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Comptroller General OF THE UNITED STATES

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Nuclear Diversion In The U.S.? 13 Years Of Contradiction And Confusion

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DECEMBER 18, 1978

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Classified by letter from FBI to GAO dated October 25, 1978 and a letter from CIA to GAO also dated October 25, 1978.

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-157767

The Honorable John D. Dingell
Chairman, Subcommittee on
Energy and Power
Committee on Interstate and
Foreign Commerce
House of Representatives

Dear Mr. Chairman:

On August 12, 1977, you requested that we initiate an investigation to determine the extent and contents of intelligence and related nuclear safeguards information regarding a possible diversion of nuclear material from a U.S. facility and the extent to which this information was disseminated among those agencies having responsibilities in this area.

In response to your request, this report primarily discusses two questions

--what information has been developed about the alleged diversion? and

--were the investigations done by the Federal Government adequate?

As agreed with your office we plan to distribute the report to certain other parties having an interest in it. Specifically, we plan to provide the report to the Chairman of the House Committee on Interior and Insular Affairs and the Chairman of the Subcommittee on Energy, Nuclear Proliferation and Federal Services, Senate Committee on Governmental

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Affairs. Further, we will also be providing the report to the House and Senate Select Intelligence Committees and the Federal agencies included in our review.

The report has been classified as SECRET/National Security Information by the Federal Bureau of Investigation and the Central Intelligence Agency. We made every attempt to issue an unclassified report on this matter. However, neither the Federal Bureau of Investigation nor the Central Intelligency Agency was able to provide us with a declassified version of the report.

Sincerely yours,

Comptroller General
of the United States

REPORT OF THE COMPTROLLER GENERAL OF THE UNITED STATES

NUCLEAR DIVERSION IN THE UNITED STATES? 13 YEARS OF CONTRADICTION AND CONFUSION

D I G E S T

PREFACE

It is not GAO's function to conduct criminal investigations and this review should not be construed as one. This report is simply a presentation of facts as we have examined them regarding the alleged diversion and its accompanying 13 years of contradiction and confusion. GAO's efforts focused on the implications such an alleged incident would have for improving the effectiveness of the Nation's current nuclear safeguards program. Investigations of the alleged incident by the FBI and the Department of Energy's (DOE) Office of Inspector General are still underway.

WHY GAO'S REVIEW WAS MADE

Chairman John Dingell of the House Subcommittee on Energy and Power requested GAO to examine an alleged incident involving over 200 pounds of unaccounted for uranium-235, the material used in the fabrication of nuclear weapons, from a nuclear plant in western Pennsylvania. Also, Chairman John Glenn of the Subcommittee on Energy, Nuclear Proliferation, and Federal Services, Senate Committee on Governmental Affairs, and Chairman Morris K. Udall of the Subcommittee on Energy and Environment, House Committee on Interior and Insular Affairs, expressed interest in the review.

Chairman Dingell specifically asked GAO to examine the extent and content of intelligence and safeguards information regarding the alleged incident, and the extent to which this information was provided to DOE and the Nuclear Regulatory Commission (NRC) for their use in assuring that nuclear materials were being adequately protected in this country. Chairman Dingell requested that GAO review " * * * all necessary files

and reports including those of ERDA, NRC, CIA, and the FBI * * *."

CONSTRAINTS ON GAO'S REVIEW

GAO attempted to satisfy the Chairman's request by interviewing responsible Federal and private individuals and by examining pertinent reports and documentation. While DOE 1/ and NRC provided full access to all their records and documentation, GAO was continually denied necessary reports and documentation on the alleged incident by the Central Intelligence Agency (CIA) and the Federal Bureau of Investigation (FBI).

CIA provided GAO a written chronology of contacts with other Federal agencies, however, the CIA denied GAO access to any on the case. The CIA did subsequently allow selected staff of Chairman Dingell's Subcommittee access to CIA documents, however, access to the documents was not extended to include GAO.

1/The Atomic Energy Commission (AEC) was formerly responsible for both regulating and promoting all nuclear activities in the United States. In January 19, 1975, it was split into the Nuclear Regulatory Commission and the Energy Research and Development Administration (ERDA). NRC became responsible for nuclear regulation and ERDA became responsible for nuclear development and promotion. Under Public Law 95-91, ERDA's functions were placed in the Department of Energy effective October 1, 1977. NRC remained intact. Throughout the report, DOE is used to refer to the Department of Energy, ERDA, and AEC.

The FBI's rationale for denying access was that it did not want to jeopardize an ongoing investigation of the alleged diversion incident.

Because GAO was denied access to documentation, it had to rely, for the most part, on oral evidence obtained in interviews with knowledgeable individuals and staff. The lack of access to CIA and FBI documents made it impossible for GAO to corroborate or check all information it obtained. Whenever possible, GAO attempted to corroborate the information with other knowledgeable individuals. One must keep in mind, however, that the alleged incident occurred more than 13 years ago. These limitations impeded GAO's efforts to fully collect and evaluate all facts of possible relevance to the alleged diversion incident.

While GAO normally would not continue work where it was continually denied access to pertinent and important documentation, it did continue in this case because of the significant nuclear safeguards implications and the congressional interest. This report is focused on the implications the alleged incident has for improving the effectiveness of the Nation's current nuclear safeguards program.

BACKGROUND

The alleged incident surfaced in 1965 at the Nuclear Materials and Equipment Corporation (NUMEC). Since that time, many allegations concerning the incident have been made in newspaper and magazine articles and at congressional hearings. These allegations include:

--The material was illegally diverted to Israel by NUMEC's management for use in nuclear weapons.

--The material was diverted to Israel by NUMEC's management with the assistance of the CIA.

--The material was diverted to Israel with the acquiescence of the United States Government.

--There has been a cover-up of the NUMEC incident by the United States Government.

[redacted] Based on the totality of GAO's inquiry, we believe that the allegations have not been fully or adequately answered.

Investigations of the incident were conducted by DOE and the FBI. The CIA, NRC, and the Joint Committee on Atomic Energy also have some knowledge of the facts surrounding the incident. All investigations 1/ of the alleged incident ended with no definitive answer and GAO found no evidence that the 200 pounds of nuclear material has been located. However, as a result of the NUMEC incident the safeguards programs in the United States have undergone substantial changes and have improved significantly.

This report addresses the two major questions still surrounding the incident and their implications for this country's continuing responsibilities for safeguarding strategic nuclear materials. These are:

--What information has been developed about the alleged NUMEC diversion?

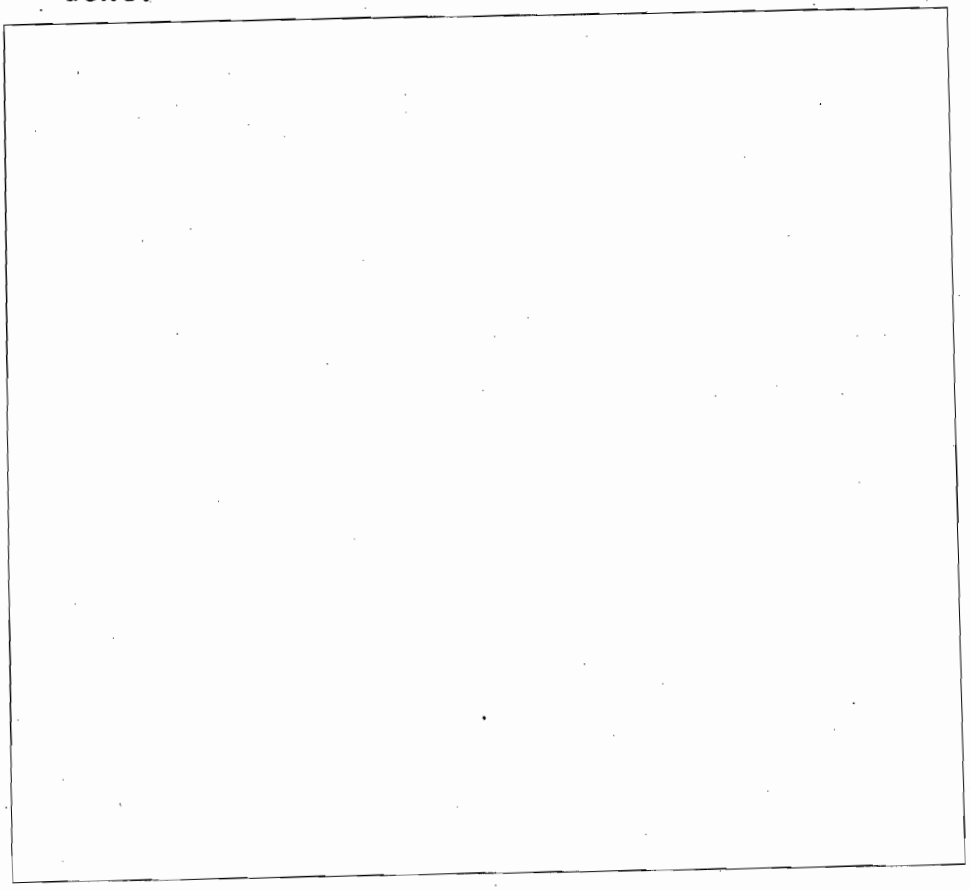
--Were the investigations conducted by the Federal Government into the alleged incident adequate?

