



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

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FEB 23 1968

MEMORANDUM FOR CHAIRMAN SEABORG
COMMISSIONER RAMEY
COMMISSIONER TAPE
COMMISSIONER JOHNSON

SUBJECT: B-52 CRASH AT THULE AIR BASE, GREENLAND

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Feb. Thule Incident

This is the fourth in a series of status reports to the Commission on the Thule B-52 accident situation. This report briefly summarizes information available as of 5:00 p.m., February 19, 1968.

The collection of debris from the surface of the crash site is continuing but is essentially complete. Although intensive radiation detector and visual searches extending within an area approximately two and one-half miles north, two miles west, three miles south, and one mile east of the crash site have continued, the last piece of positively identified weapon debris was found on February 14. With the exception of **DELETED** which were shipped to LASL, all weapon debris is being shipped to the Rocky Flats plant where an intensive postmortem is now being accomplished. Of particular concern to the postmortem will be identification and association of the recovered debris with the specific weapons involved in order to ascertain what happened to the fourth weapon secondary, from which no parts have yet been positively identified.

Collection of contaminated aircraft debris is estimated at 99 per cent complete. This debris is being sealed into steel containers and will be shipped to Oak Ridge for disposal by burial. The approximate volume of this aircraft debris is represented by its containment in four 18,000 gallon tanks, twenty-two 30 gallon and one hundred fifty-five 20 gallon drums, and thirteen 2800 gallon jet engine containers. Oak Ridge representatives who went to Thule to determine, and advise on, the adequacy of packaging of this material foresee no problem in the safe handling and disposal of it at Oak Ridge.

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Thule Incident

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With recovery of the contaminated aircraft debris, the contamination levels of the crash area have decreased. The majority of the residual contamination is contained in the ice crust and snow of the fuel burn area and southern one-third of the impact area. Analysis of snow and ice core samples at LASL shows tritium contamination as high as 40 millicuries per square meter as well as plutonium contamination in this area. Also of concern are "pockets" of plutonium-contaminated, unburned JP-4 jet fuel oil in the immediate crash area. Analysis of snow and ice core samples is continuing, with Danish participation, to determine the degree of snow and ice removal necessary, and the extent and disposition of the contaminated fuel problem. An initial estimate by the Oak Ridge representatives who have returned from the crash scene envisions the scraping of approximately the top five inches of snow and ice from the impact area, comprising a volume of approximately 100,000 cubic feet, or 750,000 gallons. Oak Ridge would also be prepared to dispose of this material, possibly in 25,000 gallon tanks, provided by the DoD at Thule and transported back by ship or barge by next fall or winter.

Dr. Carl Walske (ATSD(AE)) led a team of eight DoD, AEC, and Laboratory scientists to Copenhagen on February 13-17 to confer with top officials of the Danish Ministry of Health, Ministry of Greenland and their Atomic Energy Agency. The latest information and concept were discussed frankly and freely at these sessions and resulted in the attached Joint Statement provided to both the Danish and American Presses.

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The Danes propose to conduct all monitoring and surveillance studies of the biota of the area using the logistic support of Thule Air Base and leaving to the Air Force the task of removing the debris and scraping up snow and ice in the contaminated areas. They are most concerned with the area immediately surrounding the "burn area" on the ice and may take a more relaxed attitude toward the low-level contamination at distances of four or more miles.

The Danes are aware of plutonium being entrapped in the JP-4 fuel, of tritium being in the area, and of the probability of contaminated metal on the bottom of the bay, but made no issue of these. Nothing was said at this meeting about costs or payment for Danish activities. Pu-236 will be provided to assist their bio-analyses.

Trip reports soon to be prepared by the Division of Biology and Medicine will provide more detailed information.

(See attached page for distribution)

Original Signed by
C. W. Walske
Edward B. Giller
Brigadier General, USAF
Assistant General Manager
for Military Application

BM _____
OS _____

MA:Prod AGMMA

Attachment:
Joint Statement

[REDACTED]
GFHedrick/sc EBGiller

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JOINT STATEMENT RELEASED TO PRESS
FEBRUARY 16, 1968

Scientists from Denmark and the United States met during February 15 and 16 for discussions of the technical questions arising from the B-52 crash at Thule, Greenland. The meetings continued the close cooperation which has existed since the time of the crash. Scientists of both nations have worked together at the scene of the crash and participated in the gathering of scientific evidence. The scientists reviewed the considerable progress which has been made at the site in collecting aircraft and weapons parts. Contaminated material will be removed from Greenland. They also assessed the extent to which radioactivity was released.

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It was agreed that under present conditions the radioactivity spread in the area is not a hazard to people or biological species, nor is any hazard foreseen for the future. Nevertheless, an effort will be made to remove the main part of the radioactivity which is on the ice. The conclusions of the scientists regarding the absence of hazards to the biosphere will continue to be examined in detail. Further supporting evidence will be accumulated through an extensive program of data gathering.

Participants from the United States

Dr. Carl Walske (Chairman)	Assistant to the Secretary of Defense for Atomic Energy
Mr. Herbert Parker	Biophysicist, Battelle Memorial Institute
Dr. Bostwick Ketchum	Woods Hole Oceanographic Institute
Dr. Wright Langham	Los Alamos Scientific Laboratory
Dr. H. D. Bruner	Atomic Energy Commission
Dr. John Wolfe	Atomic Energy Commission



Participants from the United States (continued)

Dr. James Shreve	Physics and Mathematical Research, Sandia Corporation
Major General Otto Glasser	Headquarters, U. S. Air Force (AFRDC)
Colonel Oscar Sundstrom	Headquarters, U. S. Air Force (AFSSSGA)

Participants from Denmark

Mr. H. H. Koch (Chairman)	Permanent Under-Secretary of State, Chairman, Executive Committee, Danish AEC
Professor P. Brandt Rehberg	Chairman, Danish AEC
Professor Jorgen Koch	University of Copenhagen, Consultant to National Health Service
Mr. E. Juel Henningsen, M.D.	Deputy Director General National Health Service
Mr. P. Grande	Head, Radiation Hygiene Laboratory National Health Service
Mr. E. Hesselbjerg	Permanent Under-Secretary of State Ministry for Greenland
Mr. H. Lassen	Head of Division, Ministry for Greenland
Mr. W. Friis-Moller	Head of Section, Ministry of Foreign Affairs
Dr. Paul Marinus Hansen	Head of the Greenland Fisheries Research Department
Dr. Christian Vibe	Assistant Professor, Zoological Museum, University of Copenhagen
Mr. B. N. Fristrup	Head of Department, Geographical Institute
Mr. Frede Hermann	Hydrographer, Ministry of Fisheries

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Participants from Denmark (continued)

Professor Mogens Faber, M.D.	Medical Adviser to the Danish AEC
Professor T. Bjerge	Director, Research Establishment Riso
Dr. C. F. Jacobsen	DOE ARCHIVES Assistant Director, Riso
Professor O. Kofoed-Hansen	Technical University of Denmark Head, Physics Department, Riso
Mr. P. L. Olgaard, M.Sc.	Head, Reactor Physics Department, Riso
Mr. N. E. Busch, M.Sc.	Head, Meteorological Section, Physics Department, Riso
Mr. Hans von Bulow	Secretary General, Danish AEC
Mr. G. Vigh	Head of Section, Danish AEC