazine, in the presence of Jim Cannon (DPI) and Justin Bloom, for an article to appear in that magazine. He asked me a number of questions that I had seen previously (copy attached) which I answered extemporaneously into a tape recorder.

At 5:35 p.m. I received a call from Kenneth Dunbar of our Chicago Operations Office. He said that one of his public relations men who is working with the AAAS reported that Art Snider of the Daily News said an active student group there would have some questions for me. He said he didn't have many details of what direction they might take, but apparently it isn't too bad a group. He just wanted me to be prepared. I said I expected that something of that sort would come up and thanked him for letting me know about this. He said he would let me know if anything further develops.

I took a hike with Suki in the Fort Reno area on the Belt Road side.

Tuesday, December 29, 1970- D.C.

At 10:45 a.m. Keith Glennan came in to brief us, with the help of Myron Kratzer on IAEA matters. Others present were Commissioners Ramey and Larson, Bob Hollingsworth, Del Crowson and Larry O'Donnell. Glennan and Kratzer brought us up to date on Part II of the safeguards negotiations. Apparently Kratzer did a very good job at the Vienna meetings, and we now can see the basis for agreement on this difficult aspect of the NPT. They also described the problems of financing the safeguards because it involves the question of whether it is done centrally through the Agency or by the countries whose facilities are under safeguards. This is a very difficult issue, still not resolved. They also discussed the status of the U.S. offer to put our facilities under IAEA safeguards when the NPT comes into effect and described some of the problems in this connection. We also discussed the need to strengthen the Agency's technical assistance program and the need to develop smaller-sized nuclear power

NEW YORK TIMES, 12/26/70

# A Committed Scientist

## Glenn Theodore Seaborg

By WALTER SULLIVAN

One of the most critical decisions in the race to produce the first atomic bomb was whether to fuel it with uranium or the newly discovered synthetic element, plutonium. On Dec. 6, 1941, eve of the Japanese attack on Pearl Harbor, three leaders of the atomic project discussed the problem, in low voices, over a lunch at the Cosmos Club in Washington. They were Dr. Arthur H. Compton, Dr. Vannevar Bush and Dr. James B. Conant. Dr. Bush and Dr. Conant said the plutonium approach was virtually hopeless. The chief problem, after plutonium had been synthesized by neuton bombardment of uranium, would be to extract the plutonium from the other materials, all highly radioactive and hazardous.

Man in the News

Industry had no experience of such operations said Dr. Bush. Dr. Conant, himself one of the nation's leading chemists, added that virtually nothing was known of the chemistry of this new element.

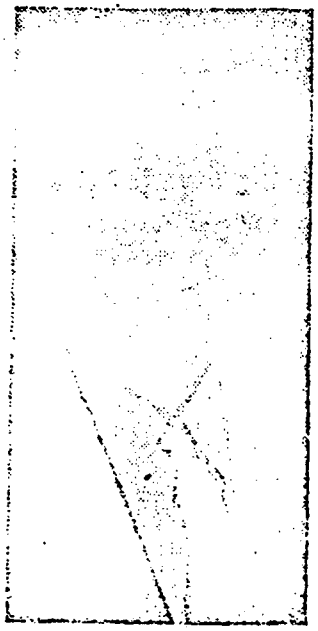
Dr. Compton then told of his conversation with a brilliant young chemist named Glenn Theodore Seaborg at the University of California in Berkeley.

### Competent Young Chemist

"Seaborg tells me that within six months from the time the plutonium is formed he can have it available for use in the bomb," Dr. Compton said Dr. Conant's reply, according to the former's account, was:

"Glenn Seaborg is a very competent young chemist, but he isn't that good."

Dr. Conant was wrong. Dr. Seaborg was brought to the University of Chicago to head the bomb project group responsible for developing a plutonium separation process and he was successful. The bomb dropped on Nagasaki, Japan, in 1945, was fueled with plutonium, whereas the one that had devastated Hiroshima a short time earlier was a uranium bomb.



A scientist who believes in the value of the humanities.

In 1951 Dr. Seaborg shared with Edwin M. McMillan a Nobel Prize in Physics for his leadership in the synthesis of elements heavier than uranium, the heaviest naturally occurring and relatively stable element. Thirteen of these "transuranium" elements have now been produced, most of them for the first time at Berkeley.

Since 1961 Dr. Seaborg has been chairman of the Atomic Energy Commission, and now he is likely to become president of one of the largest scientific organizations in the world, the American Association for the Advancement of Science, which begins its annual meeting here today.

### Bitter Dispute on Post

The post has been largely honorary. The president is only active for one year, beginning a year after his election by the organization's 530-member Council. However, Dr. Seaborg's nomination led to a bitter dispute within the leadership of the A.A.A.S.

Some members of the association's Board of Directors have argued that since he heads a major—and to some, controversial — Government agency, he should not also direct a private organization that prides itself on its independence.

Specifically they cited the fact that the A.E.C. was under attack for allegedly allowing excessive amounts of radiation to escape into the environment and a committee of the A.A.A.S. had been asked to look into such charges.

The council's mail ballots have been cast, and the results will be announced next Wednesday. It is generally assumed that Dr. Seaborg will win, for the only other candidate is Dr. Richard H. Bolt, an acoustical engineer of distinction but far less well-known than Dr. Seaborg.

However, the dispute typifies the confrontation between political activists within the organization and those who would keep it purely scientific. The program of the meeting in Chicago is peppered with sessions on issues that are socio-political as well as scientific, such as population growth, environmental quality, and crime and violence.

### Aloof From Controversy

Few men in positions as powerful as that of A.E.C. chairman have remained as aloof from controversy as Dr. Seaborg. While enemies of nuclear weapons development or atomic power programs hurl invectives at the commission, the 68-year-old scientist himself is usually spared.

On his visits to the Soviet Union to negotiate agreements on cooperative research he is greeted, not in the manner of most visiting bureaucrats, but as a Nobel laureate who can lecture to Russian scientists on a subject close to their own hearts —The synthesis of new elements.

Dr. Seaborg and his wife, the former Helen L. Griggs, have six children. Dr. Seaborg was born in a small Michigan mining town, but was largely educated in California, where he finally became chancellor of the University's Berkeley campus.

NEW YORK TIMES 12/27/70

Atomic Controls:

# Some Feel They Should Be Much Tighter

WASHINGTON — The Atomic Energy Commission, no stranger to controversy, is at year's end caught once more in a crossfire of criticism. The chief issue: just how safe are the standards and procedures established by the A.E.C. to govern nuclear power plants and atomic-bomb testing? In recent weeks, a series of developments—ranging from court decisions to an aberrant test blast — has provided new ammunition to those on both sides of the controversy.

On Dec. 18, a radioactive dust cloud erupted from the Yucca Flat desert floor at the Nevada test site, sending a light shower of fallout in a northeasterly direction. The A.E.C. promptly evacuated 600 workers who received "slight" contamination from the so-called Baneberry underground test. Planes of the Environmental Protection Agency, the new Federal unit, tracked the bomb cloud to south central Wyoming before it disappeared. E.P.A. reported that the public safety had not been endangered.