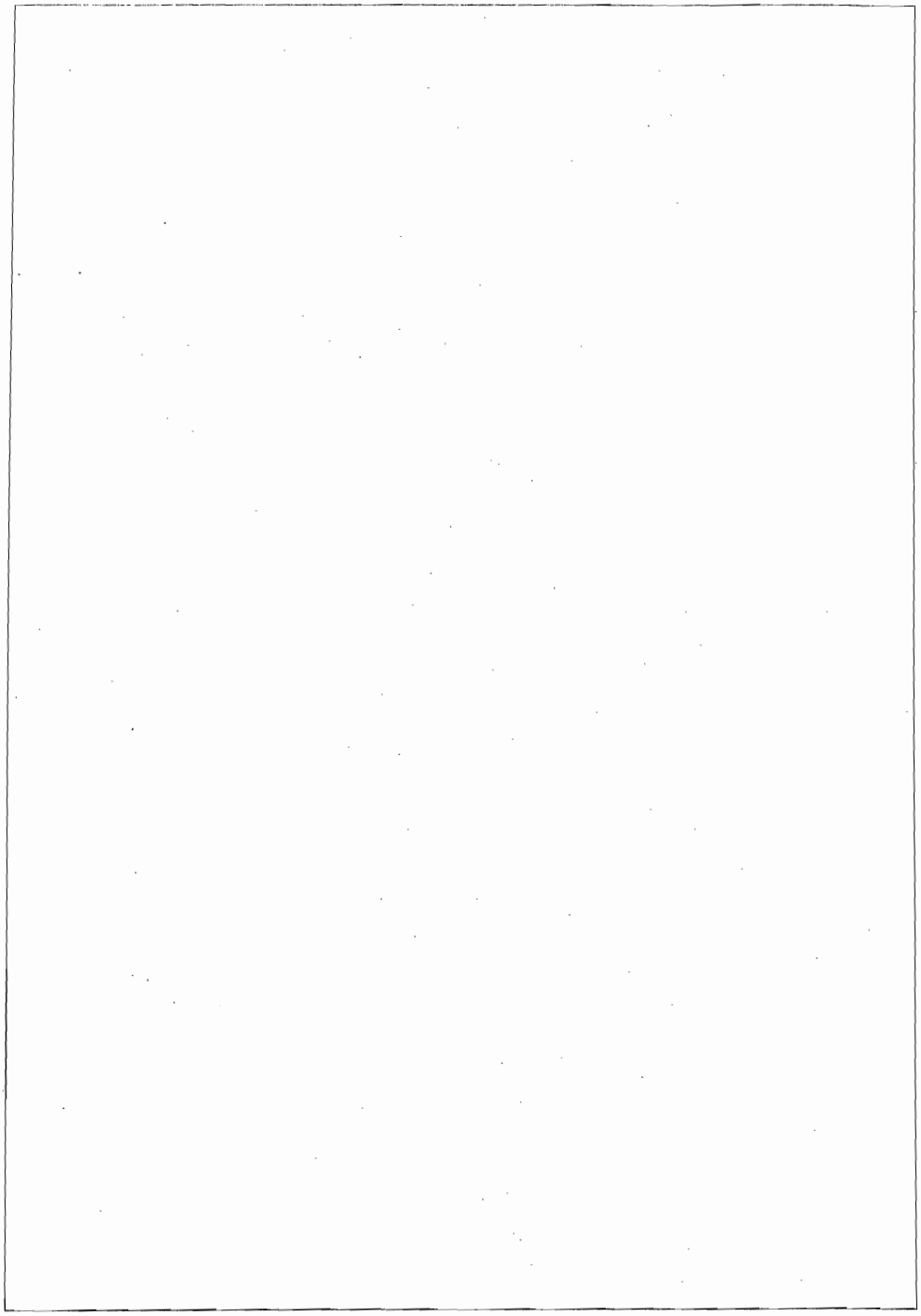
1/CIA officials informed GAO that they have no authority to conduct "investigations" of unaccounted for nuclear materials in the United States. As used in this report the term "investigation(s)" is used in the context of the entire Federal effort to resolve the incident.

WHAT INFORMATION HAS BEEN DEVELOPED ABOUT THE ALLEGED NUMEC DIVERSION?

Based on its review of available documents held by DOE and discussions with those involved in and knowledgeable about the NUMEC incident, GAO cannot say whether or not there was a diversion of material from the NUMEC facility. DOE has taken the position that it is aware of no conclusive evidence that a diversion of nuclear material ever occurred at the NUMEC facility, although it recognizes that the possibility cannot be eliminated. Agents from the FBI involved in the current investigation told GAO that while there exists circumstanial information which could lead an individual to conclude that a diversion occurred, there is no substantive proof of a diversion.

Currently the FBI is continuing its investigation into the alleged NUMEC incident.





In 1975, the entire regulatory function of DOE was taken over by the newly created NRC, which was made responsible for the regulatory oversight of commercial nuclear facilities like NUMEC, and consequently has become involved in the incident. In a February 1978 report related to the NUMEC incident,

NRC concluded that their previous official position of "no evidence" to support a diversion may need to be reconsidered in light of the many uncertainties surrounding the incident.

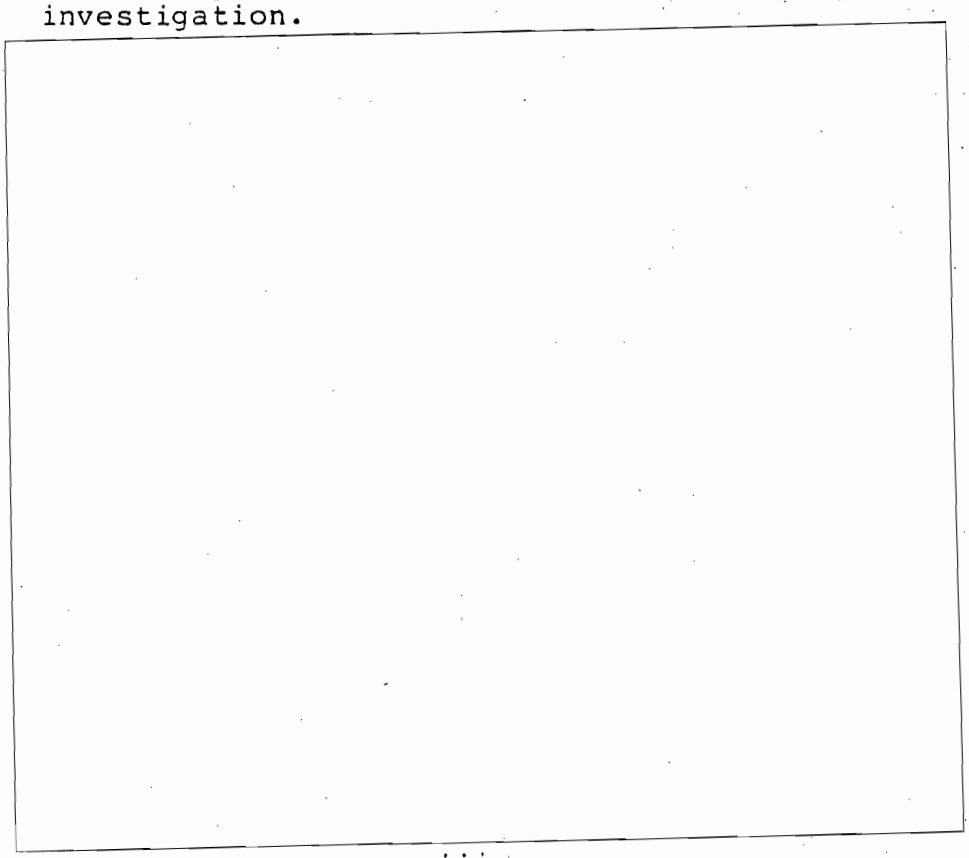
WERE THE INVESTIGATIONS CONDUCTED BY THE FEDERAL GOVERNMENT INTO THE ALLEGED INCIDENT ADEQUATE?

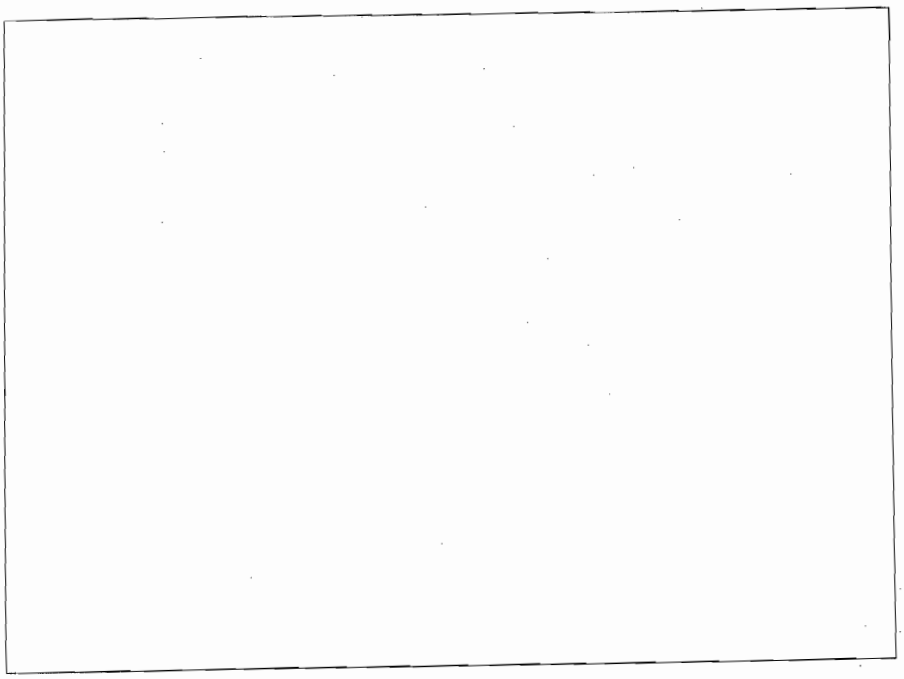
If a diversion or theft of nuclear material is suspected or actually occurs in this country, the Federal Government must be able to quickly and definitively determine how and why it happened so that the public can be protected against the potential hazards from such an occurrence. To do this, agencies of the Government with capabilities for investigating and responding to such incidents must work together to assure that all relevant information is obtained and is timely. This did not happen with the alleged NUMEC incident. Federal investigations of the alleged NUMEC incident were uncoordinated, limited in scope and timeliness, and, in GAO's opinion, less than adequate. There was not a unified and coordinated investigation of the incident by those agencies having the capabilities to fully resolve the matter --DOE, the FBI, and the CIA.

During 1965 and 1966 DOE investigated NUMEC's accountability and safeguards system focusing on the diversion possibility. Prior to the alleged 1965 incident, DOE conducted six accountability inspections at NUMEC in order to assure that nuclear materials were being adequately protected. The inspections were directed solely at the material accounting requirements of the time which were much less vigorous than those in existence at nuclear facilities today. Each inspection revealed significant deficiencies, but DOE allowed the facility to continue nuclear operations even though a key field investigator at one point recommended that DOE stop providing nuclear material to the facility.

The FBI, which had the responsibility and authority to investigate the alleged incident, did not focus on the question of a

possible nuclear diversion until May 1976 --nearly 11 years later. Initially, the FBI declined DOE's request to conduct an investigation of the diversion possibility even though they are required to conduct such investigations under the Atomic Energy Act. Two sources familiar with the matter gave GAO differing views on why the FBI declined to undertake the investigation. Between 1965 and 1976 the FBI's efforts were directed at investigating the actions and associations of NUMEC's president. FBI and Department of Justice staff told GAO that after a request by President Ford in April 1976 the FBI did begin to address the diversion aspect. GAO was not furnished any documents regarding President Ford's request and thus could not specifically determine its nature and scope. This investigation, which is currently ongoing, is obviously hampered by the 11-year gap since the alleged incident occurred. Also, although it may not affect the investigative outcome, GAO found that certain key individuals had not been contacted by the FBI almost 2 years into the FBI's current investigation.





The failure of DOE, the FBI, and the CIA to coordinate their efforts on the suspected diversion when it occurred and as new information developed and the limitation in the scope and timeliness of the FBI efforts, lead GAO to conclude that the Federal efforts to resolve the matter were less than adequate.

Currently, there exists no coordinated interagency agreed upon plan which focuses on (1) an adequate detection and investigative system and (2) a reporting system to the appropriate congressional committees and to the President. As a result, if a similar incident were to occur today, this country may not be assured of any better investigation. The United States needs to improve its efforts for effectively responding to and investigating incidents of missing or unaccounted for weapons-grade nuclear materials. In view of increasing terrorist activities throughout the world, the ability to respond and investigate such incidents should be of concern to national security and the public health and safety.

