

ATOMIC ENERGY COMMISSION

MEETING NO. 875

10:30 a.m., Wednesday, June 10, 1953

Present

Thomas E. Murray
Eugene M. Zuckert

Harold D. Anamosa
John H. Stumpf

M. W. Boyer
Harold L. Price

Also Present

Richard W. Cook
O. S. Smith
James G. Beckerley
William L. Davidson
Brig. Gen. K. E. Fields
Col. Vincent G. Huston
Comdr. Elbert W. Pate, JTF-7
Morse Salisbury
Walter F. Colby
George F. Trowbridge

McKay Donkin
Comdr. James Dunford
Edward J. Bloch
Lyall E. Johnson
John A. Waters
E. R. Trapnell
Philip Mullenbach
Dr. Walter D. Claus
Gordon Dunning

DELETED

CLASSIFICATION CANCELLED

~~OR CHANGED TO~~

BY AUTHORITY OF M. S. G. [Signature]
BY R. Anderson DATE 4/14/79

10. Fall-out from UPSHOT-KNOTHOLE Series

Mr. Dunning reported that several claims had recently been made that fall-out from the current series of tests had been responsible for the death or injury of livestock in the vicinity of the Nevada Proving Ground. In one case, several cattle in the vicinity of Charleston Peak were reported to have died from radioactivity. Upon investigation by a State of Nevada veterinarian, and representatives of the AEC, it was determined that the cattle had died from malnutrition. Several horses in Papoose Valley, about 8 miles from the test site, had beta burns on their skin while six cattle which were seen to drink from a waterhole in Papoose Valley were reported dead the next day. It had been claimed that the cattle had died from drinking radioactive water; however, an analysis of the waterhole showed less than a maximum permissible concentration. There were no beta burns on the cattle, and no deaths among the horses. Tests to determine the cause of death of the cattle are being made and the reports should be submitted shortly.

Some of the sheep grazing in an area approximately 50 miles from the site were determined to have beta burns in their nostrils and on their backs and 500 - 1,000 out of a total of approximately 10,000 were reported to have died while being moved to grazing lands in Utah. Specimens collected by medical representatives of the AEC and the State of Nevada are being analyzed and reports should be available in two weeks.

Mr. Dunning reported that the Stewart Brothers, who own grazing rights in Papoose Valley, and the owner of the Groom Mine, Mr. Sheahan, had met with Mr. Kenneth Woodruff of the AEC and the Commanding Officer of Nellis Air Force Base recently and had indicated their desire to leave the vicinity of the site. The Stewart Brothers wanted the AEC to buy their horses, cattle, and grazing rights in the area, while Mr. Sheahan wanted the AEC to buy the Groom Mine.

Commissioners Murray and Zuckert discussed the serious public relations problems which had developed from the fall-out incidents accompanying the test series, and the importance of presenting immediately to the public the full facts concerning the reported incidents and an explanation of the precautions taken by the AEC to insure against creation of any hazards to health and safety. Mr. Zuckert stressed too the need to enlist the aid of a group of chemical and meteorological experts to assist in preparation of a "case" for presentation to the public on the local level.

Mr. Dunning cited several examples of evidence that the people in the vicinity of the Nevada Proving Ground no longer had faith in the AEC, and there was discussion of the bases for this feeling and of the importance of choosing, for an objective presentation of the AEC "case", men who would enjoy the full confidence of the public.

Mr. Boyer said that upon receipt from the Manager, SFOO, of report on fall-out during UPSHOT-KNOTHOLE, representatives of the Divisions of Military Application and Biology and Medicine and the Special Assistant to the General Manager would prepare recommendations for a public education program for consideration by the Commission.

II. Effects of IVY Shots on Weather (See also Minutes of Meeting 869)

General Fields said that because of numerous charges which had appeared in the press recently that the tests just concluded at the Nevada Proving Ground were responsible for the unusual weather conditions in parts of the United States, and because of recent inquiries by the Commissioners concerning the effects of the IVY shots on the weather in the Pacific, he had asked Commander Pate, Weather Officer for JTF-7, to discuss with the Commission his study of weather conditions at Eniwetok during the IVY series.

Commander Pate said that he and Professor Palmer of UCLA had made a study of the effects of MIKE and KING shots on weather conditions at Eniwetok because the reported conditions subsequent to the shot did not agree with predictions. Observations prior to MIKE indicated 2-3% cloud conditions, while subsequent to the blast heavy cloud was reported as high as 30-40,000 feet. He described the conditions under which it was possible for an air circulation to occur and create the disturbances observed at Eniwetok, and said it was concluded that the MIKE shot had set up these conditions. Similar weather disturbances occurred after the KING shot, resulting in weather changes

for a few hours which produced rain squalls over the ocean, small storms, but no winds of hurricane force.

Commander Pate said that air circulations such as those occurring after the KING and MIKE shots had also been observed at certain of the shots at past continental tests, but with two important differences: the circulation had lasted for only a few minutes, and the shots over the desert involved insufficient moisture to create storm conditions. No material in the bomb debris could cause rain or a tornado. It was possible for a tornado to be "triggered" by external conditions, but it needed moisture as a fuel to become selfsustaining.

In response to questions by Mr. Zuckert, Commander Pate said that the unusually high number of tornadoes this spring could be attributed to an unusual pressure condition forcing moist Gulf air across the U. S. at high level until it came in contact with a cold air mass coming down from Canada, and that by no mechanism known was it possible for the tornadoes to have been caused by the Nevada tests.

The Commissioners discussed with Commander Pate the views of various meteorological experts throughout the country concerning the effect of the Nevada tests on weather conditions, and said they considered it necessary to reply immediately to the charges that the Nevada tests were responsible for tornadoes. Mr. Zuckert said that it appeared that the Joint Committee on Atomic Energy might want to hold hearings on this problem, and suggested that the Office of the General Counsel, together with other interested divisions, prepare a case which could be presented to the Joint Committee. Such a case should include testimony by leading meteorologists in the country such as representatives of the U.S. Weather Bureau, professors of meteorology at leading colleges and universities, professional "rainmakers", and representatives of the Department of Defense, such as the Tinker Air Force Base group. The General Manager said that a study such as that suggested by Mr. Zuckert would be undertaken.

Harold D. Anamosa
Acting Secretary

Approved by the Commission: July 10, 1953