What happened to Baneberry? The experts' explanation is simple: "It vented." For some reason, which is still uncertain, the depth of burial of the nuclear explosive was not sufficient to prevent radioactive debris from being shot into the atmosphere.

Last week workers returned to their jobs to prepare for another test. The A.E.C. has detonated about 250 underground shots since the limited nuclear test ban went into effect late in 1963. They are allowed so long as vented radioactivity does not persist beyond national borders.

## Defense Needs

Why so many tests? The Defense Department wants potent and reliable warheads for a large family of nuclear weapons, including multi-megaton warheads for the Spartan antiballistic missile. The Spartan's warhead is a hundred-fold more powerful than the Baneberry test device, which was in the range of a warhead for the Navy's Poseidon multiple-warhead successor to Polaris. The full-scale Spartan, tests of which will continue through 1974, will require a mile-deep hole to prevent venting—about six times the depth of the Baneberry hole.

Next month the A.E.C. has scheduled an above-surface nuclear testing of a rocket engine for the National Aeronautics and Space Administration (NASA). By chance, on the very day of the Baneberry test, Dr. H. Peter Metzger filed a suit against A.E.C.-NASA testing of the nuclear engine, maintaining that it did not meet the requirements of the National Environmental Policy Act of 1969. Dr. Metzger is president of the Colorado Comittee for Environmental Information, a group that has been sharp-shooting at the A.E.C. for many months. It lost a court battle to stop the A.E.C. from conducting Project Rulison, an underground nuclear test in Colorado, but it scored heavily by finding evidence of radioactive contamination outside the Rocky Flats plant near Denver after authorities claimed none existed.

Recent environmental legislation concerning air and water quality has strongly backed the hand of conservationists and others who oppose the A.E.C. In addition, the opposition has gained the support of highly vocal scientists who question whether maximum allowable radiation standards set by the A.E.C. are safe. This became a legal issue in Minnesota where Northern States Power brought a lawsuit against the state to operate its Monticello nuclear generating station on the Mississippi, 40 miles north of Minneapolis. The state sought to impose radiation standards more rigid than those of the A.E.C., thus challenging Federal authority.

Last week, on the other hand, Minnesota Judge Edward C. Devitt gave the A.E.C. a Christmas present, ruling that the amended Atomic Energy Act gives the atomic agency the power to lay down radiation standards. His decision sent a legal shock wave rolling across the country to the shores of Chesapeake Bay where Baltimore Gas and Electric is building a nuclear power plant. This Calvert Cliffs A-plant, some 40 miles from the White House, is already 30 per cent complete under the authority of an A.E.C. construction permit.

Maryland's Public Service Commission, refusing to recognize the A.E.C.'s authority, is itself considering whether or not to grant a "certificate of necessity and convenience" to permit construction of the plant. Again, Federal versus state authority is involved. Public hearings featured testimony of Dr. John F. Gofman, a bio-scientist from the A.E.C.-funded Lawrence Radiation Laboratory of Livermore, Calif. Dr. Gofman asserted that even 1 per cent of the A.E.C. standards for radiation would be unsafe.

## 'Legal License'

Dr. Gofman charged that the A.E.C. standards amount to "a legal license to murder humans in exchange for some benefits of atomic energy." Together with his colleague, Dr. Arthur R. Tamplin, he has been verbally assaulting the A.E.C. for a full year, and it's no secret that A.E.C. officials have been stung by the criticisms. Drs. Gofman and Tamplin feel they have been persecuted by the A.E.C., and Senators Edmund S. Muskie and Mike Gravel came to their aid, urging that the American Association for the Advancement of Science examine the evidence.

Tomorrow the A.A.A.S. will constitute a new Committee on Scientific Freedom and Responsibility, which is expected to consider the case. The committee could very well become the closest thing to a grand jury any scientific organization has ever had. An ironic footnote to all this was sounded by the A.A.A.S. announcement last week that its president-elect will be A.E.C. Chairman Glenn T. Seaborg.

—RALPH LAPP

# SCIENCE

## Fallout Over Seaborg

No scientist could have more imposing credentials: Nobel laureate in chemistry, co-discoverer of plutonium and eight other synthetic elements, former chancellor of the University of California at Berkeley and longtime associate director of its famed Lawrence Radiation Laboratory. Yet Glenn Seaborg is currently the center of a bitter controversy that has sharply divided the nation's largest and most powerful private scientific organization. At issue is whether the three-term chairman of the U.S. Atomic Energy Commission should also serve as president of the American Association for the Advancement of Science, which has 130,000 members. If a scientist works for the U.S. Government, can he honestly speak for science as a whole without a conflict of interest?

**32,000 Deaths.** The row is no ordinary academic tempest. For many members of the A.A.A.S., Seaborg's recent selection by an inner circle of 530 special electors raises extremely serious questions about the organization's very future. Should it continue its above-the-battle posture? Or should it begin taking strong stands on social and moral issues involving science, such as the use of herbicides by the U.S. in Viet Nam? With Seaborg or any other Government official as president, these activists fear that criticism of Government policies by the A.A.A.S. would be extremely difficult, if not impossible. They may well voice their fears in an impromptu floor debate at the association's annual meeting in Chicago this week.

Seaborg's election is also being attacked for less ideological reasons. Earlier this year, two investigators stunned the scientific community by asserting that there would be an extra 32,000 cancer deaths a year if Americans were exposed to the maximum dosages of radiation permitted under the AEC's existing safety standards for nuclear power plants. Ironically, the scientists, Arthur R. Tamplin and John W. Gofman, who have just amplified their case in a book sardonically titled *Population Control Through Nuclear Pollution*, did their work at Seaborg's old scientific haunt, the Lawrence Radiation Lab, which is entirely supported by AEC funds. The AEC vigorously denied their charges, but Senator Edmund Muskie, chairman of the Senate's Subcommittee on Air and Water Pollution, found them serious enough to ask for an independent investigation by the A.A.A.S. In particular, Muskie wants to know if the AEC harassed Tamplin and Gofman, as they claim it did.

Oblivious to the furor, the A.A.A.S.'s nominating committee picked Seaborg as one of its presidential candidates last June. The organization's board of directors immediately raised the conflict-of-interest question. At least eleven of the 13 board members—including Environmentalist Barry Commoner (TIME cover, Feb. 2)—questioned the choice of Seaborg, whose election they felt was certain because the other nominee was a relatively unknown acoustical expert, Richard H. Bolt. Furthermore, even though the A.A.A.S. had not yet acted on Muskie's request, the board members pointed out that one of the organization's committees was already planning to study the environmental effects of power plants, a subject that could easily put the group at odds with the AEC—and thus with its own incoming president.