RECOMMENDATIONS TO THE HEADS OF AGENCIES

GAO recommends that the heads of DOE, NRC, the Department of Justice, and the CIA, as part of their responsibilities for the national security of the country, establish a plan for coordinated interagency action which focuses on a nuclear safeguards system that adequately detects, investigates, and reports to the Congress and the President on thefts or diversions of nuclear materials. The plan which should be submitted to the Congress within 90 days or less of the issuance of this report, should include

--a formal means for a timely determination of whether a loss has occurred;

--a clear and direct channel of communications between the agencies;

--a formal means for rapidly focusing the abilities of these agencies on the resolution of a diversion incident; and

--a means for allowing any incident involving the theft or diversion of nuclear material to be definitely resolved to the satisfaction of the Congress and the President.

GAO also recommends that the Attorney General, working with the FBI, take the lead in establishing the interagency plan since the FBI, under the Atomic Energy Act of 1954, is responsible for investigating incidents involving the diversion or theft of nuclear materials.

RECOMMENDATION TO THE CONGRESS

The committees of Congress having jurisdiction for domestic nuclear safeguards should

--review the nuclear safeguards plan to be submitted by the Executive Branch to assure that an adequate system is developed which deters and investigates thefts or diversions of nuclear materials.

--request that the FBI and DOE's Office of Inspector General complete their investigations of the NUMEC incident as soon as possible and submit their reports to the committees.

These reports should be reviewed to determine the adequacy of the investigations and their implications for developing a more effective future system.

Even with complete information on all Government investigations, given the passage of time, it may be difficult to conclusively determine what specifically happened at NUMEC. GAO believes the important thing is to use the lessons learned from the NUMEC experience to make certain that the Nation develops an adequate detection and follow-up system to deter future nuclear thefts or diversions.

AGENCY COMMENTS

DOE's comments on the report are contained in a letter dated July 25, 1978. (See appendix II). DOE agreed with the thrust of the report. However, it disagreed with our recommendation concerning the need to enter into a formal interagency agreement with NRC, the FBI, and the CIA for more timely and effective action in investigating incidents of suspected or real diversions of nuclear material. DOE stated in its letter that a comprehensive plan and a memorandum of understanding with the FBI already existed for joint responses to nuclear threat situations. Further, DOE stated that it had open channels of communication to other agencies, including the CIA, for the exchange of information pertinent to nuclear threat situations.

These factors were known to GAO and are commendable. The current memorandum of understanding between DOE and the FBI is the beginning of an effective response plan to incidents of nuclear diversion, but is inadequate since it does not include CIA participation and cooperation. Without a formal interagency agreement placing positive reporting and investigative responsibilities on DOE, NRC, the FBI, and the CIA along the lines recommended by GAO, we believe the

possibility exists for a repetition of the 13-year NUMEC investigation.

The comments received from the CIA are contained in a letter dated September 1, 1978. (See appendix III.) The letter takes no issue with the facts or recommendations included in the report. It does, however, point out some concerns about certain information in the report.

GAO believes that the concerns expressed by the CIA have been adequately addressed in the text of the report. However, we did not specifically address the CIA's concerns regarding its degree of cooperation with DOE and the FBI on the alleged NUMEC incident. In its letter the CIA disagreed with the statement in the report indicating that they failed to cooperate with DOE and the FBI. The CIA bases the disagreement on the fact that its officials briefed a large number of officials in the executive and legislative branches of Government on the NUMEC matter in 1976 and 1977.

GAO was aware that such briefings were provided. However, GAO believes that since the briefings were provided 4 to 6 years after some of the key information was developed their utility in helping to resolve the NUMEC matter was greatly diminished.

The Department of Justice and the FBI did not furnish formal written comments. GAO provided them more than 3 months to do so, a time period longer than that provided DOE, the CIA, and NRC. While GAO did not have the benefit of official written comments from the Department of Justice and

the FBI in preparing the final report, GAO did consider the view and comments of the FBI staff familiar with the alleged NUMEC incident during the course of the review.

NRC had no comment on the content of the report. However, NRC did state that the recommendations to the Heads of Agencies appears reasonable. (See appendix IV.)

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ABBREVIATIONS

AEC	Atomic Energy Commission
CIA	Central Intelligence Agency
DOE	Department of Energy
ERDA	Energy Research and Development Administration
FBI	Federal Bureau of Investigation
GAO	General Accounting Office
JCAE	Joint Committee on Atomic Energy
NRC	Nuclear Regulatory Commission
NUMEC	Nuclear Materials and Equipment Commission

CHAPTER 1

INTRODUCTION

In 1965 the Department of Energy (DOE) 1/ found during an inspection that about 206 pounds of uranium-235 could not be accounted for at the Nuclear Materials and Equipment Corporation (NUMEC), a nuclear facility located in Apollo, Pennsylvania. DOE estimated that this much uranium could make at least four or five nuclear weapons. Although investigations were conducted, the uranium was never accounted for.

The Federal Government has generally remained silent about the incident. Information that has become known over the years has been vague and inconsistent. With the current high interest in assuring adequate safeguards over nuclear materials, speculation about the incident has surfaced again. Many allegations concerning the unaccounted for material and the NUMEC facility have been made in newspaper and magazine articles and at congressional hearings. These allegations include:

--The material was illegally diverted to Israel by NUMEC management for use in nuclear weapons.

--The material was diverted to Israel by NUMEC management with the assistance of the Central Intelligence Agency (CIA).

--The material was diverted to Israel with the acquiescence of the United States Government.

--There has been a cover-up of the NUMEC incident by the United States Government.

1/The Atomic Energy Commission (AEC) was formerly responsible for both regulating and promoting all nuclear activities in the United States. On January 19, 1975, it was split into the Nuclear Regulatory Commission (NRC) and the Energy Research and Development Administration (ERDA). NRC became responsible for nuclear regulation and ERDA became responsible for nuclear development and promotion. Under Public Law 95-91, ERDA's functions were placed in the Department of Energy effective October 1, 1977. NRC remained intact. Throughout the report, DOE is used to refer to the Department of Energy, ERDA, and AEC.

[redacted] Based on the totality of our inquiry, we believe that the allegations have not been fully or adequately answered.

Overall the nuclear safeguards systems in this country have been greatly improved as a result of the alleged NUMEC incident. Since the alleged incident occurred AEC and its succeeding agencies have placed much greater levels of control requirements on private nuclear facilities like NUMEC. There are many new requirements which include such measures as bimonthly inventory accounting, armed guards to protect unauthorized access to nuclear material and alarm systems designed to detect unauthorized movement of nuclear material. Nevertheless, two reports GAO recently issued 1/ cited major deficiencies in our domestic nuclear safeguards systems. These reports point out that there are thousands of pounds of weapons-grade material unaccounted for in this country today. This being the case, it is critical that the Government be prepared to quickly and effectively respond to allegations of loss of nuclear material to determine whether, when, where, and how it occurred.

The unresolved NUMEC incident raises questions on the U.S. capability to deal with unaccounted for nuclear materials. This report discusses, within the constraints of the data available to us, the scope and effectiveness of U.S. efforts to locate the unaccounted for uranium, and the implications the incident has for our current nuclear safeguards programs.

This report addresses two basic questions arising from the NUMEC incident.

--What information has been developed about the alleged NUMEC diversion?

--Were the investigations by the Federal Government into the alleged incident adequate?

With the amount of nuclear materials in this country increasing rapidly, the opportunities for diversion without

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1/EMD-76-3, "Shortcomings in the Systems Used to Protect and Control Highly Dangerous Nuclear Materials," dated July 22, 1976, and EMD-77-40, "Commercial Nuclear Fuel Facilities Need Better Security," dated May 2, 1977.

adequate safeguards can also increase. Consequently, answers to these questions are important in order to insure that current Federal capabilities exist to respond to real or suspected incidents of nuclear material diversion.

AGENCIES INVOLVED IN INVESTIGATING 1/ NUMEC

Originally, there were three agencies involved in gathering information on the incident. These were DOE, the Federal Bureau of Investigation (FBI), and the CIA. However, DOE and the FBI have begun new investigations of the incident. In February 1978 DOE began an investigation to determine what officials in the agency knew about the alleged diversion incident. In April of 1976, at the oral request of President Ford, the FBI opened an investigation of the NUMEC incident aimed at determining whether a diversion of nuclear material ever occurred at the facility. Both of these later investigations are still ongoing and we have not reviewed these reports.

There are also other Federal bodies that have developed a substantial amount of information on the incident. These are the former Joint Committee on Atomic Energy (JCAE), NRC and GAO. A staff member of the former JCAE compiled a lengthy record of the events and incidents surrounding the alleged diversion and wrote a report which was inconclusive about whether a diversion ever occurred at the NUMEC facility. The report was written in about 1967 or 1968. NRC issued a report on certain aspects of the NUMEC incident in March 1978. The NRC report, however, did not focus on the diversion question. It was aimed at what specific NRC officials knew about the alleged diversion incident. GAO issued a report to the former JCAE in June 1967 which focused primarily on NUMEC's accountability controls over nuclear material. In that report GAO said it found no evidence of diversion and after considering information available had no reason to question AEC's conclusion that while it could not be stated with certainty that diversion didn't take place, the survey team found no evidence to support the possibility.

GAO's current report focuses on the allegations and information developed since that time in attempting to answer the

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1/CIA officials informed GAO that they have no authority to conduct "investigations" of unaccounted for nuclear materials in the United States. As used in this report the term "investigation(s)" is used in the context of the entire Federal effort to resolve the incident.

questions of what information has been developed about the alleged diversion, and were the investigations done by the Federal Government adequate.

ACCESS TO RECORDS DIFFICULTIES

During our review, we were denied documents pertinent to the NUMEC incident by the FBI and the CIA. We repeatedly tried to obtain documents from these groups, but with no success. A written chronology of contacts with other Federal agencies was provided by the CIA, [redacted] The CIA did subsequently allow selected staff of Chairman Dingell's Subcommittee to review some CIA documents at CIA Headquarters. Access to these or any other CIA documents was not extended to include GAO. Further, the CIA did not cooperate with GAO in arranging some interviews with knowledgeable current and former CIA officials. This was significant since former CIA officials, although not required, can be expected to inform CIA before discussing their former activities with others. The FBI's rationale for denying GAO access to their documents was that the Bureau did not want to jeopardize its ongoing investigation of the alleged diversion incident.

These constraints made it impossible to obtain corroborating evidence for some of the report's contents. Nonetheless, we made every attempt to do so and, where it was not possible, we have so noted it in the report.

CHAPTER 2

WHAT INFORMATION HAS BEEN DEVELOPED ABOUT THE ALLEGED NUMEC DIVERSION?

Until the summer of 1977, the only publicized Government view on the NUMEC incident was that there was no evidence to indicate that a diversion of nuclear material had occurred.

