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ATOMIC ENERGY COMMISSION

MEETING NO. 1180

10:00 a.m., Tuesday, February 28, 1956

* * * * *

Present

Lewis L. Strauss
W. F. Libby
Harold S. Vance

K. E. Fields
Edward Diamond

W. B. McCool
William L. Oakley

Also Present

A. Tammaro
David F. Shaw
J. L. Kelehan
John A. Derry
Edward R. Gardner
Chris Henderson
Jesse C. Johnson
Frank B. Quackenboss
Charles H. Reichardt
T. H. Johnson
Amasa Bishop
Harold L. Price
Louis H. Roddis
E. J. Bloch
Brig. Gen. Alfred D. Starbird
Charles L. Marshall
Morse Salisbury

Oscar S. Smith
J. A. Waters
Willis R. Boss
Paul B. Pearson
Marvin M. Mann
Don S. Burrows
Edward A. Shepherd
Francis J. McCarthy
John H. Burchard
Richard G. Hewlett
Benjamin S. Loeb
Roland A. Anderson
Manuel Dupkin II
George G. Manov
Richard J. Hallinan
Ruth Thomas

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8-28-95
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General Manager's Monthly Report

1. Operations Analysis

With reference to a question raised by the McKinney Panel, Mr. Quackenboss presented an analysis of some of the effects of a drastic reduction in the cost of uranium ore. He observed that the cost of nuclear power is not greatly affected by the cost of uranium. Assuming a requirement for enriched material, the diffusion plant would strip uranium to a tails concentration of .42% even if the ore were free, and consequently, costs would still be appreciable.

2. International Affairs

Mr. Gardner reported that the Agreement for Cooperation with Thailand would be signed in Bangkok on March 13 by the Secretary of State, who would also present an unclassified technical library.

Mr. Gardner then reported on other events of interest and remarked that the Argonne Reactor School expected a total of 67 applicants. After some discussion concerning the background of the students, Mr. Libby requested a study of comparative class compositions of the ANL Reactor School. (See AEC 267/27, subsequently circulated.)

The Commissioners briefly discussed the forthcoming meeting of the UN Scientific Committee on Radiation. Mr. Libby commented on the lack of biological scientists, specifically a geneticist, on the UN Secretary General's staff. Mr. Libby then referred to an announcement on genetics by the American Federation of Scientists. In this connection he observed that the Federation had indicated their agreement with AEC that weapons tests were no more hazardous genetically than natural background radiation. He suggested consideration of a resolution for submission to the UN Scientific Committee on Radiation concerning agreement among the members of such scientific facts regarding radiation.

Mr. Strauss said that the Brazilian Ambassador had indicated that Brazil would like to begin negotiation on a power reactor bilateral

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agreement in order to obtain fuel for a completely Brazilian financed power reactor.

Mr. Libby referred to the report that 10,000 pounds of uranium enriched to five percent U-235 be required for the Belgian reactor. After a brief discussion, the Commissioners requested a detailed analysis of the use to be made of this material. (See AEC 264/148 subsequently circulated.)

3. Raw Materials

Mr. Johnson reported that at the current rate, foreign U₃O₈ deliveries during FY 1956 might exceed the 11,350 ton estimate, and that it appeared that domestic deliveries will approximate the 4500 ton estimate given to the JCAE.

Mr. Johnson also reported on the British contract with Australia for the production of 4500 tons of uranium, which would amount to about \$100 million. He then said that the Aluminum Company of America was definitely interested in producing alumina and phosphate from the Florida leach zone at the rate of about 305 tons of U-308 per year. He added that this material would be for sale at competitive prices about 1960.

4. Construction and Supply

Mr. Derry reviewed the status of construction projects and commented on other matters of interest in the AEC construction and supply program.

Mr. Strauss requested copies of the APPR and PWR photographs for presentation at the next NSC meeting.

5. Reactor Development

Mr. Roddis reviewed the status of the first round PDERP contract negotiations with Consumers Public Power District and the Power Reactor Development Company which included the Detroit Edison Co. Mr. Strauss

requested the Commission be informed, if the question of insurance becomes a contingency in the Consumers proposal. Mr. Roddis reported that the first contract negotiating meeting with Yankee Atomic Electric Company was held February 23.

After discussion of the importance of setting a realistic maximum chemical processing cost figure in order to encourage industry participation in the PDRP, Mr. Libby asked that he be provided with a technical analysis of these costs before the submission of a staff paper on the subject.

At this point Mr. Strauss briefly left the meeting.

