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COLLECTION AEC Minutes (NNS-326-92-006)  
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ATOMIC ENERGY COMMISSION

MEETING NO. 1249

2:15 p.m., Tuesday, November 27, 1956

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Present

Lewis L. Strauss  
Thomas E. Murray  
W. F. Libby  
Harold S. Vance

K. E. Fields  
William Mitchell  
  
W. B. McCool

Also Present

E. J. Bloch  
John H. Burchard  
Don S. Burrows  
W. Kenneth Davis  
Dr. Charles L. Dunham  
Manuel Dupkin II  
Paul C. Fine  
Kirk Fox  
Edward R. Gardner  
Richard J. Hallinan  
Alfred S. Hodgson  
Jesse C. Johnson  
William K. Maher  
Charles L. Marshall

Paul W. McDaniel  
Curtis A. Nelson  
William L. Oakley  
Calvin Potts  
Eber R. Price  
Charles H. Reichardt  
Morse Salisbury  
David F. Shaw  
Brig. Gen. Alfred D. Starbird  
A. Tammaro  
Allen J. Vander Weyden  
J. A. Waters  
Richard V. Willit  
John F. Worth

9/7/95  
KSA 9-8-95  
RH Smiley  
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1. Executive Session\*

a. BOB Markup of FY 1958 Budget

\*Separate minutes for this part of the meeting have been circulated.

b. Union Carbide Antitrust Suit

c. General Manager's Monthly Report

(1) Production

(2) Military Application

(3) Intelligence

2. General Manager's Monthly Report

a. Operations Analysis

Mr. Fine reviewed a report on the problems related to the use and/or disposal of depleted uranium. He pointed out that for the foreseeable future, there will be a great excess of depleted uranium. Mr. Libby remarked that the Government might retain title to this material, and lease it for use in shielding shipping containers for irradiated fuel elements. Mr. Strauss observed that a certain amount of U-235 remains in this depleted uranium and that if a process for separating it were discovered, the depleted uranium would be a valuable source of U-235.

b. International Affairs

Mr. Vander Weyden said Norwegian officials had indicated that they were prepared to conclude negotiations on an unclassified power bilateral agreement similar to the French Agreement. He also said that during the week Japanese, Italian and German representatives had conferred with AEC officials.

c. Special Projects

Mr. Gardner reported that an exhibit on some phase of Project SHERWOOD is being considered for

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the 1958 International Scientific Conference. He also said that a list of invitees to the Inter-American Symposium to be held at Brookhaven National Laboratory during May, 1957 is being prepared and that it had not yet been determined how U.S. contributions to Latin-American participation in the Symposium would be financed. Mr. Strauss inquired whether Under Secretary of State Hoover had written ICA Director Hollister regarding this problem; Mr. Gardner was to make further inquiry.

Mr. Gardner then referred briefly to plans for the 1958 Brussels World's Fair and said that proposals for the U.S. exhibit would be prepared and submitted to the U.S. Commissioner General. He said that U.S. participation would be financed from a special fund created by Congress.

d. Raw Materials

Mr. Johnson reviewed with the Commissioners the October Monthly Report on Raw Materials. He remarked that ore procurement was about two percent below projections for October but that he expected the FY 1957 total to reach the projected figure of 15,575 tons. He also outlined certain problems arising in connection with division of CDA materials.


e. Construction and Supply

Mr. Maher reported that a public inspection of the new Headquarters building and a dedication and cornerstone ceremony were planned for September or October 1957. Mr. Strauss commented on part of a recent report by the Senate Sub-committee on Small Business in which AEC is commended for its small business program. He suggested that appropriate publicity be given to this part of the report.

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Mr. Murray observed that the Monsanto and Westinghouse contracts expire on November 30, and December 15, 1956, and said he had understood that contracts such as these were to be submitted to the Commission for consideration well in advance of their expiration date. Mr. Fields indicated that he would clarify procedures for the Commission review of contract matters. (See AEC 181/83)

The Commissioners next discussed the difficulties that have developed with the nuclear propulsion unit in the SEAWOLF. Mr. Murray remarked that in view of the experience with the SEAWOLF reactor, it might be desirable for the Commission to re-evaluate all work on liquid metal cooled reactors. He also suggested that other groups which are engaged in liquid metal reactor development be informed of the problems encountered with the SEAWOLF reactor. Mr. Davis said that the Naval Branch of the Division of Reactor Development is preparing a report on this matter, for distribution to all groups participating in liquid metal reactor development work. Mr. Strauss noted that the difficulties in using stainless steel for containment of liquid sodium had been realized in Reactor Development Division as early as 1953. Mr. Davis reviewed efforts being made to develop improved heat exchangers. Mr. Strauss observed, and Mr. Murray agreed, that the difficulties now being encountered should not discourage efforts to perfect such a reactor. Mr. Libby referred to the apparent disadvantages in using stainless steel for the piping and boiler material of sodium reactors, and said he believed that nickel might prove to be a more satisfactory metal for this purpose. Mr. Davis said that nickel would be extremely difficult to fabricate.



f. Reactor Development

Mr. Davis reported that after a final check by the Reactor Hazards Evaluation staff the Borax-4 reactor at the NRTS would be put into operation. In addition, he said, the EBWR would become critical the following day.

Mr. Davis then reviewed recent negotiations with the North American Aviation Company regarding the establishment of a contract for the Consumers' reactor. The Company has indicated that they would establish a maximum cost but this figure would be approximately \$10,000,000 higher than the figure originally considered. Mr. Davis said he believed that if the Commission wishes to proceed with the construction of the reactor, a cost-plus-fixed-fee or similar arrangement will have to be negotiated.