[redacted]

We attempted to obtain all the information developed by the Government on this matter. We reviewed documents, reports, and studies made available to us. We also interviewed those individuals most involved with the incident and the subsequent investigations of it.

Based on our work, we cannot say whether or not there was a diversion of material from the NUMEC facility. Following is the information and views which we obtained from the three principal agencies involved in the alleged incident --DOE, FBI, and CIA.

DEPARTMENT OF ENERGY'S INVOLVEMENT WITH NUMEC INCIDENT

DOE records show that in December 1957, the NUMEC facility located in Apollo, Pennsylvania was licensed to possess enriched uranium for manufacturing nuclear fuel, recovering scrap, and conducting nuclear research and development. NUMEC obtained various forms of enriched uranium and other nuclear material from the United States Government and commercial sources. During the period 1957 through 1967, NUMEC received over 22 tons of uranium-235--the material used in the fabrication of nuclear weapons.

Until 1975 DOE was responsible for insuring that licensed commercial nuclear facilities such as NUMEC provided adequate safeguards and material control. DOE's records show that until June 1967 the policy for safeguarding nuclear materials relied primarily on the monetary value of the material. DOE believed that the financial penalties imposed upon licensees for the loss of or damage to nuclear material, and the criminal penalties provided by the Atomic Energy Act of 1954, would be sufficient to motivate licensees to adequately protect the material from loss, theft, or diversion. Material

accountability requirements, while written into licensee contracts and the Code of Federal Regulations, were more directed to health and safety concerns than in protecting nuclear material from theft or diversion. Our review of DOE records showed that at the time (1) there were no limits placed on the amount of unaccounted for nuclear materials, (2) facilities were required to inventory their nuclear materials only once a year, and (3) estimating inventories was a widespread practice at all nuclear facilities at that time. The elaborate material control and physical security measures in place at commercial nuclear facilities today were developed since 1967. Such measures were not present before then.

DOE officials told us that in the mid-1960s material accountability capabilities and methods were just being developed. As a result, uncertainty existed on the part of both the agency and the industry about nuclear material control standards and criteria. DOE officials and NUMEC's president told us that the situation at NUMEC was further complicated by the fact that NUMEC was involved in many unique first-of-a-kind nuclear projects.

DOE, pursuant to its regulatory responsibilities, conducted six accountability inspections at NUMEC--prior to the alleged 1965 incident--to assure that nuclear materials were being adequately protected. Each inspection revealed major deficiencies.

In April 1961 DOE conducted its first material control inspection and found "significant" deficiencies in the material accounting systems. During its second inspection in May 1962, DOE found that, although NUMEC had corrected some accounting deficiencies, it still did not follow practices necessary for the maintenance of adequate material control. During this inspection, the agency discovered that NUMEC was mixing nuclear material among various contracts--a practice that was expressly prohibited. According to DOE inspectors, such commingling made it difficult, if not impossible, to trace discrete batches of material through the plant and to determine how the material was being used.

DOE's next inspection in July and August of 1963 did not show much improvement, and revealed additional problems with the material accounting systems. In early 1964 another inspection was undertaken and more inadequacies were identified. DOE's records show that at this point, the agency became so concerned with the inadequate controls at the facility that it began considering whether to prevent NUMEC from receiving any additional nuclear materials. Later, in September of 1964, DOE attempted to take a physical inventory of the material held by NUMEC but could not do so since, in

the opinion of DOE investigators, NUMEC's records were so poor that they were unauditable. As a result, the inventory check was canceled.

In April of 1965, DOE began another inspection and, for the sixth consecutive time, found fundamental problems with NUMEC's ability to control material. The inspection report concluded that "safeguards control of [nuclear material] at NUMEC is inadequate." It was during this inspection that a large amount of highly enriched uranium was unaccounted for. The loss, initially identified as 53 kilograms (117 pounds) was later adjusted to 61 kilograms (134 pounds). This was about 2 to 3 times higher than was experienced by other similar facilities operating at that time.

Although DOE had made financial arrangements with NUMEC to insure payment for the loss, the highly significant safeguards implications of the loss sparked a lengthy investigation. The investigation which began in early November 1965 was aimed at (1) determining the exact total cumulative loss of highly enriched uranium at NUMEC since its startup in 1957 and (2) explaining the 134 pound loss under its most recent contract involving 93 percent enriched--weapons-grade--uranium.

The investigation lasted until mid-November 1965 and revealed a cumulative loss of 178 kilograms (392 pounds) of material. DOE was able to trace 186 pounds to waste and gas filters leading from the plant, but the remaining 206 pounds could not be accounted for.

The November 1965 investigation did not provide DOE with a conclusive answer as to what happened to the unaccounted for material. However, according to agency officials, enough information existed to develop a "theory" on the probable cause of the missing material. The "theory" developed by the DOE staff and accepted by top DOE officials was that through April 1965 NUMEC consistently underestimated its material losses from contract to contract. As each job was completed and NUMEC had to pay DOE for the actual losses sustained, the differences between the estimated and actual losses were passed on from completed jobs to new jobs. The theory concluded that these actions continued over the 8 years of the company's operations until April 1965 when, strictly by chance, only one contract was being processed at the facility, and it was possible for DOE to isolate the total cumulative material unaccounted for.

DOE documents showed that because of the poor condition of NUMEC's material accounting records, it was not possible to establish when the losses occurred or even whether the material was used to offset losses on previously completed

contracts. NUMEC's president contended that the nuclear material was not stolen or diverted but unavoidably "lost" in the processing system itself through adherence to the equipment and piping and amounts discarded as waste. Consequently, the DOE investigators concluded that DOE could not say, unequivocally, that the material was not stolen or diverted from the facility.

We learned from a discussion with a former DOE official, that in February 1966, DOE asked the FBI to determine whether a theft or diversion of the material had occurred. The DOE files contain a memorandum of discussion with the FBI. The memorandum stated that " * * * the Bureau had decided not to undertake an investigation at this time * * *" even though they were required to investigate such incidents under the Atomic Energy Act of 1954. Consequently, DOE continued its own. After examining the facility records, cleaning out processing equipment, searching some of the company's nuclear waste burial ground, and interviewing many key NUMEC employees, DOE was still unable to conclusively determine what happened to the material.

In 1966 NUMEC paid DOE $1.1 million for the missing 206 pounds of enriched uranium as required by NUMEC's contract, and the DOE investigation of the incident was, for all practical purposes, closed unresolved. The $1.1 million was paid partly from a $2,500,000 revolving credit note account that NUMEC arranged with the Mellon Bank. The balance was paid through the return to DOE of some nuclear material for which NUMEC was credited. Atlantic Richfield Corporation later purchased the facility in April 1967 and it is now owned by the Babcock and Wilcox Corporation who bought the facility in 1972.

Other information relevant to the NUMEC incident

We identified several occurrences from our review of DOE files and interviews with DOE officials, which impact on the NUMEC incident. We learned that:

--After the November 1965 investigation, NUMEC management hired one of DOE's on-site investigators who was an expert in material control and accountability. The investigator had responsibility for conducting a major part of the material control review at the facility.

--During a period of rising concern with unaccounted for material at NUMEC, some material accounting records were reported to DOE as being inadvertently destroyed

during a labor dispute at the facility in January-February 1964. According to a former head of DOE's nuclear material management group, and investigators from the FBI, the records might have affected DOE's ability to trace the material held by the facility.

--NUMEC mixed material among various contracts--a practice that was explicitly prohibited by DOE. According to DOE investigators, this practice made it very difficult, if not impossible, to track the material through the facility.

Further, DOE was concerned with the foreign interests and contacts maintained by NUMEC's president. DOE's records show that, while president, this individual had various high-level contacts with officials of the Government of Israel, both in that country and in the United States. The records also show that, for a time, he acted as a sales agent in the United States for the Defense Ministry of Israel. Also, while president of NUMEC, he had a 50-percent interest in a nuclear facility in Israel established for the purpose of radiation experimentation on various perishable commodities.

[redacted]

A principal field investigator for DOE at the time, told us that the sloppiness of NUMEC operations made it very conducive to a diversion. This investigator noted that on a visit to the facility in 1963 or 1964 he saw nuclear material deposited in the crevices of the stairwells and on the floor. However, of all DOE officials we interviewed, including a former Chairman and two former members of the Atomic Energy Commission, only one, a former DOE security expert, actually believed that a diversion of material occurred. According to this individual, who was not familiar with the material accounting practices established by DOE, his conclusion was based on inspections he conducted at NUMEC. He told us he visited NUMEC several times between 1962 and 1967 to conduct physical security inspections for DOE. He said that in an inspection report dated February 10 and 11, 1966, he noted that a large shipment of highly enriched uranium was made to France roughly equivalent to the material identified as missing in DOE's November 1965 inspection--100 kilograms. According to him, the circumstances at the facility were such that it would have been relatively easy to ship highly enriched (weapons-grade) uranium to another country instead of low enriched uranium since the enriched uranium storage system at NUMEC did

not clearly distinguish between weapons-grade and nonweapons-grade material.

Current DOE officials informed us, however, that while the United States did not make independent verification of the shipments being dispatched to a foreign country, at the time of the NUMEC incident, it did conduct safeguards inspections as provided in bilateral agreements for cooperation with various countries. According to DOE, inspections in this particular foreign country were conducted to account for enriched uranium shipped from the United States. DOE officials told us that two of these inspections were conducted which identified material in the form, enrichment level, and approximate quantity shown in the U.S. (NUMEC) transfer documents.

The former DOE security inspector also said that the entire security program at NUMEC was very bad and that, to a large extent, contributed to his concern that the missing material at NUMEC had been diverted. Two other former security officials at DOE concurred in this latter point. These three individuals agreed that, based on their knowledge and experience with the NUMEC facility, it was very possible that the material unaccounted for from NUMEC could have been diverted. One of these security officials told us that NUMEC's security program was widely "disrespected" among the DOE investigative staff. However, none of these individuals were able to provide us with any direct evidence that would support the view that a diversion of material had occurred. Further, DOE records show that of the 37 NUMEC employees interviewed by DOE in 1966, none believed that a diversion of nuclear material had occurred.

In 1975 NRC was made responsible for the regulatory oversight of commercial nuclear facilities like NUMEC, and consequently has become involved in the incident. In a February 1978 report related to the NUMEC incident, NRC concluded that their previous official position of "no evidence" to support a diversion may need to be reconsidered, in light of the many uncertainties surrounding the incident. Included in that report is a letter from the Chairman, NRC to the Chairman of the Committee on Interior and Insular Affairs, concluding that "* * * for regulatory purposes we must assume the circumstances [surrounding NUMEC] were such that a diversion could have occurred, and we must construct our safeguards requirements accordingly."

FEDERAL BUREAU OF INVESTIGATION'S INVOLVEMENT WITH NUMEC INCIDENT

The FBI is responsible for gathering domestic intelligence on activities affecting the national security of the

United States. It is also responsible for investigating all alleged or suspected criminal violations of the Atomic Energy Act of 1954 including the theft or diversion of nuclear material. In this role the Bureau has initiated three investigations involving NUMEC with one still ongoing.