Mr. Roddis then commented on experiments in the aircraft reactor program. With regard to the HTRE-1 he said that some fission product activity had been observed in the reactor's exhaust. Mr. Libby asked that he be provided with a copy of the technical report, when it is available, on fission products in the exhaust. Mr. Libby then pointed out that the findings of this report would have a bearing on whether a third type of reactor needed to be developed, since it would affect the practicality of the direct cycle approach.

The Commission discussed with Mr. Roddis other matters of interest in the reactor development program.

6. Civilian Application

Mr. Price reported that at the recent meeting of the Advisory Committee of State Officials on health and safety matters, the group had requested that AEC recognize in its regulations the interest and responsibility of the states in some of these areas and also that AEC inform them of applications for projects in their states.

Mr. Price then said that the construction permits for Consolidated Edison and Commonwealth Edison would probably be issued in a few weeks, and that preliminary discussions had been held with A. E. Little Company, General Electric and Textron concerning their plans for a three-core engineering test reactor in Massachusetts.

Mr. Price also said that the Westinghouse Electric Company was negotiating with the Mallinkrodt Chemical Company for the processing of U_2O_3 into oxide for fuel elements for the Belgian reactor. Although AEC might be able to process this material more cheaply, he said he had informed Westinghouse that as a matter of policy, AEC did not wish to compete with private industry.

7. Research

Mr. Johnson reported that about 60 project connected scientists, principally from the National Laboratories, would attend the CERN Conference on high energy physics at Geneva on June 11 to 23. The question of attendance at scientific conferences in USSR was discussed, and Mr. Johnson remarked that these requests would be processed through the Division of Security in the regular manner for foreign travel, and that approval would be on the basis of benefit to U.S. atomic energy projects.

Mr. Bishop then reported on the SHERWOOD Steering Committee meeting in Berkeley. As a result of work going on at LASL and Berkeley, Mr. Bishop informed the Commission that there is now a great deal more in the way of sound experimental and theoretical information on the important question of the stability of a plasma in a magnetic field, and that the outlook is not as discouraging as it was six months ago. During the discussion Mr. Libby requested the preparation of a report on possible theories for unanticipated neutrons observed in controlled thermonuclear research.

At this point Mr. Strauss briefly left the meeting.

8. Biology and Medicine

Mr. Boss briefed the Commission on additional plans for biological experiments at Operation REDWING. He added that consideration was being given to the question of whether the West Coast fish monitoring program should be reactivated. Mr. Libby

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suggested that Mr. Leo D. Marinelli be contacted concerning use of his instrumentation techniques in the Operation REDWING experiments. Mr. Libby also suggested that available water samples from the various tests, be sent to all the AEC Laboratories capable of making quantitative measurements. The Commissioners then discussed radioactive fallout from test operations and the effect of Operation REDWING on the world-wide strontium 90 level. Mr. Libby commented on the need for information collating devices in the SUNSHINE area, such as seminars or scientific journals.

Mr. Boss then reported on questions asked by Mr. Takashi Mukaibo, the Japanese Scientific Attache, with respect to the conduct of the Operation REDWING tests. (See AEC 787/22 subsequently circulated.)

9. Organization and Personnel

Mr. Smith commented on some of the personnel problems involved in moving the AEC headquarters to Germantown.

Mr. Strauss reported that the Assistant to the President and the Secretary of Labor had agreed that the Atomic Energy Labor Management Relations Panel should be transferred to the AEC and that the White House would issue the necessary decision to effect the transfer.

10. Security

Mr. Waters briefly discussed security matters. Mr. Strauss requested that he be provided with information on certain unaccounted for documents.

11. Information Services

In response to a question by Mr. Strauss concerning the status of discussions with the DOD regarding a program for public media observers at Operation REDWING, Mr. Salisbury commented on possible accommodations for these observers.

12. Inspection

Mr. Mann briefly commented on functions and practices of the Division of Inspection.

13. Classification

Mr. Marshall reported on the completion of the special declassification and downgrading review of documents of interest to the civilian application program. Mr. Strauss suggested consideration of a public announcement of the results of this document review program. He further suggested that the Commission consider the need for another such program in approximately one year.

14. General Counsel

The Commissioners had no questions on Mr. Diamond's report of N. V. Phillips', et al, offer to settle their \$ 20 million patent claim for \$ 4.5 million.

Mr. Strauss said that Mr. Mitchell doubted whether the Commission had legal authority to give 1,000 kg of U-235 to IAEA. He added that he had spoken to the Attorney General about this matter and that his comments would be received shortly.

15. Executive Session* - General Manager's Monthly Report

a. Intelligence

b. Finance

c. Military Application and Production

W. B. McCool

Secretary

Approved by the Commission: Meeting 1207, June 12, 1956

*A separate minute for this part of the meeting has been circulated.