**Typical *Sang-froid*.** The board conveyed its misgivings to Seaborg. Under the A.A.A.S.'s archaic rules, it could not do anything more. Nor would Seaborg. He had already turned down an offer of the A.A.A.S. presidential candidacy twice before because of his other obligations, and did not care to bow out this time. In fact, the only casualty of the dispute was a bystander: Dan Greenberg, 38, the news editor of the A.A.A.S. publication *Science*, and one of the most astute observers of the U.S. scientific establishment. Urged by the board members to bring their doubts about Seaborg's nomination to the attention of the full membership, Greenberg ordered up an account of the backstage maneuvering. Chemist Philip Abelson, *Science's* editor and Seaborg's contemporary at the University of California, refused to print it; he said that it would be unfair to raise questions about Seaborg's candidacy just before the voting. Infuriated, Greenberg quit.

Seaborg's own reaction was quite different. Unruffled by the criticism, he said simply that as president he would disqualify himself from any A.A.A.S. activities in which his participation might compromise the organization. The A.A.A.S.'s quaint electoral protocol again was on his side; he would first have to serve out a year as president-elect, he noted, before he actually assumed the presidency in 1972. By that time, the dispute over the radiation standards might be settled. Seaborg's *sang-froid* was characteristic. A tall (6 ft. 3 in.) and shambling figure, he has become something of a legend in Washington for his ability to duck controversy. During the intense debate over whether the U.S. should build an H-bomb, he managed to retain the friendship of both Robert Oppenheimer and Edward Teller. On the one hand, he agreed with Teller that the bomb should be built; on the other, he so qualified his support that even Oppenheimer, the project's chief opponent, could hardly take offense.

Seaborg has used similar tactics to meet the emotional challenges of Gofman and Tamplin, who contend that the AEC's policies are nothing less than outright genocide. In response, Seaborg acknowledges the dangers of radiation, yet insists that the AEC's precautions have been more than adequate. Such a reply, however, may not be enough. Public anxiety over the real or imagined dangers of the atom was on the rise even before Gofman and Tamplin unleashed their polemic. One evidence of this is the proliferation of conservationist lawsuits attempting to block construction of nuclear plants in the U.S. Similar concern has also nearly turned under the AEC's Project Plowshare, which proposes to use nuclear devices for such peaceful purposes as excavating deep-sea harbors, unlocking mineral and gas deposits and digging a new Panama Canal. Seaborg has championed peaceful uses of the atom for more than two decades, but he is going to need all of his conciliatory skills if he is to prevail without dividing the scientific community still further. The new activists in the A.A.A.S. will severely test his celebrated *sang-froid*.

GOFMAN & TAMPLIN — SEABORG

*Can a scientist work for government and speak for its critics?*

Questions by Joseph Trento of TRUE Magazine, Dec. 28, 1970 UNCL. BY NOV 8

1. Dr. Seaborg, you have come so far since the late 1920's at Jordan High, how do you compare your ambitions in those days and where you stand today?

2. In the late 1930's and early 40's did you foresee nuclear power, and a nuclear defense? Did people think you were somewhat of a visionary?

3. Do you miss research work? Do you ever want to go back to the laboratory?

4. In the more peaceful University days you held the job of a University Chancellor. Have students changed since then when you were so close to them?

5. Some people argue that the nuclear age has caused a "live for today" attitude among the postwar generation. Do you think this is true? Do you believe that the kids feel threatened by the age of superweapons, or that they have accepted it as part of humanity's process?

6. How did you feel when John Kennedy asked you to become Chairman of the Atomic Energy Commission?

7. In 1963 you went to the Soviet Union to sign the "Memorandum of Cooperation in the Field of Utilization of Atomic Energy for Peaceful Purposes." Since that agreement what kind of trade-off have we had with the Soviets?

8. Sir, you have known a number of Presidents. Have you developed any feelings about science and political life?

9. Since you are a distinguished teacher, could you tell us in an elementary way what happens when a nuclear explosion occurs?

10. You have what has to be one of the most sensitive posts in government. How do you keep from getting an ulcer?

11. Have you ever had a moment you wish you were not Chairman of the Atomic Energy Commission?

12. If you were to leave the AEC today, what would you list as the best thing accomplished under your leadership?

13. Dr. Seaborg, a rash of critical television and written reports have appeared, most critical of the AEC, some highly inaccurate. As a man used to dealing with facts, how does this affect your outlook?

14. As a scientist are you satisfied with activity within the private sector in developing peaceful uses of the atom?

15. You were Chairman during the 1962 missile crisis when the world nearly faced total destruction. Did you have any thoughts from that period that you would like to share?

16. What are your plans once this term as Chairman of the AEC has expired?

plants for the smaller countries; we decided that Glennan will continue to pursue these matters with Eklund.

I called Ed David to tell him that Rickover would like to brief him on his program, which would include the nuclear submarine and nuclear navy and the light water breeder. David said that would be fine with him and he would get in touch with Rickover to set up a time. I then spoke to David about the OMB decision to sell part of the Brookhaven property, which, we understand, was the recommendation of the Property Review Board, the OMB and the OST. David said his opinion isn't strong in either direction. He looked over the material and in light of the President's directive it seemed like the thing to do in a situation where we are preserving a fairly large amount of property in a high land use area for the possibility of a high energy accelerator sometime in the future. I said I am wondering about an appeal, and he asked me if I have talked to Weber about it. I said maybe that would be my next step. He said his feeling is that Long Island would be a poor place to put any large installation, and I said I think it would be a very good place if it should be international. He said that he would be glad to go back and intercede for us and that Jerry Tape has also given him a long story on this matter. He also said he has received a communication protesting this signed by people from all over the country, and I said I thought he should tell Weber about this. We agreed that I would call Weber, suggesting that we get together to discuss this and that David would also sit in.

I asked him what Don Dunlop's status is. He said he really doesn't know, but he doesn't see any reason why I couldn't ask Don directly because David doesn't think he is sensitive about it.

I called Weber, who was agreeable to a meeting so that we scheduled it for Thursday, December 31st.

I received a call from Professor William Bailey of the University of Maryland, who, as Chairman of the ACS Nominations Committee, asked me to be a nominee for the presidency of the American Chemical Society. I asked whether he thought I would run into the same problem as I had with the AAAS. He said that ACS has a number of problems, but not the same type that AAAS is worrying about. He said we have to face up to a realistic national science policy and he thinks someone of my stature might have more to say about such a policy than has been the case in the past. I said I would think about this, that I am not at all sure this is the right year because it would be so close to my AAAS presidency. He said this would be a pattern very much like Wallace Brode's and suggested that I might talk with Brode about it. I said I will think about it and he could call me back in a week.

I sent my biweekly status report to the White House today (copy attached).

Suki and I took a hike in the Fort Reno area on the Belt Road side.

I flew to Chicago on UAL Flight No. 931, leaving National Airport at 8:10 p.m. and arriving at Midway Airport at 8:35 p.m. I was met by George Bobysud of the Chicago Operations Office, who drove me to the Sheraton Blackstone Hotel at 635 Michigan Avenue. Here I met Stan Schneider, who brought me up to date on student activities at the AAAS meeting. I spent the night in Room 1205.

Wednesday, December 30, 1970- Chicago-. D.C.