Our efforts to obtain and evaluate the information collected by the FBI on the NUMEC matter were repeatedly denied by the Department of Justice. The Department of Justice told us that since their latest investigation was still underway they could not give us any documentation related to the NUMEC incident. The denial included information developed as part of Justice's prior two investigations. This position was formally communicated to the Comptroller General of the United States from the Attorney General in a letter dated February 8, 1978. (See Appendix V for a copy of this letter.)

The FBI did, however, brief us twice and responded to several follow-up inquiries. We also contacted 12 former and current officials of the Department of Justice and the Bureau including the current Attorney General and two former Attorneys General. (Appendix I contains a summary of the individuals we contacted during our review.)

Our first briefing by the FBI was provided by the agent-in-charge and two other FBI representatives on October 6, 1977. The briefing covered all FBI investigations related to NUMEC. We received a follow-up briefing on December 14, 1977, in order to clarify some of the information we had obtained earlier. This briefing was provided by a new FBI agent-in-charge since the former one was transferred off the case shortly after our October 1977 briefing.

We were informed at these briefings that in June of 1965, the FBI was asked by DOE to investigate the possibility that NUMEC's president might need to register his activities in the United States under the Foreign Agent Registration Act. DOE's specific concern stemmed from the individual's associations with Israeli officials. According to information we received at the October 1977 briefing, NUMEC's president's capacity as sales agent for the Ministry of Defense of Israel was of particular concern to DOE.

At the October 1977 briefing, we were told that the FBI began the investigation in August of 1965. In October of 1966, after 14 months of effort, it reported that NUMEC's president did not have to register as a foreign agent since NUMEC's activities with Israel were conducted under applicable U.S. laws and regulations. Further, according to the Department of Justice, the business activities established between Israel and NUMEC were all found to be legitimate.

In a letter to the Director of the FBI dated February 17, 1966, DOE asked the Bureau to investigate the suspected diversion of nuclear material from the NUMEC plant. FBI responded on February 25, 1966, stating that it "decided not to undertake this investigation at this time." According to the former FBI agent in charge of the current investigation, the reason for the decision was that in DOE's discussions with the Bureau, DOE presented a convincing case that there was no diversion at the facility. However, we were informed by a former Executive Director of the Joint Committee on Atomic Energy, that the reason the Bureau did not want to get involved was twofold: (1) the Bureau did not think that a diversion occurred based on the presentation provided by DOE, and (2) it simply did not like conducting investigations involving unaccounted for nuclear materials.

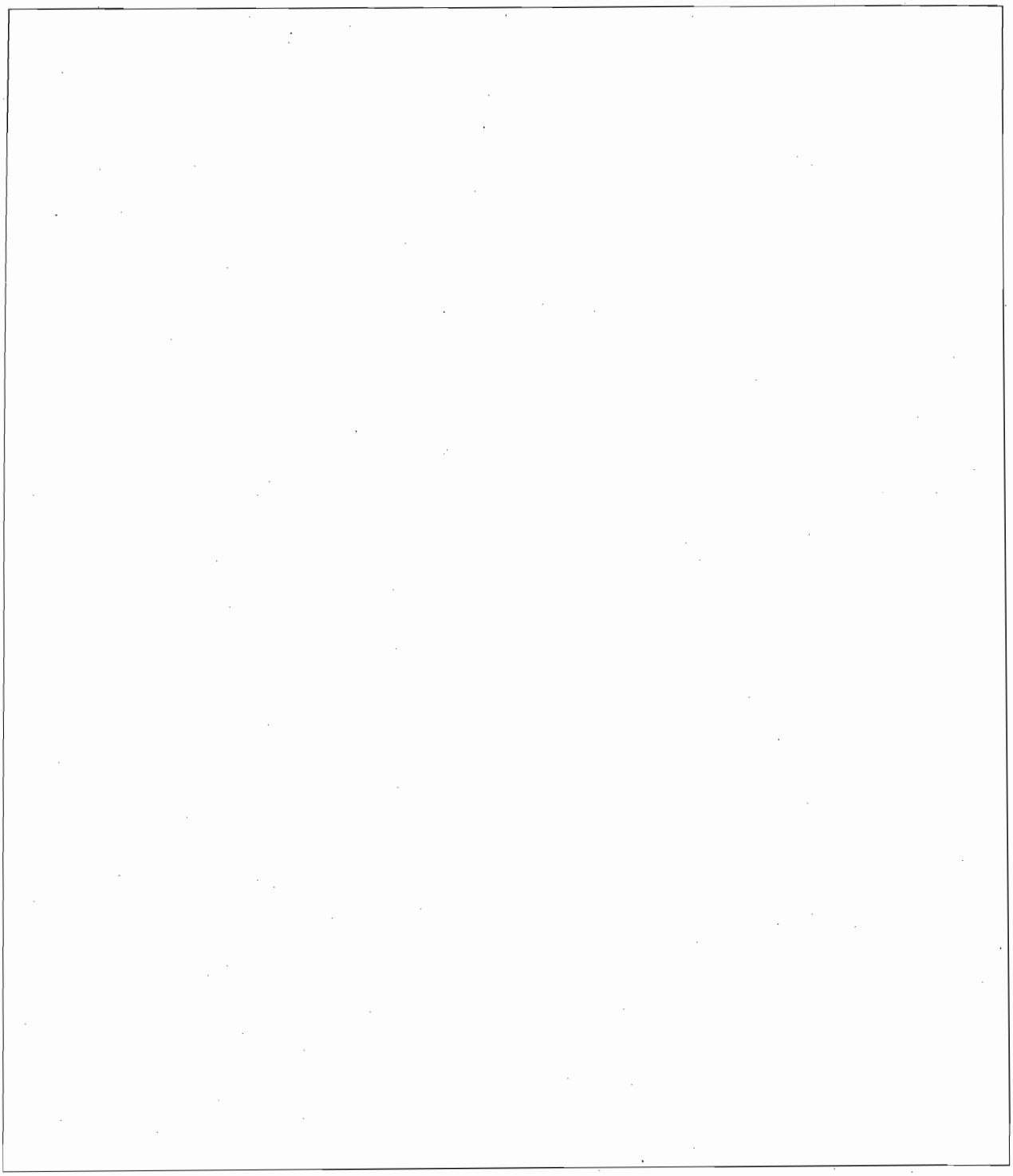
At the two FBI briefings, we were provided with information the FBI had developed on the background, associations, and business activities of NUMEC's president with Israeli government officials, agents, and citizens. According to the FBI agents giving the briefings, the information developed, while circumstantial in nature, raised serious questions concerning the national security risks posed by NUMEC's president.

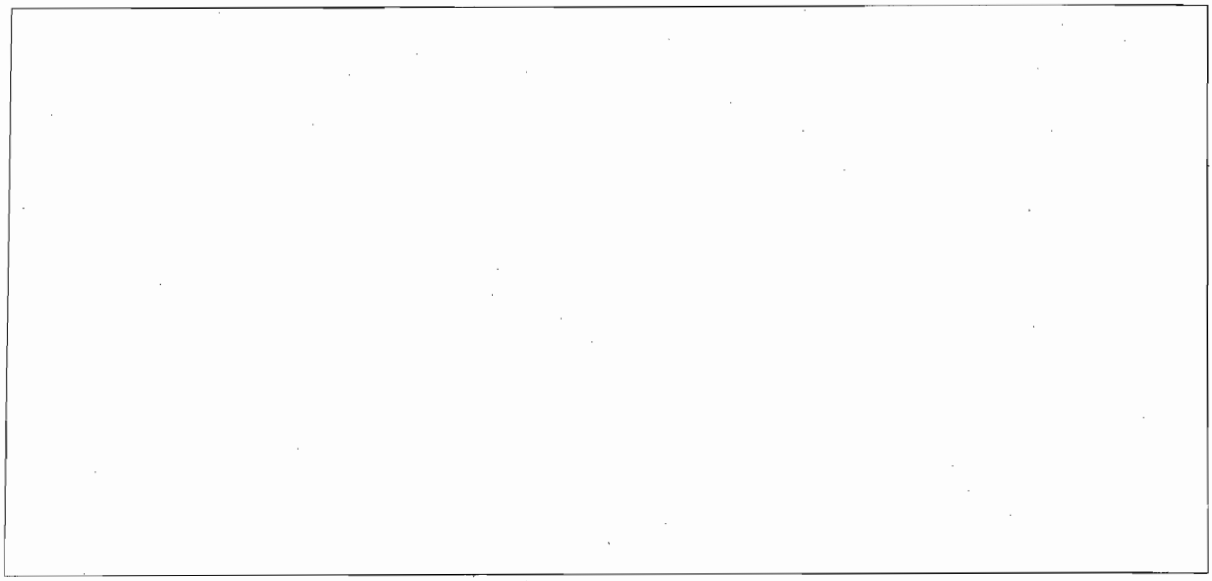
In reviewing DOE files, we found that during the FBI's surveillance activities, the FBI became so concerned about the security risks posed by NUMEC's president that they asked DOE whether it planned to terminate his security clearance or stop the flow of nuclear materials to NUMEC. According to the FBI's liaison with GAO, the FBI recommended that NUMEC's operating license be taken away.

DOE files also show that in early 1969 the FBI briefed President Nixon on the questionable activities of NUMEC's president. The files further show that top level Government concern about the security risks posed by the president of NUMEC continued until 1971. We were told by a former Deputy Director of Security at DOE that in 1971 a former Commissioner of AEC aided the NUMEC official in obtaining employment with Westinghouse Electric Corporation, where he would have no need for access to national security information. The former Deputy Director of Security said he helped the former Commissioner in obtaining such employment for NUMEC's president. The former Commissioner declined to comment to us on this matter. We believe this is particularly important since we were informed by the president of NUMEC that he may attempt to obtain employment in an area which will involve a top secret clearance. If this should occur, the question of his obtaining a security clearance may surface again.

In the FBI briefing on December 14, 1977, we were told by the current FBI agent in charge of the investigation, that no additional surveillance activities or investigations of any kind were undertaken by the FBI concerning NUMEC from September 1969 until April of 1976, when ordered to do so by President Ford. A Department of Justice staff attorney assigned to the case later confirmed this. He told us that the FBI's current investigation was the direct result of a request to the then Attorney General by President Ford in April 1976. According to the Justice staff attorney it was at that time President Ford asked the FBI to investigate the possibility that weapons-grade materials might have been diverted from the NUMEC facility to Israel. GAO was not furnished any documents regarding President Ford's request and thus could not specifically determine its nature and scope.

We were told by both the former and current FBI agents involved in the investigation that, during all the FBI's investigations into NUMEC, it did not obtain any information conclusively showing that a diversion of nuclear material occurred at NUMEC.