The Commissioners then discussed financial difficulties which have arisen in connection with the Rural Cooperative Power Association's plans for construction of a power reactor at Elk River, Minnesota. Mr. Davis said the Rural Electrification Administration has indicated that it will not grant a loan to the Elk River group if there is any possibility that the power produced by the proposed reactor would cost more than power produced by a conventional plant. Mr. Strauss observed that if this is actually the policy of REA, the REA will not participate in the financing of the Elk River reactor. He said he believed that the matter is of such importance that confirmation of the general REA policy on the financing of power reactors should be obtained in writing from the REA. Mr. Davis added that it appears that if the Elk River reactor project is to be completed it will have to be financed by the Government. He pointed out that the Elk River group has no funds and is unable to

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obtain a loan unless a fixed price for the reactor is established. Mr. Davis also said that on November 21, the American Machine and Foundry Company had notified RCPA that the Company would have to further consider the signing of the proposed contract for construction of the reactor at the presently established minimum price of \$ 2,000,000 and a maximum price of \$ 3,700,000. A discussion then ensued regarding factors pertinent to AMF's undertaking this contract.

Mr. Davis also reported that the Reactor Hazards Evaluation staff has indicated that the proposed location of the Elk River reactor is not satisfactory nor are the proposed containment features of the plant.

g. Civilian Application

Mr. Eber Price reported briefly on a meeting of the staff with the Advisory Committee of State officials to discuss proposed regulations establishing standards for radiation protection. He said he hoped to submit the regulations to the Commission in the near future.

Mr. Strauss requested that future monthly reports by the Division of Civilian Application contain a statement of the reasons for any license denials which occur during the preceding month.

The Commissioners referred to the isotope program and discussed briefly the probability that the demand for tritium for use in commercial devices will increase at a time when tritium supplies are not abundant, and also the need for AEC testing of the safety of commercial devices containing by-product materials.

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h. Research

Mr. McDaniel said AEC staff members who recently visited the U.K. controlled thermonuclear projects at Harwell and Aldermaston reported that the British are making substantial progress in work on a controlled thermonuclear reactor using the pinch effect. He pointed out that all British efforts seem to be directed at this one particular approach to the problem, and added that the U.S. is leading the U.K. in over-all development. Mr. McDaniel also remarked that the SHERWOOD Steering Committee has approved Mr. Lyman Pitzer's request to proceed with the design of a Model "C" Stellarator.


i. Biology and Medicine

Dr. Dunham said that the ACBM had recommended that the Rongelap natives be returned to the islands from which they were removed at the time of Operation CASTLE. Also, in view of the necessity of continuing weapons tests in the U.S., the Committee had recommended approval of the ten roentgen in ten years criteria for off-site exposure to fallout. Dr. Dunham said the Committee believes that this amount of exposure will not create an appreciable genetic risk to the U.S. population. (See AEC 156/64).

Mr. Murray then inquired about the status of a study being prepared for the Net Evaluation Subcommittee of the NSC concerning the biological consequences of nuclear warfare. He said he wished to receive copies of this and all similar reports prepared by the AEC staff. Mr. Strauss said he had not yet seen this particular report, but that he would consider providing Mr. Murray a copy after he had seen it.

j. Office of General Counsel

Mr. Mitchell commented briefly on the monthly report by the Office of the General Counsel.



k. Organization and Personnel

The Commissioners indicated that they had no questions concerning the monthly report by the Division of Organization and Personnel.

l. Security

The Commissioners indicated that they had no questions concerning the monthly report by the Division of Security.

m. Finance

The Commissioners also indicated that they had no questions concerning the monthly report by the Division of Finance.


n. Classification

Mr. Marshall said a revised draft classification guide for the controlled thermonuclear reactor program has been prepared, taking into account the information on this subject which has been released by the Soviet Union. He said this guide has been used in discussions with U.K. representatives during the past week and would be submitted to the Commission as soon as the minutes of the joint U.S.-U.K. meeting are approved by those who attended.

The Commissioners then briefly discussed the new Declassification Guide and the need for putting it into effect as soon as possible.

o. Information Services

Mr. Salisbury reported that four traveling Atoms-for-Peace exhibits were now touring the U.S.



Mr. Murray commented on an AEC letter to Representative Elizabeth Key replying to questions from one of her constituents on the matter of weapons testing. Mr. Murray pointed out that the AEC reply referred the reader to a copy of the October 24, 1956, White House statement on weapons testing. He said the Commission has never formally approved the statement and that he disagreed with parts of it. Therefore, he indicated that it seemed inappropriate to make use of this statement in official AEC replies to such inquires. The Commissioners agreed that this matter should be considered further during the Executive Session. (See Minutes of Executive Session of Meeting 1249).

p. Inspection

The Commissioners discussed with Mr. Nelson the reactor inspection procedures of the Division of Inspections. Mr. Nelson indicated that these inspection are carried out independently from those of the ACRS and provide the General Manager with an independent judgment on the safety of the reactors inspected.


Mr. Strauss inquired about the waste disposal procedures of laboratories and clinics using sizeable quantities of radioactive isotopes and Mr. Nelson said he would provide the Commissioners several typical inspection reports on the waste disposal procedures used by these institutions.

3. Executive Session (continued)\*

a. National Academy of Science's Study of Radiation Effects

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\*Separate minutes for this part of the meeting have been circulated.

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- b. Use of October 24 White House Statement on Weapons Testing
  - c. Reply to MURA Telegram

W. B. McCool

Secretary

Approved by the Commission: Meeting 1293, June 27, 1957