I had breakfast in the Conrad Hilton Hotel (room 1919A) with Dr. and Mrs. Athel Spilhaus, Dr. and Mrs. Bentley Glass, Dr. and Mrs. (Mina Rees) Leopold Brahdy,

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AEC BIWEEKLY STATUS REPORT FOR DECEMBER 29, 1970

1. A U.S. District Court has ruled that states cannot set stricter radioactive effluent standards for the operation of a nuclear power plant than those standards set by the Federal Government. This ruling, announced on December 22, came in a suit by Northern States Power Company to prevent the Minnesota State Pollution Control Agency from enforcing stricter regulations. An appeal to the ruling is a possibility.

2. Policy changes required by recent amendments to the Atomic Energy Act in P.L. 91-560 are being carried out. AEC has submitted proposed new criteria for charges for uranium enrichment services to the Joint Committee on Atomic Energy. Based on provisions in P.L. 91-560, the new criteria provide that the charge should be established on the basis of assuring recovery of appropriate Government costs for work done in Government plants. The new criteria cannot be established until 45 days after their submission to the JCAE. Also, the charge for enriching services, based on the new criteria, will be increased to $32 per kilogram unit from the present $23.78. The principal reason for this increased charge is the higher cost of electricity required to operate the enrichment plants. In another action under P.L. 91-560, AEC is amending its regulations concerning antitrust review of applications for the construction and operation of nuclear power reactors and fuel reprocessing plants. Up to now these facilities have been licensed under the research and development section of the licensing chapter of the Atomic Energy Act. As a result of P.L. 91-560 such licenses (with some exceptions) will be issued under the commercial section, which provides for antitrust review. The new regulations provide procedures for carrying out AEC's antitrust responsibilities, which include obtaining advice and recommendations from the Attorney General and giving public notice. The new regulations also include provisions for hearings on antitrust matters where appropriate; these would be held separately from the public hearings on radiological safety.

3. AEC has revised its regulations concerning its records and documents that will be made available to parties in licensing proceedings. The Commission believes these new

regulations concerning attendance of AEC personnel and the production of inspection reports and internal working papers at hearings will make the maximum amount of information available but also protect the rights of privacy and prevent unwarranted interference with the work of the Commission and its staff. Under the new regulations AEC staff will be available to testify orally or by deposition. Also, AEC will produce relevant factual information in its inspection reports and other records and documents when such information is not otherwise available.

4. AEC's draft "Environmental Quality Statement in Support of the Radioactive Waste Repository at Lyons, Kansas" has been made available to the public. The proposed repository, which would be constructed in underground bedded salt formations in central Kansas, would be used to store solid high level waste from nuclear powered generating plants and nuclear fuel reprocessing facilities. The statement points out that no significant impact on the environment is anticipated as a result of either the construction or operation of the proposed repository.

5. The feasibility of a second Plowshare natural gas stimulation experiment in Colorado, which would be known as Rio Blanco, will be studied under an agreement recently concluded between AEC and a firm specializing in peaceful applications of nuclear explosives, the CER Geonuclear Corporation (of Las Vegas). CER is engaged in a joint venture with Equity Oil Company to investigate development of natural gas reserves that are deeply buried and tightly held in the Piceance Basin near Rocker, Colorado. The agreement, signed on December 18, calls for a project definition study consisting of a program of investigation, evaluation, and planning to determine potential technical feasibility and safety, together with the prospects for significant enhancement of natural gas production. Meanwhile, Governor Love has requested that procedures for approving possible future Plowshare projects in Colorado be developed so that no experiment involving the detonation of a nuclear device would be conducted without prior consultation with and official sanction by the State. In a recent letter to Chairman Seaborg, Governor Love said that pending the results from the Gasbuggy nuclear gas stimulation experiment (near Rifle, Colorado) and evidence that the nuclear technique is economically feasible, Colorado should not become committed to another Plowshare event. His letter specifically

mentioned Project Rio Blanco and that it might involve a multi-device explosion. (The Rio Blanco gas-bearing rock formations are so thick that the project might use two or three explosives emplaced at varying depths.)

6. A low yield underground nuclear test in Nevada on December 13 caused some release of very low levels of radioactivity into the atmosphere beyond the Government-controlled reservation; however, no health hazard is expected. This event drew more than 100 inquiries to AEC from all types of newsmen over the nation on the evening of the 13th and the morning of the 14th. Newspaper coverage of the event appears to have been generally straightforward.

7. A reply to LOOK magazine's article "Nuclear Threat Inside America," in the December 15 issue, has been sent by Chairman Seaborg to LOOK's editor-in-chief, Mr. Gardner Cowles. The article contained many factual errors and related charges made previously that have repeatedly been proven false by AEC and public health authorities. We understand that unfavorable reactions to this article have caused the editors to consider publishing a pro-nuclear article, possibly authored by an authority on atomic energy.

8. A series of articles on the role of nuclear power in the overall electrical energy situation is expected to begin in the NEW REPUBLIC during January. NEWSWEEK published an article on the AEC in its January 4, 1971, issue.

9. The Commission will be represented on a new "Committee on Power Plants and the Environment (Chesapeake Bay)" that is being organized by the Maryland and Virginia State Governments. The Committee is establishing a Chesapeake Bay Cooling Waters Study Group, composed of members of organizations sponsoring research in the Bay region, to evaluate the environmental aspects of power plant siting.

10. Maryland will assume part of AEC's regulatory authority over the use of radioactive materials as a result of an agreement between AEC and Maryland, which will become effective on January 1, 1971. This transfer of regulatory authority will include licensing, rulemaking, and enforcement in the uses of radioisotopes, the source materials uranium and thorium, and small quantities of fissionable materials. Maryland will become the 23rd state to assume

certain regulatory functions under agreements between states and AEC.

11. Two lawsuits alleging agency deficiencies in implementing the National Environmental Policy Act were filed against AEC during December. A suit by the Sierra Club, the National Wildlife Federation, and the Calvert Cliffs Coordinating Committee raises several challenges to AEC's policy issuances for implementing NEPA in connection with licensing nuclear power plants. The plaintiffs principally contend that (1) certain of the requirements of the AEC's new regulations for implementing NEPA should not be deferred in their application until March 4, 1971, (2) AEC licensing rules should not assume that water quality standards set and enforced by cognizant Federal and State Government agencies are sufficient evidence that there would not be a significant adverse environmental effect, and (3) provisions should be made for backfitting of licensed facilities with environmental protection devices of later development. Another suit, by the Colorado Committee for Environmental Information, seeks to stop a nuclear powered rocket test scheduled to begin early in 1971 at the National Rocket Development Station in Nevada. This suit claims that the potential environmental implications of the test have not been studied and reported to the Council on Environmental Quality in full accord with the requirements of NEPA and that the test cannot commence until this is done.

and Bill Bevan. We discussed the disruptive and, at times, rather comical antics of the various young demonstrators.

I spent the morning in my room reading and going over speech material. I then had lunch in the Sheraton Blackstone Grille with the participants of the "Outlooks" session of the AAAS symposium on "Science and the Federal Government-1970." Present were Ray Seeger, Congressman Charles A. Mosher (Ohio), Homer E. Newell (NASA), Robert Q. Marston (NIH), Charles C. Edwards (Food and Drug Administrator), Raymond L. Bisplinghoff (NSF) and Robert Laner (Health Services and Mental Health Administration).