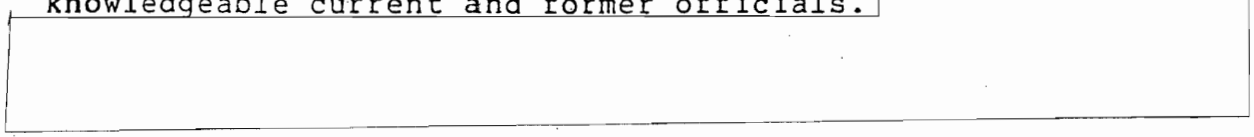


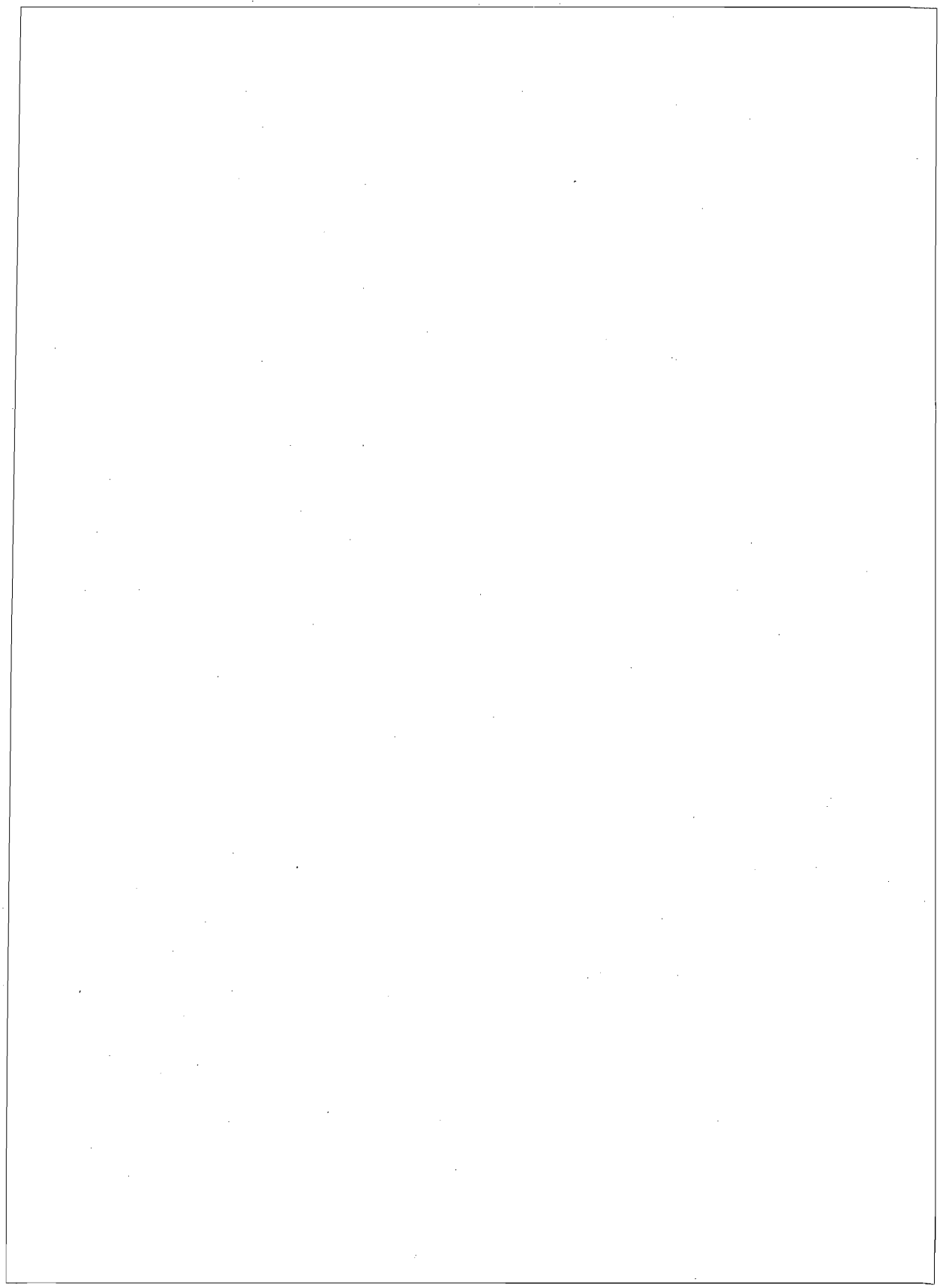
The FBI is currently preparing a report on its most recent investigation. FBI agents involved in the current investigation told us that while there exists circumstantial information which could lead an individual to conclude that a diversion had occurred, there is no substantive proof of a diversion. The report was submitted to the Attorney General on February 16, 1978. However, a staff lawyer in the Internal Security Section at the Department of Justice, informed us on May 25, 1978, that there were still several items the FBI had to cover in its report before the Justice Department would accept it. Currently, the FBI is still investigating the alleged NUMEC incident.

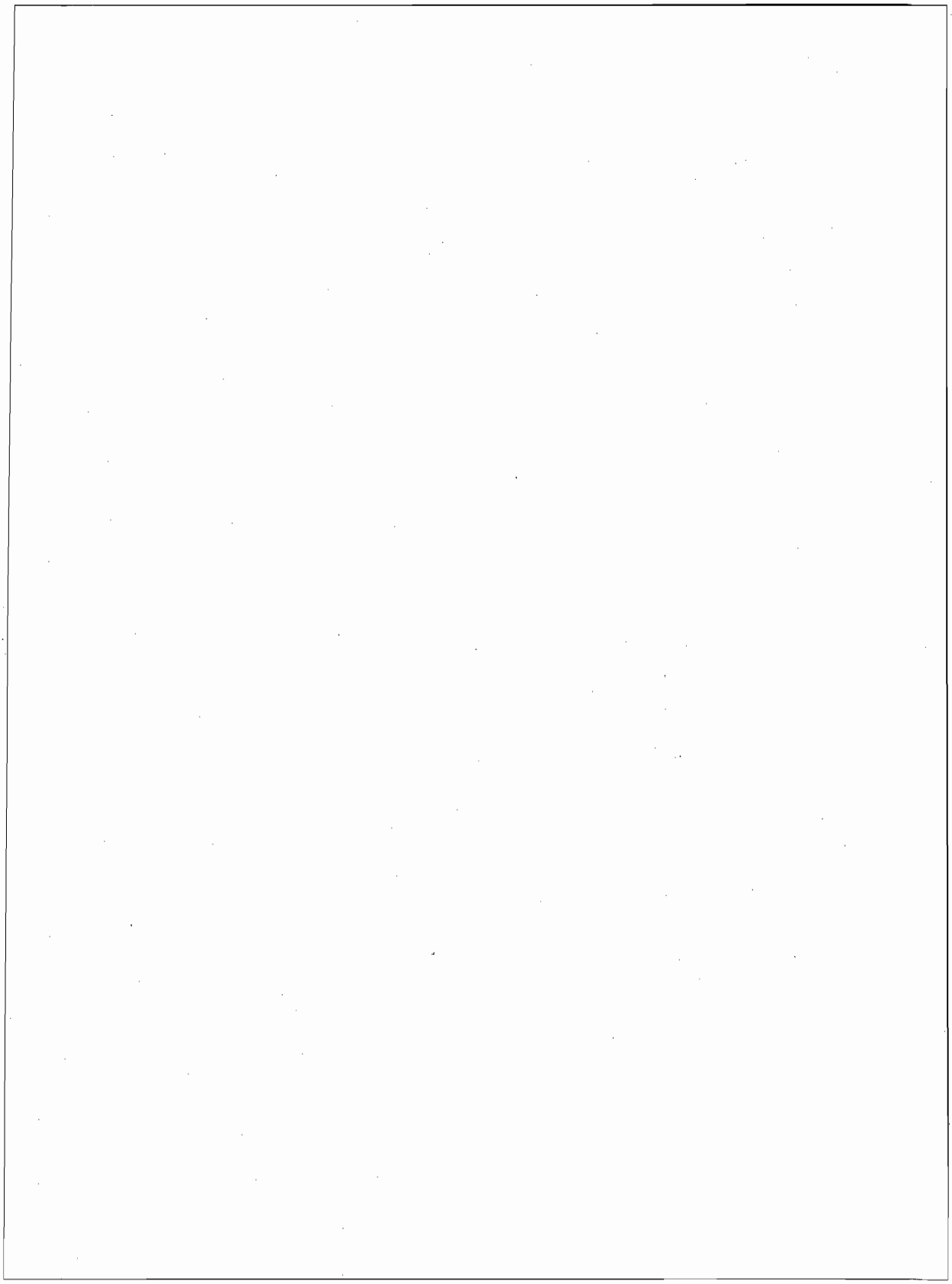
CENTRAL INTELLIGENCE AGENCY'S INVOLVEMENT WITH NUMEC INCIDENT

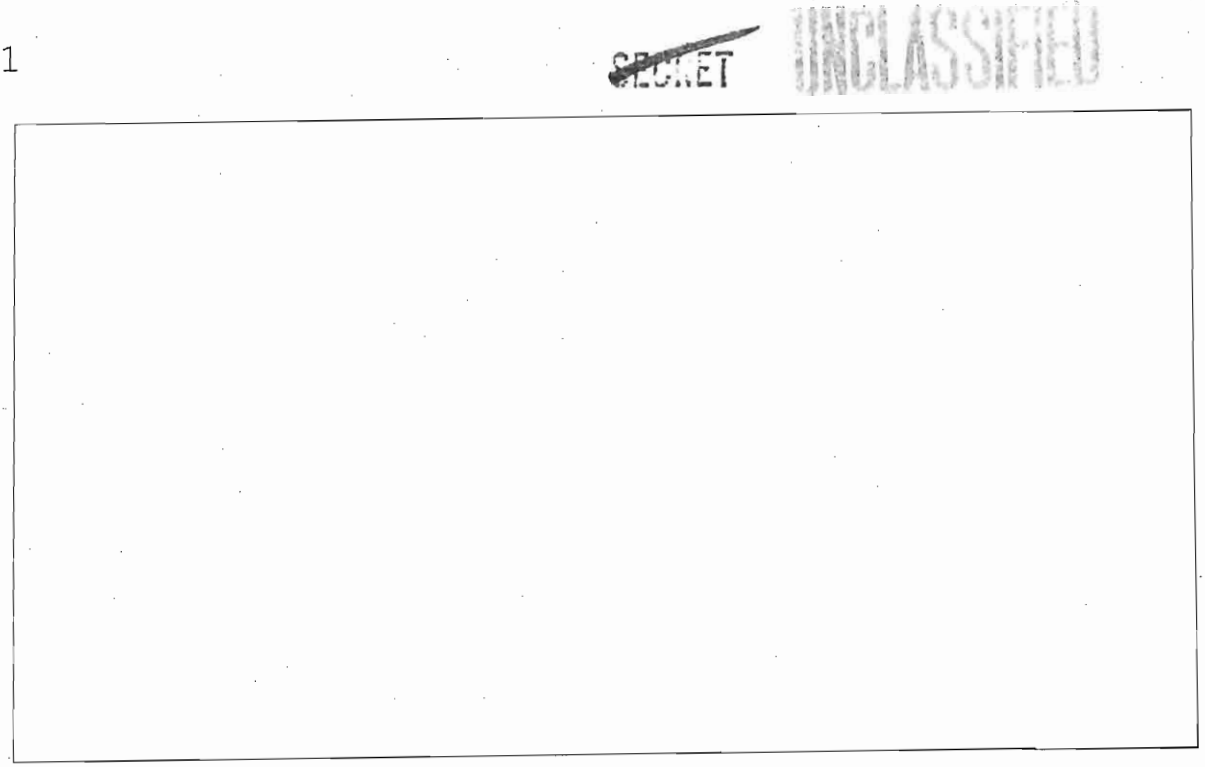
On August 29, 1977, we met with the CIA for a briefing on their knowledge of and involvement in the alleged NUMEC incident. Subsequently, we had several follow-up discussions with CIA representatives on the matter. We contacted 11 former and current CIA employees. However, as we got further into our review, the CIA blocked our efforts to continue. While the CIA did provide selected staff members of Chairman Dingell's House Subcommittee on Energy and Power with the opportunity to review at CIA Headquarters some documentation on their knowledge of the NUMEC incident,

Furthermore, the CIA did not cooperate with us in arranging interviews with knowledgeable current and former officials.









