

PERFORM THEM ON DANISH EMPLOYEES DUE TO THEIR MINIMUM EXPOSURE AS THEY WERE KEPT OUT OF THE CONTAMINATED AREA. THEY WERE, HOWEVER, MONITORED FOR CONTAMINATION LIKE US PERSONNEL FROM THE START OF THE CLEANUP OPERATIONS. INITIAL MONITORING DID REVEAL THAT US PERSONNEL VISITING THE CRASH SITE SHOWED CONTAMINATED CLOTHING AND FOOTWEAR, DANISH PERSONNEL WERE "CLEAN". IN FACT, NOTHING HIGHER THAN A READING OF ZERO WAS CONSIDERED SATISFACTORY FOR ANYONE EXCEPT AMERICAN PERSONNEL, THUS DANISH WORKERS WERE KEPT TO A HIGHER STANDARD DURING THE OPERATION. IN FACT, DANISH WORKERS WERE PROHIBITED FROM ENTERING THE SO-CALLED ZERO LINE (A ZERO READING IN DETECTION EQUIPMENT).

AS YOU KNOW, A FEW DANISH CONSTRUCTION WORKERS EMPLOYED AT THULE DURING THE CLEAN-UP OPERATION FILED A CLAIM AGAINST THE U.S. HOWEVER, THEIR CLAIM WAS DISMISSED IN 1988. MORE RECENTLY, FOUR AMERICAN SERVICE PERSONNEL FILED SUIT AGAINST THE U.S. AIR FORCE SEEKING DAMAGES OVER EXPOSURE DURING THE CLEAN-UP. THIS SUIT IS CURRENTLY IN LITIGATION AND REMAINS UNRESOLVED.

QUESTION 7.

ACCORDING TO YOUR OPINION, WOULD IT BE POSSIBLE TO DRAW A PARALLEL TO THE PALOMARES, SPAIN, PLANE CRASH OF 1966? HAVE DAMAGES TO THE HEALTH OF THOSE PARTICIPATING IN THE CLEANUP OPERATION OR TO THE HEALTH OF THE LOCAL POPULATION BEEN ESTIMATED?

ANSWER 7.

FROM THE EXPERIENCE AT PALOMARES, THE USAF RADIOLOGICAL HEALTH LABORATORY, WRIGHT-PATTERSON AFB, OHIO, (NOW THE ARMSTRONG LABORATORY, BROOKS AFB, TEXAS) LEARNED THAT CONTAINERS USED TO COLLECT URINE SAMPLES AT THE SCENE WERE OFTEN CONTAMINATED WITH MINUTE AMOUNTS OF PLUTONIUM. IT WAS THEREFORE NECESSARY TO COLLECT 24-HOUR URINE SAMPLES FROM EVERYONE THAT HAD PARTICIPATED IN THE PALOMARES OPERATION. ABOUT 4 MONTHS FOLLOWING THE END OF THE PALOMARES OPERATION AND AGAIN AFTER THE THULE OPERATION, 24-HOUR URINE SAMPLES WERE COLLECTED FROM AMERICAN PERSONNEL THAT HAD BEEN INVOLVED. THESE SAMPLES WERE ANALYZED FOR PLUTONIUM.

THERE WERE 756 URINE SAMPLES COLLECTED ON AMERICAN PERSONNEL WHO HAD BEEN AT THULE. ALL OF THESE SAMPLES WERE UNIFORMLY FREE OF PLUTONIUM, INDICATING THAT NO PARTICIPANT IN OPERATION CRESTED ICE WAS INTERNALLY CONTAMINATED WITH PLUTONIUM.

THERE WERE NEARLY 1,600 PARTICIPANTS IN THE PALOMARES PLUTONIUM BIOASSAY STUDY. ONLY 25 SHOWED ANY EVIDENCE OF HAVING PLUTONIUM UPTAKE. THE VALUES RANGED FROM 7 PERCENT TO 57 PERCENT OF A PERMISSIBLE BODY BURDEN OF 0.04 MICROCURIES. PARTICIPANTS IN BOTH OPERATIONS WERE INFORMED OF THEIR PLUTONIUM URINE ANALYSIS RESULTS.

THE PRINCIPAL DIFFERENCES IN THE THULE AND PALOMARES OPERATIONS, FROM A RADIOLOGICAL STANDPOINT, WAS THAT AT THULE THE PLUTONIUM BECAME WELL ENTRAPPED IN THE SNOW AND ICE FOLLOWING THE EXPLOSION AND FIRE. THIS GREATLY REDUCED THE AIRBORNE CONTAMINATION PROBLEM. THE PALOMARES ACCIDENT OCCURRED IN AN ARID LOCATION WHERE THERE WAS A GREATER TENDENCY FOR SPREAD OF PLUTONIUM CONTAMINATION. THIS IS THE MAIN REASON WHY A SMALL NUMBER OF INDIVIDUALS AT PALOMARES SHOWED SOME VERY LOW LEVEL PLUTONIUM IN THEIR URINE SAMPLES, IN CONTRAST TO THOSE INVOLVED AT THULE WHO DID NOT EXPERIENCE SIMILAR LEVELS OF AIRBORNE CONTAMINATION.

QUESTION 8.