I returned a call that Caspar Weinberger (OMB) had made to me. He told me that he has met with the President and decisions have been made on my appeal items and other items in our FY 1972 budget. We have been allowed $156 million for NERVA, which can be divided as we see fit, but one possible division is $8 million for Los Alamos and $7 million for Westinghouse. We have been allowed the $10 million for the LWBR, $1 million for the pacemaker and 0.3 million for program administration, just as we requested. The $50 million for the disposal of AEC-owned uranium concentrates has not been subtracted from our budget, so we are not compelled to do this, but we are supposed to make an effort to dispose of some of the stockpile. Our suggestion that we sacrifice $3 million for the high speed printer in order to compensate for the appealed items was not accepted; that is, these items are still in the budget. There will be a cut of $10 million for physical research and high energy physics can be included in determining this cut. However, Cap pointed out that in discussing this with the President, the President pointed out that he had added $100 million to the NSF budget and that NSF might pick up some or all of the AEC programs covered by this $10 million. He said that $16.1 million for advanced CIP work, added by Congress to the FY 1971 budget, will be held in abeyance for the FY 1972 budget at the proper time.

I mentioned the problems that the DOD has with the dropping of AFAP (the 155mm nuclear projectile) and the shutdown of the two Hanford reactors, and he assured me that he would talk with Packard about this.

I also mentioned the phone call that I received from John Lawrence regarding A&E for an addition to the Berkeley HILAC to make it suitable for medical experiments with high energy heavy ions- $400,000 for AEC and $500,000 for NASA, with a possible total cost in later years of $5 million to $10 million. I suggested that he might want to commit this for the FY 1973 budget, but he indicated that he would like to look into this further and possibly add it to the FY 1972 budget.

I also called his attention to the phone call I had from George Low of NASA, pointing out that SNAP-8 is their main hope as a power source for the space station, and asked that he might consider reinstating the $6 million for this program.

I then went to the Hubbard Room of the Sheraton Blackstone. The room was packed and the crowd included a number of radical young students and a large number of reporters from all over the country. NBC, CBS, and ABC had their TV cameras there, too.

Seeger gave some opening remarks and then called on Mosher, Newell and Marston, who spoke in turn. Just as Marston finished, I received a note from Spilhaus asking me to step out to speak to him on the phone. Right after I left, and immediately after a belligerent question directed to Marston concerning NIH support of biological warfare, Herbert Fox (of Richard Bolt's firm) seized the

microphone and read an indictment of me (copy attached). A girl then read a statement on Women's Lib.

I went to Spilhaus' room, where I conferred with Bolt, Thornhill (AAAS staff), Bevan, Joe Fouchard and Seeger, who joined us at various times. I was ready to return to the symposium, but when Seeger arrived he said he had recessed it (actually adjourned it) so that was not possible.

I then took a taxi to O'Hare Airport, where I joined Stan Schneider and Joe Fouchard. We flew back to Washington National Airport on TWA Flight No. 438, leaving about 5:30 p.m. and arriving about 8 p.m.

I took a hike with Suki in the Fort Reno area on the Belt Road side.

Thursday, December 31, 1970- D.C.

I was pleasantly surprised this morning to receive a telephone call from President Nixon. He said he had seen reports in the papers concerning the AAAS incident yesterday and he hoped I wouldn't be too disturbed by it. He said that treating a scientist and former chancellor of a university in this fashion shows these people to be purely destroyers. The President also said he thinks some of my colleagues should have tried to put these people down. I said that it could have been a riot situation had it gone on longer. I also told the President that I think a paper like the Washington Post makes matters worse since they put everything in such a totally unfavorable light. He agreed with me on that. The President again said not to let this worry me. He wished me lots of luck in my new position as President of the AAAS, as well as a happy new year. I told him that I greatly appreciated his call.

Attached are copies of articles on yesterday's AAAS meeting, which appeared in today's Washington Post, New York Times and Evening Star.

At 9:15 a.m. I called George Low of NASA, but talked to Willis Shapley in Low's absence. I told him that we got a restoration of $15 million on NERVA. I said Weinberger didn't mention SNAP-8 so I brought it up, but Weinberger wasn't familiar with it. He did imply that he would look into it. I also told him we have the thermionics back on the theory that that will fill the bill on a longer range than SNAP-8. Shapley said that Low had talked to Rice on SNAP-8 but he hadn't seen any correspondence. He asked how we made out and I said not too badly. He said he would get in touch with George and tell him about my call.

Admiral Rickover called at 9:30 a.m. to say that he had heard about OMB's action and he appreciates what I have done. He then mentioned the AAAS incident of yesterday, saying the scientific community is being faced with the same thing as the universities. He said if the scientists don't start taking charge, they will create a very unfavorable image. His suggestion is that I get 15 or 20 of the leading groups to appoint a panel that would set up rules for conducting meetings. I said that a number of people have expressed this opinion and that is probably the direction we will take.

Accompanied by Commissioner Larson and John Erlewine, I went to the Executive Office Building (Room 252) to meet from 10 a.m. until 11 a.m. with Arnold Weber (OMB and Chairman, Property Review Board), Charles Perry (Weber's assistant), Fred Schuldt (OMB), Robert Kupperman (Property Review Board) and Dr. Ed David concerning the Property Review Board decision to declare as excess the North Tract at Brookhaven. Weber opened the meeting by briefly describing the mission of the Property Review Board. He chairs the Board and its members include Donald Rumsfield, John Ehrlichman and Robert Kunzig. He said the Board has as

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Herbert Fast read indictment
to Seaborg / works for Boltó Company

# AN INDICTMENT OF GLENN T. SEABORG FOR THE CRIME OF SCIENCE AGAINST THE PEOPLE

We, scientific workers and students, here in Chicago at the annual meeting of the A.A.A.S., do hereby on this, the 30th of December, 1970, indict you, Glenn T. Seaborg, for the crime of SCIENCE AGAINST THE PEOPLE.

SCIENCE AGAINST THE PEOPLE is a crime that in today's world has reached a scale unprecedented in history. For never before has the influence of technological capability and the need to dominate affected so many people in so many parts of the world. You are guilty, Glenn T. Seaborg, of a conscious, major, self-serving and ruthless role in establishing, organizing, maintaining and developing institutions of science and government for effective use by the ruling class.

WE INDICT YOU FOR THE CRIME OF SCIENCE AGAINST THE PEOPLE.

You have been instrumental in the maintenance and aggressive extension of theAmerican empire at the cost of untold human lives.

WE INDICT YOU FOR THE CRIME OF SCIENCE AGAINST THE AMERICAN PEOPLE.

You have been instrumental in channelling their goals and resources into the huge bureaucracies of waste and war.