Moreover, in November 1977 the CIA refused to assist us in contacting former or present CIA employees having knowledge of the incident. At one point we attempted to discuss a particular CIA briefing with a former Chairman of NRC who had participated in the briefing. However, since the discussion would have involved CIA information, the former NRC Chairman wanted prior approval from the CIA. We attempted to obtain the necessary approval from the CIA but were informed that this request could not be honored due to the Director's decision to work solely with Chairman Dingell's Subcommittee on this investigation.

CHAPTER 3

WERE THE INVESTIGATIONS BY THE FEDERAL GOVERNMENT INTO THE ALLEGED INCIDENT ADEQUATE?

If a diversion or theft of nuclear material is suspected or actually occurs in this country, the Federal Government must be able to quickly and definitively determine how and why it happened so that the public can be protected against the potential hazards of such an occurrence. To do this, agencies of the Federal Government with capabilities for investigating and responding to suspected diversion incidents must work together. This did not happen with NUMEC. Whether a diversion(s) ever occurred at NUMEC still remains unanswered. What can be said, however, is that the Federal investigations of the matter were uncoordinated, limited in scope and timeliness, and in our opinion less than adequate.

DEPARTMENT OF ENERGY

We believe certain DOE actions prior to and after the alleged NUMEC diversion(s), raise questions on the adequacy of DOE's implementation of its regulatory responsibilities and its investigation of NUMEC. DOE did not take corrective action against the NUMEC facility prior to the alleged incident, even though DOE inspections revealed repeated NUMEC material accountability and physical security deficiencies. DOE's investigation of NUMEC omitted one potentially significant avenue of investigation, i.e. that the unaccounted for material could have been erroneously shipped to another country. Also, recognizing DOE's dual role for promotional and regulatory responsibilities over nuclear activities, its investigation of NUMEC cannot be considered truly independent. Prior to January 1975, DOE was responsible for regulating nuclear materials as well as promoting the use and development of nuclear energy in the United States. Consequently, a discovery that a large amount of weapons-grade material could have been diverted from a U.S. facility would have been embarrassing to DOE and detrimental to its promotional responsibilities. Congress recognized these conflicting DOE roles and split DOE's regulatory aspects from its promotional role effective January 19, 1975.

From the time NUMEC was licensed in 1957 until the missing material was identified in April 1965, every accountability inspection conducted at NUMEC by DOE found significant weaknesses in NUMEC's accountability over nuclear material.

In view of the problems DOE was experiencing with NUMEC and investigations which were conducted, the FBI's liaison

with GAO and a former Executive Director of the JCAE, told us that the FBI and the JCAE recommended to DOE that NUMEC's license be taken away and that it be prohibited from receiving additional nuclear materials. However, they could not recall when or how these recommendations were communicated to the agency. (We were unable to find any record of these communications.) Further, in a letter to DOE on July 26, 1965, a DOE official who played a key role in the investigation of the NUMEC facility, wrote

> "* * * if it were within my province to do so I would, * * * stop all further deliveries of enriched uranium to NUMEC until such time as they had straightened out their procedures and had satisfactorily accounted for all enriched uranium entrusted to them to date."

We found no indications that DOE took corrective action against NUMEC based on these recommendations.

DOE's reluctance to take action against the facility in light of continuing material control problems is questionable. In some informal notes we obtained from DOE's files, a former DOE official in charge of DOE's overall investigation of NUMEC, admitted the agency did not know whether the material had been stolen or diverted. Yet the facility was not ordered to cease operations, and it continued to obtain nuclear material contracts. According to this official, who was a former DOE Assistant General Manager, there was "no good answer" as to why these conditions were allowed to persist over the years of NUMEC's operation.

DOE's handling of physical security inspection reports on the NUMEC facility by top DOE security officials also raises some concern. Two former DOE security inspectors told us on March 31 and April 3, 1978, that during most of the 1960s, including the period of the alleged NUMEC incident, DOE's Division of Security would not issue an "unsatisfactory" security report on a nuclear facility. According to these inspectors the security reports had to be written in a certain manner in order to be approved by the top security official at DOE, the Director of Security. For example, one security inspection report on the NUMEC facility conducted on February 10 and 11, 1966, noted two "principal" and several "minor" security deficiencies at the facility. The deficiencies were significant enough to prompt the Director of Security to visit the NUMEC plant to discuss the problems with facility management. The two former security inspectors told us, however, that the conclusion in the inspection report did not represent the actual findings. The report concluded: "During the course of the inspection several deficiencies were discovered though not sufficient

to seriously detract from the otherwise satisfactory aspects of the security program * * *." However, three former DOE security investigators, including the former Deputy and Assistant Directors of Security, told us that the entire NUMEC security program was inadequate.

We were unable to discuss this matter with the former Director of Security due to his current ill health.

We were told by the former DOE security inspector for the NUMEC facility that during the February 1966 physical security inspection at NUMEC he identified some unusual circumstances regarding the control of nuclear material held by NUMEC. Although this individual was not familiar with the material accounting practices, the circumstances led him to believe that an amount of highly enriched uranium about equal to the amount unaccounted for from the NUMEC facility might have been erroneously shipped to France. This former inspector became so concerned about the matter that he attempted to report it to the former Director of Security upon returning from the inspection. However, according to this individual and his former supervisor, the Director of Security told him to "get out of his office" and not pursue the matter any further. According to both these individuals, the entire matter was suppressed and was never considered by top DOE security officials. According to DOE officials, as it later developed an authorized shipment of highly enriched uranium was sent to France and was identified by DOE inspectors as being in that country.

Since NUMEC was both a DOE contractor and a licensee, the facility's nuclear activities were split between DOE's conflicting regulatory and promotional responsibilities. These conflicting responsibilities may have affected DOE's conclusion about the alleged diversion incident. DOE developed a "theory" about what happened to the material, even though DOE had no conclusive information showing that a diversion did or did not occur at the NUMEC plant. Moreover, at a top level staff meeting on February 14, 1966, a former Assistant General Manager of AEC advised the members of the former AEC that:

> "* * * it would be theoretically possible to ship material abroad in excess of the amounts indicated in the company's records." And that "* * * the AEC material accountability system might not reveal a deliberate and systematic attempt to divert material * * *."

Further, 3 days after AEC was advised of the possibility of a diversion, they briefed the FBI and, according to the former agent in charge of the investigation, presented a convincing

case that there was no diversion or theft of material from the NUMEC facility.

FEDERAL BUREAU OF INVESTIGATION

Our evaluation of the FBI's investigation of NUMEC was blocked by the FBI's denial to provide us with supporting documentation. However, based on our interviews with FBI and Department of Justice officials, we believe that: (1) the FBI's investigations of the incident were untimely; and (2) the scope of the investigation was limited.

From August 1965 to September 1969, the FBI developed a substantial amount of information on the actions and associates of NUMEC's president. However, it was not until April of 1976 that the FBI began to investigate whether there was a diversion of material at the NUMEC plant--about 11 years after DOE's investigation of the incident.

On February 17, 1966, DOE staff met with the FBI to discuss the incident and requested them to investigate the matter. The FBI is required by the Atomic Energy Act of 1954 to investigate all alleged or suspected criminal violations of the act. A diversion of nuclear material is a criminal violation of the act; however, on February 25, 1966, the FBI informed DOE that it would not undertake an investigation of the incident. The question of diversion was not addressed by the Bureau again until 1976. The former agent in charge of the investigation stated that since such a long period of time had elapsed since the alleged incident occurred it was very doubtful whether the FBI would be able to develop any evidence that would resolve the incident.