WE KINDLY REQUEST BEING INFORMED ABOUT TO WHAT EXTENT YOUR AUTHORITIES INFORMED THE REPRESENTATIVES OF DENMARK, ALREADY IN 1968, ABOUT THE EXACT QUANTITY OF PLUTONIUM CARRIED BY THE FOUR BOMBS.

ANSWER 8.

THE FACT THAT A TOTAL OF APPROXIMATELY 6 KILOGRAMS OF PLUTONIUM WAS INVOLVED IN THE CRASH OF THE B-52 BOMBER NEAR THULE, GREENLAND, ON JANUARY 21, 1968, WAS APPROVED FOR RELEASE TO THE DANISH GOVERNMENT BY THE UNITED STATES ATOMIC ENERGY COMMISSION ON APRIL 15, 1968(6) AND AGAIN ON JUNE 18, 1968(11). THESE TWO DOCUMENTS CONTAIN ABOUT THE SAME TEXT; THAT THE USAEC HAD DETERMINED THAT:

"(A) THE FACT THAT APPROXIMATELY 6 KG OF PLUTONIUM WERE INVOLVED IN THE GREENLAND ACCIDENT, AND (B) OUR BEST ESTIMATES OF THE AMOUNT OF PLUTONIUM WE HAVE REMOVED FROM THE SITE OF THE ACCIDENT COULD BE PUBLISHED WITHOUT UNDUE RISK TO THE COMMON DEFENSE AND SECURITY."

THE APRIL 15, 1968 MEMORANDUM CONTINUES WITH:

"IT IS IMPORTANT TO NOTE THAT THE COMMISSION IN TAKING THIS DECLASSIFICATION ACTION CONCLUDED THAT THE DATA SHOULD BE PROVIDED TO REPRESENTATIVES OF THE DANISH GOVERNMENT AS 'PRIVILEGED INFORMATION' WITH A REQUEST THAT ITS DISSEMINATION BE CAREFULLY CONTROLLED AND THAT ADMINISTRATIVE MEASURES SHOULD BE TAKEN TO APPROPRIATELY CONTROL ITS DISSEMINATION WITHIN THE UNITED STATES."

THE REFERENCE TO "DECLASSIFICATION" IN THE 1968 MEMO HAS TO BE READ AS ALLOWING THE DANISH GOVERNMENT TO RECEIVE SENSITIVE INFORMATION WHICH IT NEVERTHELESS WAS BOUND TO KEEP FROM BECOMING PUBLIC.

QUESTION 9.

WE SHOULD ALSO LIKE TO ASK TO WHAT EXTENT YOUR RECORDS CONFIRM

THAT REPRESENTATIVES OF THE DANISH AUTHORITIES HAVE AT THE OCCASION OF AN AUGUST 1988 MEETING IN WASHINGTON BEEN INFORMED THAT IT WAS IMPOSSIBLE TO PROVIDE INFORMATION ABOUT THE QUANTITY OF PLUTONIUM CARRIED BY THE FOUR NUCLEAR WEAPONS, AND IT WAS IMPOSSIBLE AS WELL TO DRAW UP AN ACCOUNT OF THE PLUTONIUM INVOLVED, SINCE THE QUANTITY OF PLUTONIUM CONTAINED BY THOSE PARTS OF THE WRECK AND THOSE REMNANTS OF THE BOMBS WHICH HAD BEEN BROUGHT BACK TO THE USA HAD NOT BEEN MEASURED.

REFERENCE IS MADE TO THE MEETING WHICH TOOK PLACE AT OAK RIDGE ASSOCIATED UNIVERSITIES, WASHINGTON, DC ON AUGUST 22ND - 23RD, 1988 BETWEEN REPRESENTATIVES OF THE DANISH NATIONAL BOARD OF HEALTH, RISO NATIONAL LABORATORY AND OTHERS, AND REPRESENTATIVES OF THE U.S. DEPARTMENT OF STATE, USAF HEADQUARTERS, THE U.S. DEPARTMENT OF ENERGY, OAK RIDGE ASSOCIATED UNIVERSITY AND OTHERS.

ANSWER 9.

AS STATED ELSEWHERE IN THESE ANSWERS THE DANISH SCIENTISTS HAD BEEN INFORMED AS EARLY AS APRIL 1968 THAT THE FOUR NUCLEAR WEAPONS INVOLVED IN THE THULE ACCIDENT CONTAINED A TOTAL OF ABOUT 6 KG OF PLUTONIUM. SINCE THERE WERE NO VERBATIM MINUTES KEPT AT THIS PARTICULAR MEETING, IT IS IMPOSSIBLE TO SAY WHAT INFORMATION WAS EXCHANGED AMONG THE PARTICIPANTS.

FOR ALL THE REASONS CITED PREVIOUSLY, THE PRECISE AMOUNT OF PLUTONIUM CONTAINED IN THE WEAPONS WILL REMAIN CLASSIFIED TO PREVENT THE PROLIFERATION OF NUCLEAR WEAPONS DESIGN INFORMATION. GIVEN THE UNCERTAINTY IN ESTIMATING THE RECOVERED AMOUNT, 6 KILOGRAMS OF PLUTONIUM IS A VERY REASONABLE ESTIMATE.

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