In the maintenance of world hegemony for the profit-making, people-exploiting American empire such men as Seaborg are essential to create and adapt the institutional structures, to coordinate the complex interlocking parts of this monster of history, contemporary American imperialism. The mutually dependent Pentagon, Big Science, University System and Federal Government plan and fund for research and development of SCIENCE AGAINST THE PEOPLE, for the use and profit of corporate America. In this, Glenn Seaborg has been instrumental as administrator, coordinator, and manager for the ruling class as a whole. He has performed this function, of coordinating and strengthening the dependence of science and universities in war and profit in a unique criminal history of holding key positions of responsibility in many of these institutions, for example:

Livermore Radiation Labs--where the U.S. nuclear strategy and hardware are developed.
University of California--where the minds of students are bent to the needs of the Empire.
Atomic Energy Commission--where megadeath development and radiation pollution development are directed.
Department of Defense--the primary institution for genocidal application of SCIENCE AGAINST THE PEOPLE.

National [illegible] agency--where the most outrageous forms of waste for profit are perpetuated in dishonest appeals to the noblest traditions of science and used to divert attention from the obvious neglect of people's needs.

The President's Science Advisory Committee-- where the budget is minipulated for the support of this structure.

Today, Glenn T. Seaborg, already culpable in wholesale application of SCIENCE AGAINST THE PEOPLE, sincinues his criminal history. The ruling class concern for the diminishing support of science and rising protest against the misuse of science, moves its loyal coordinator into the presidency of America's prime public relations agency of the Military, Industrial, Government, Big Science, University Complex--The American Association for the Advancement of Science.

The A.A.A.S. serves this function well because its undemocratic structure immunizes it against the criticism of the disenfranchised scientific worker membership, yet is in a position to influence the public.

With his new tool, Seaborg will try to further dupe the American people into believing that science policies that serve the implementation of war and profit are part of a "human enterprise". Thus us also adds to his crimes the continuous development of collective schizophrenia among scientific workers who in five days of talk about "social responsibility" and participation in oblique discussion tacitly endorse the legitimacy of Seaborg, his nefarious role, and the whole criminal superstructure. For this last, we scientific workers are outraged. We indict you therefore, Glenn T. Seaborg, not only for thecrime of SCIENCE AGAINST ALL THE PEOPLE AND AGAINST THE AMERICAN PEOPLE, but also for your crimes against us, for your SCIENCE AGAINST THE SCIENTIST. Traitors have always been considered the most despised of criminals by the group they betray, and so it is with us, the scientific workers.

SCIENCE FOR THE PEOPLE
Dec. 30, 1970

# Young Radicals Drive Seaborg Off Platform

By Stuart Auerbach
Washington Post Staff Writer

CHICAGO, Dec. 30—The chairman of the Atomic Energy Commission, Dr. Glenn T. Seaborg, fled a meeting here today just before radical young scientists took over the podium to accuse him of "The crime of science against the people."

Knowing the disruption had been planned, Seaborg ducked out a side door at the first sign of trouble.

While about two dozen radical young scientists spread out across the front of the meeting room to read their "indictment" of Seaborg, the rest of the panel of top federal science officials disbanded.

"I suggest we adjourn and say nothing about it," said Raymond J. Seeger, chairman of the panel on science and the federal government at the annual meeting of the American Association for the Advancement of Science.

It was the second major disruption of the day by a group of young radicals acting under the banner of Scientists and Engineers for Political Action. This morning, they took over a meeting on violence and the police, deposing the chairman but allowing two speakers to continue.

The afternoon meeting began quietly enough as the first two speakers — Rep. Charles A. Mosher (R-Ohio) and Homer E. Newell, associate administrator of the National Aeronautics and Space Administration — gave their talks.

But the radicals began to act up during the presentation by Dr. Robert Q. Marston, director of the National Institutes of Health. Just as he finished, Arthur Reingold, a 22-year-old medical student at the University of Chicago, shouted a question from his third row seat.

Seaborg, who has just been named president-elect of the AAAS, immediately left his seat and went out a side door.

This enraged the young scientists, who had been sitting toward the rear of the hall waiting for Seaborg, who was scheduled to give his speech last. They immediately surged to the front, carrying their own bullhorn as hotel security men shut off the microphone.

In the "indictment" read by Herbert Fox of Boston, they charged Seaborg with playing "a conscious, major, self-serving and ruthless role in establishing, organizing, maintaining and developing institutions of science and government for effective use by the ruling class."

Seaborg, a chemist who has discovered many of the so-called heavy elements, left within an hour for Washington without commenting on the attack on him. He is known, however, to be a strong advocate of peaceful uses of atomic energy, and to have had doubts about dropping the atom bomb on Japan.

In the hearing room, meanwhile, the radical scientists "rapped" with the government officials on the panel, including Dr. Charles E. Edwards, head of the Food and Drug Administration, Marston and Mosher.

The morning disruption was more bitter. The radical students attacked Joseph Coates, now of the National Science Foundation, for his eight-year association with the Institute for Defense Analysis helping to plan counterinsurgency tactics.

"He's one of the super criminals in this nation," said Dr. Rick Kunnes, an instructor in psychiatry at the Elstein College of Medicine in New York.

The students refused to allow Coates to preside at the meeting. Whenever he tried to speak in the microphone, Kunnes would yank it away from him. The protesters held a sign in front of his face and when Coates stood on a chair to get above the sign, Kunnes climbed up on another chair to be level with him.

The young scientists wanted Coates to explain his IDA affiliation. Coates said he would if the meeting voted that he should. The scientists refused to allow the vote. They did, however, allow two panel members to deliver their papers through a bullhorn.

Another member of the panel, Washington Police Chief Jerry Wilson, refused to come here today. He said it was a waste of the city's money for him to travel to Chicago to be heckled.

Disruptions have become a way of life at academic and scientific meetings for the past three years. Dissidents have interrupted such previously quiet meetings as those of the American Historical Association, the American Medical Association, the American Psychiatric Association and the American Political Science Association.

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# A.E.C. Head Walks Out As Dissidents Crowd In

Special to The New York Times

CHICAGO, Dec. 30—An organized group of radicals disrupted two meetings of the American Association for the Advancement of Science here today and prevented the association's president-elect from speaking.

In an apparent move to avoid a direct confrontation with the radicals, Dr. Glenn T. Seaborg, chairman of the Atomic Energy Commission, who is the A.A.A.S. president-elect, walked out of a session this afternoon shortly before he was scheduled to speak.

Forty or more radicals had crowded into the room with the announced purpose of interrupting Dr. Seaborg's speech with antiwar charges.

It is understood that the presiding chairman, seeing the radicals moving about restlessly and seeking an impending clash, slipped a note to Dr. Seaborg advising him to leave the small conference room at the Sheraton-Blackstone Hotel.

### Dissident Takes Floor

As soon as Dr. Seaborg did, one of the radical leaders, Dr. Herbert Fox of Boston, took the floor. Flanked by a dozen or more fellow dissidents, he read a prepared "indictment of Glenn T. Seaborg for the crime of science against the people."

Over the confusion of television cameras, shouting and shuffling of people, Dr. Fox charged that Dr. Seaborg was "guilty of a conscious, major, self-serving and ruthless role in establishing, organizing, maintaining and developing institutions of science and government for effective use by the ruling class."

Dr. Fox criticized the American Association for the Advancement of Science. "Its undemocratic structure immunizes it against the criticism of the disenfranchised scientific-worker membership," he said.

Dr. Fox, a bearded, 40-year-old physicist for a private company, which he declined to identify, said later that the two-page "indictment" was drafted by the members of the Scientists and Engineers for Social and Political Action, a loosely knit national organization that directed the radical activities at this six-day conference.

Most of the dissidents were graduate students and young scientists from universities around the country. Most of them were in their late twenties, but a few of their leaders, like Dr. Fox, were older.

More than 200 people were in the room at the time. They included the dissidents, newsmen, plainclothes policemen and a sprinkling of A.A.A.S. members. Dr. Seaborg, who sat in the front row, had listened to three earlier speakers before he left by the side door.

Behind him the radicals crouched in the center aisle and leaned against the walls. They held up placards reading "We are a death-oriented culture" and "Reverse priorities—all life and power to the people."

They distributed leaflets attacking nuclear power plants with such phrases as "If your children are to see butterflies, you must be a revolutionary and yourself take control of your life and its surroundings."

In the speech that he had prepared for the meeting, Dr. Seaborg said:

"I think we must realize that science is suffering today from a kind of dislocation and disunity brought on by its own success. That is, it has fostered changes in our society faster and with far more impact than our social and political institutions can absorb and manage them."

Dr. Seaborg's prepared remarks had been released to newsmen earlier in the day. In them he declared "We of the A.A.A.S.—and all scientists—must counteract the pervasive feelings that the world of science is one apart from the world of man, or that we have reached a science saturation point at which we must set science aside while we tend to 'human problems.'"

"No thinking could be more dangerous to science or man than that," he said, "because every major problem we face today—military, environmental, educational, social or political—has important ramifications that somehow involve scientific and technological judgment or require more and better knowledge that can only be achieved through scientific investigation."

Dr. Seaborg said that scientists "must be more aggressive in bringing the issues, deliberations and thinking of science to the public."

At a meeting this morning on crime and violence, a dozen or so radicals rushed to the podium and took the microphone away from the chairman, Joseph F. Coates of the National Science Foundation. They demanded that he explain his activities when for eight years prior to last May he was an analyst in the science and technology division of the Institute for Defense Analysis, a Government-funded research organization that has been a frequent target of radicals.

Mr. Coates said that he would deviate from the scheduled program only if the people in the audience voted to. The radicals quit interrupting so that no vote was ever taken.

EVENING STAR, 12/31/70

# Science Conference Tumult Continues, Seaborg Muffled

Special to The Star

CHICAGO — The annual convention of the American Association for the Advancement of Science was rocked by dissent yesterday as radicals blocked a speech by Glenn Seaborg, chairman of the Atomic Energy Commission, and former Interior Secretary Stewart Udall issued a stinging indictment of the prestigious National Academy of Sciences.

Protestors disrupted meetings on four days of the five-day convention.

Seaborg, newly elected president of the AAAS, left yesterday before the demonstrators read a paper charging him with "the crime of science against the people."

Demonstrators had told the press of their plans and Seaborg apparently also had heard of them. He left the hall at the first sign of an outburst.

His prepared text, distributed in advance of the symposium, was titled "New Frontiers of the Mind" and laid heavy stress on a "partnership between science and government."

Earlier in the day, protestors disrupted a panel discussion of "Police and Violence," threw out its chairman, Joseph F. Coates of the National Science Foundation because of his former connection with the Institute of Defense Analysis, and forced the next speaker to resort to a bull-horn.

Udall attacked the NAS, which is a government chartered, but independent, association of scientists, as "a virtual puppet of the government." He said he has urged consumer advocate Ralph Nader to probe the group's reluctance to challenge the "establishment" on questions involving technology and the environment.

Udall, who served in the Kennedy and Johnson administrations, said "many men of science are allowing their findings to be used as buttresses for status-quo thinking" and said the academy and its members have been among the worst offenders.

Udall cited a recent speech by NAS President Philip Handler as a case in point. He quoted Handler as warning of the "dreadful price" the nations of the world might pay "for the public behavior of scientists who depart from established fact to indulge themselves in hyperbole."

Udall said Handler's attitude is "dangerously outdated in an age of ecology" and tends "to make scientists political eunuchs . . . by overemphasizing a kind of discipline that abhors involvement and drains off emotions. The scientific community has, I fear, stifled the response of science to the environmental crisis," he said.

At one of the speeches that wasn't disrupted yesterday, a government botanist whose particular interest is trace elements said deficiencies of these metals in the soil may have a bearing on susceptibility to heart disease.

Dr. Hansford T. Shacklette described a study which compared a high heart disease death rate area with an area where the rate was more than twice as low.

Both areas, he said, were in rural Georgia and their populations were comparable, as were all other factors, but the content of their soils was radically different.

In the low-death rate area, Shacklette found, concentrations of every trace metal except zirconium were higher than they were in areas where death from heart disease was more prevalent. Among the metals in which the differences were greatest were aluminum, barium, calcium, chromium, copper, magnesium, manganese, phosphorous, titanium and vanadium.

Shacklette, who works for the U.S. Geological Survey in Denver, said his figures dealt only with white males aged 35 to 74 in the years 1960-69. For every 100,000 of these in the healthier area, he said, the yearly death rate ranged from 530 to 682, whereas the annual death rate in the other area went from a low of 1,151 to a high of 1,446. Urban areas were excluded from the survey, he said, because soil factors were presumed to have a less direct effect on the development of heart disease.

In making the study, Shacklette not only tested the soil, but also analyzed the content of locally grown trees and garden vegetables.

The tree samples were selected for analysis because they were a measure of the availability of the soil elements to deep-rooted plants, and the vegetables were tested because they were part of the human diet, he said.

Soil composition differences did not show up in most of the vegetable tests, said Shacklette, but were readily apparent in the tree samples, which contained greater amounts of trace metals when grown in the low-death-rate areas than when grown in the area of higher mortality.

What this may mean, he said, is that the soil-derived metals which appear to protect humans against heart disease, enter the body through the water supply, through plants other than those studied, or through meat and milk from animals that have foraged on local vegetation.

its principal objective carrying out the "Nixon Legacy," which he defined as creating parks or other green areas throughout the country. He said the President regularly quizzes him regarding progress and he feels that the Board isn't making much so far.

As for the North Tract, he stated that he planned to recommend to the Board that it be excessed primarily because its future use for high energy physics purposes is based upon several layers of contingencies which appear to total up to a very low probability of realization.

I then summarized the AEC's case for retention of the North Tract, emphasizing the excellence of the high energy physics group at the Laboratory, the technical suitability of the BNL site for a 2000 BeV accelerator, and the excellence of the site in terms of potential for an international project. I inquired as to the possibility of ascertaining the interest of the State of New York in taking over the North Tract as a green area and thereby preserving the option of its possible use for a 2000 BeV accelerator. Weber thought that such would be a possibility and indicated that he is under the impression that normal excessing procedures would be followed, whereby the interests of federal, state and local governmental agencies would be sought.

Ed David said he would like for it to be clear that any decision to excess the North Tract should have no bearing on the question of whether or not there should be a 2000 BeV project.

I asked about notification to the JCAE and Weber requested that notification not be given until after the Board has made its recommendation to the President. I agreed that no attempts would be made to ascertain possible state interest in the North Tract until after the Board has made its recommendation. Weber said that AEC would be informed of his recommendation to the Board prior to the next Board meeting scheduled for sometime in January and that AEC should choose to appear before the Board if it so desired.

After the meeting I talked with Ed David about my conversation with Weinberger yesterday which defined the AEC FY 1972 budget. I reviewed for him the favorable decisions on NERVA, the LWBR, the Pacemaker, thermionic reactor, etc., but said we are being asked to sustain an additional $10 million cut in physical research to be distributed between high energy physics and the other fields. I said we were told that NSF might pick up some or all of this with their $100 million additional allocation. David indicated that there might be some problems with this. He said that he might look into the possibility of getting some of the $10 million restored. He asked me about the 200 BeV Accelerator and I said I would let him know.

I then dropped by Don Rice's office, along with Clarence Larson, and discussed with him the problem that NASA has with dropping SNAP-8 at this time since it is their main hope for the power supply for their future important programs. Rice indicated that the OMB decision to keep the thermionic reactor development program in the AEC budget was meant to take care of this, but I pointed out the long range nature of this program. I suggested that if they could give us even partial restoration of the SNAP-8 funding, this would be helpful. Rice seemed to indicate that he would put this under consideration.

Larson and I then went into Jim Schlesinger's office and conferred with him about the problem of total plutonium availability, if both Hanford reactors were shut down. Schlesinger said that Weinberger had talked to AFAP matter over with Packard yesterday, and they had reached agreement on deferring this. They also discussed yesterday the Hanford reactor situation, and Packard seemed to accept

the feasibility of meeting the plutonium production requirements at Savannah River, bearing in mind that one or two of the standby reactors could be started up again. However, Schlesinger indicated that I might want to talk with Packard about this, which I indicated I would do. Schlesinger said he thought that the three reactors at Savannah River could continue Cf-252 production and still meet the base case of plutonium requirements, and it wouldn't be necessary to start up another Savannah River reactor before 1976.

After I returned to the office I called Packard and he essentially confirmed that AFAP was being held in abeyance until a broad decision as to tactical nuclear weapons could be made by the NSC sometime in January, or soon thereafter. When I explained to him the Hanford reactor situation, particularly the hardship that would be brought about by shutting down both reactors on such a sudden schedule before July 1, 1971, he thought that this factor, together with the need for flexibility on the total supply of plutonium, probably argued against shutting down Hanford. He said he would discuss it further with Walske and call me back.

Packard called back a few minutes later to indicate that he had discussed this with Walske and had decided to send a memo to the President appealing the decision to shut down Hanford. I agreed that our people would be willing to work with Walske in preparation of this memo.

At noon I called Ed David and told him I had looked up the 200 BeV Accelerator (about which he had asked me) and found it was cut $30 million but I don't think it would be good politics to do anything about it. He asked me what effect this would have on the program. I said it would slow things down and Wilson, of course, will not like this, but I think it is better not to reopen it at this time. I said it is not our worst problem.

I received a letter from Governor John Love of Colorado (copy attached), thanking me for my letter of December 9th (attached on December 16th) and asking that he be briefed on the Rio Blanco experiment and provided a final review prior to any decision to proceed with this detonation.

Attached is a copy of a memorandum sent by John Harris to the White House covering current AEC activities in the public relations area.

I took a hike with Suki in the Fort Reno area on the Belt Road side.

Brendan and Joe Canary had dinner with us and and spent the night.

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NOV 86

THE STATE OF COLORADO
EXECUTIVE CHAMBERS
DENVER

JOHN A. LOVE
GOVERNOR

December 24, 1970

Mr. Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Glenn:

I was gratified to receive your letter of December 17, 1970, in response to my letter of December 9 and was especially pleased to receive your assurance, "that the Atomic Energy Commission will not proceed with any detonation in connection with the Rio Blanco experiment without the concurrence of appropriate State officials."

Your prompt response and your recognition of the responsibility of the State of Colorado are both highly commendable.

I am, by this letter, confirming your continued contacts with the State through Mr. Ten Eyck, Dr. Emerson and Mr. Rold. I would also like to develop with you some mutually acceptable procedure under which I may be personally briefed on the developments in the proposed project and which will at some appropriate time provide for a final review and approval by the Governor prior to any decision to proceed with the planned detonation. I would ask that you work with Mr. Ten Eyck in the development of such a procedure.

I appreciate the continued collaboration with your Commission and the excellent manner in which you have kept me informed.

Sincerely,

John A. Love

JAL:Teu

December 30, 1970

UNCL. BY DOE
NOV 86

Mr. Alvin Snyder
Office of Director of Communications
for the Executive Branch
The White House

Dear Al:

Following is a list of some of our current activities:

Tuesday, January 5 -- We plan to announce that fees are being increased for nuclear facility and radioactive materials licenses. The most substantial increases are for power reactor license fees. The old fees have been in effect since October 1, 1968.

Thursday, January 7 -- Chairman Seaborg will lecture at the 1971 Nobel Conference at Gustavus Adolphus College in St. Peter, Minnesota. His topic will be "Shaping the Future - Through Science and Technology."

Friday, January 8 -- We plan to release a newsfeature on a unique railroad in operation at our Hanford plant in Washington State. The rail system was built during World War II when there was a shortage of steel. Due to this and the supposedly temporary nature of the plant, 40 different types of rail, some dating back to 1880, were gathered from all over the nation. The railroad is still in operation.

We plan to announce tomorrow that during January the AEC will hold meetings with conservation and environmental groups and representatives of the nuclear industry to discuss recent amendments to AEC regulations which provide assurances that AEC licensees will keep releases of radioactivity as low as practicable.

Also tomorrow we will announce that the relatively new rare isotope of californium 252 will be available February 1 for sale in bulk quantities at the newly established low price of $10 per microgram. Currently the AEC is in the process of producing the bulk quantities. Currently limited research quantities of the material are available at $100 per one-tenth of a microgram.

Look magazine has requested an interview with Chairman Seaborg to develop an article using a question-and-answer format on the subject of atomic energy. We believe this request results from the many letters and comments Look received on its one-sided article of December 15 entitled "Nuclear Threat Inside America." The Chairman plans to meet January 19 with Jack Shepherd who authored the first article.

National Wildlife magazine has expressed interest in 1,000 words from Chairman Seaborg on the safety and environmental aspects of nuclear power plants. This is in preparation.

Sincerely,

Signed John A. Harris

John A. Harris, Director
Division of Public Information

| OFFICE ▶ | PI | PI | | |
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| SURNAME ▶ | RNewlin:ak | JAHarris | | |
| DATE ▶ | 12/30/70 | 12/30/70 | | |

Form AEC-318 (Rev. 9-53)

U.S. GOVERNMENT PRINTING OFFICE : 1955—O-214-629

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BERKELEY, CALIFORNIA 94720