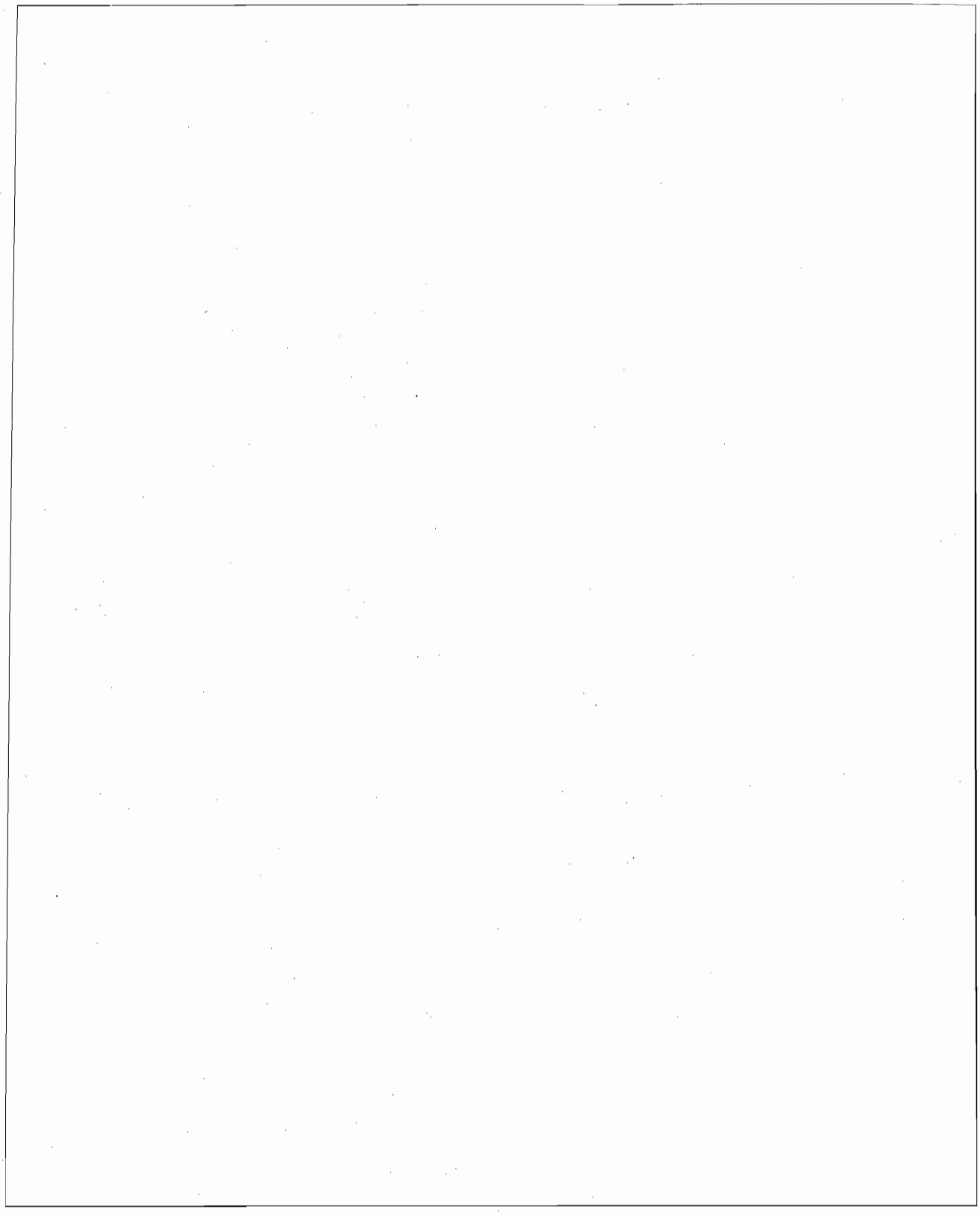
During our review we found that the scope of the FBI's current investigation appeared limited since they had not interviewed at least eight key officials about their knowledge of the NUMEC incident. These included a Chairman of the former AEC during the NUMEC incident; the loan officer at the Mellon Bank who approved the loan to NUMEC; a key DOE staff member responsible for material control investigations at NUMEC; and the chief DOE field investigator for NUMEC. These officials told us that the FBI never interviewed them about the NUMEC incident. DOE's chief field investigator, told us that they could not understand why the FBI had never discussed the matter with them

In the FBI briefing we received on October 6, 1977, we learned of another limitation in the scope of the FBI's current investigation. The former agent in charge of the FBI's investigation told us that the FBI did not investigate the source of funds for NUMEC's payment for the missing nuclear material. Although he saw this as an important aspect of the investigation--since NUMEC's financial position did not appear to support such a loan--it was not pursued because the FBI anticipated legal difficulties in getting the appropriate bank records. However, we obtained much of the data simply by requesting it from the responsible bank official over the telephone. Although the information we obtained did not reveal any peculiarities in NUMEC's financial dealings, it did serve to further demonstrate the limited scope of the FBI's investigation of the incident.

The FBI's efforts to effectively investigate the incident have also been impeded by its lack of technical expertise in dealing with nuclear facilities such as NUMEC. This is particularly significant since the Atomic Energy Act requires that the FBI investigate such occurrences. According to the former agent in charge of the investigation at the FBI, the FBI is not competent to do the type of investigation needed to determine the causes of unaccounted for nuclear material without expert assistance. Consequently, he did not think the FBI could ever conduct effective diversion-type investigations without relying heavily on DOE or NRC for technical assistance and guidance.

CENTRAL INTELLIGENCE AGENCY

From interviews with a former CIA official and with former and current officials and staff of DOE and the FBI we concluded that the CIA did not fully cooperate with DOE or the FBI in attempting to resolve the NUMEC matter. Although CIA officials told us that they believe they did fully cooperate with DOE and the FBI, it appears to us that the CIA was reluctant to provide information



CHAPTER 4

OBSERVATIONS, CONCLUSIONS, AND RECOMMENDATIONS

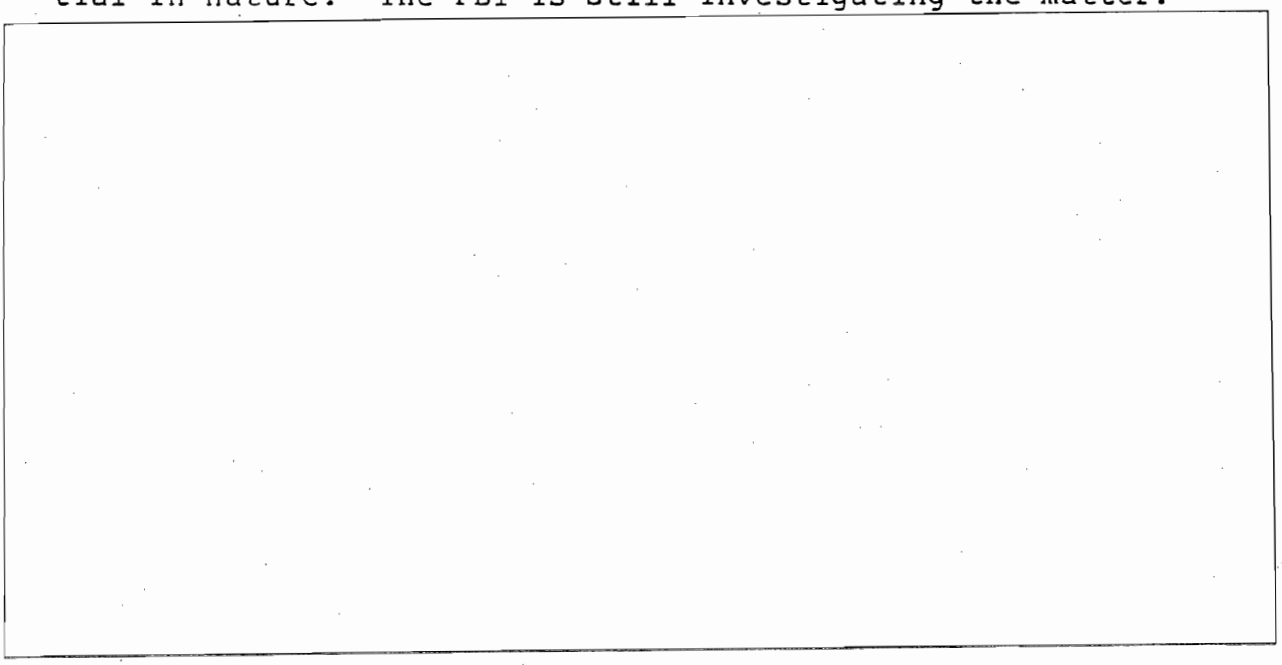
WHETHER A DIVERSION OCCURRED AT NUMEC REMAINS TO BE ANSWERED

Although large amounts of circumstantial information have been developed by DOE, the FBI, and the CIA on this incident, these agencies did not provide any information, nor did we independently identify any, that would conclusively show that a diversion of material occurred at the NUMEC facility. Consequently, whether or not such an incident occurred is still debatable.

DOE has taken the position that it has no conclusive evidence that a diversion of nuclear material ever occurred at the NUMEC facility, although it cannot deny such a possibility.

DOE supports the theory that the nuclear material unaccounted for from NUMEC was caused by inadequate inventory management. All current and former DOE officials we interviewed, except one, agreed with this theory. On the other hand, many of these same officials also agreed that the facility was sufficiently unable to control its nuclear materials so that a diversion could have been carried out.

FBI agents involved in the investigation believe that there is a substantial amount of information which tends to support the diversion theory. However, it is circumstantial in nature. The FBI is still investigating the matter.



[redacted]

NRC, in a February 1978 report related to the NUMEC incident, concluded that their previous official position of "no evidence" to support a diversion may need to be reconsidered in light of the many uncertainties surrounding the incident.

DOE stated that it had no evidence to indicate that a diversion of nuclear material had occurred. We believe that the agency could have been much more tentative in its conclusions on the matter, instead of informing the public and Government officials that there was no need for concern about a possible diversion of weapons-grade material from the NUMEC facility.

[redacted]

FEDERAL MECHANISMS TO COORDINATE INVESTIGATIONS OF MISSING NUCLEAR MATERIAL ARE LACKING

It is essential that the nuclear safeguards systems employed by the United States be continually monitored and improved as weaknesses in it are identified. Overall, the safeguards systems in this country have been greatly improved as a result of the alleged NUMEC incident. Since the alleged incident occurred AEC and its succeeding agencies have placed much greater levels of control requirements on private nuclear facilities like NUMEC. There are many new requirements which include such measures as bimonthly inventory accounting, armed guards to prevent unauthorized access to nuclear material and alarm systems designed to detect unauthorized movement of nuclear material. Nevertheless, two recent GAO reports pointed out significant shortcomings in the ability of Government and commercial nuclear facilities to adequately monitor and control nuclear materials with current accountability systems. These reports pointed out that due to limitations in the state-of-the-art of measurement instrumentation, diversions of nuclear material from a U.S. facility can still occur and would probably not be discovered in a timely manner.

The NUMEC incident and its associated 13-year investigation highlight this country's current inability to effectively deal with possible diversions of nuclear material. The combined capabilities of DOE, FBI, and CIA were never directed at all the factors involved in the alleged diversion. The institutional barriers existing among these agencies may have prevented it. Each agency did "its own thing," to the detriment of a unified, comprehensive investigation. A formal coordinated interagency plan agreed upon plan is needed to focus the combined capabilities of these agencies in a more timely and effective manner. The agreed upon plan should focus on (1) an adequate detection and investigative system and (2) a reporting system to the appropriate congressional committees and to the President. As a result, if a similar incident were to occur today, this country may not be assured of any better investigation. The United States needs to improve its efforts for effectively responding to and investigating incidents of missing or unaccounted for weapons-grade nuclear materials. In view of increasing terrorist activities throughout the world, the ability to respond and investigate such incidents should be of concern to national security and the public health and safety. We believe a timely, concerted effort on the part of these three agencies would have greatly aided and possibly solved the NUMEC diversion questions, if they desired to do so.

While incidents of unaccounted for material have been experienced in the past, there has not been another incident involving public allegations such as those at NUMEC. We believe this can possibly be attributed to the increased emphasis the Government has placed on protective measures against diversions or thefts but it may also be due to a little good luck in that people may have not tried to do it.

RECOMMENDATIONS TO THE HEADS OF AGENCIES

GAO recommends that the heads of DOE, NRC, the Department of Justice, and the CIA, as part of their responsibilities for the national security of the country establish a plan for coordinated interagency action which focuses on a nuclear safeguards system that adequately detects, investigates, and reports to the Congress and the President on thefts or diversions of nuclear materials. The plan which should be submitted to the Congress within 90 days or less of the issuance of this report, should include

--a formal means for a timely determination of whether a loss has occurred;

--a clear and direct channel of communications between the agencies;

--a formal means for rapidly focusing the abilities of these agencies on the resolution of a diversion incident; and

--a means for allowing any incident involving the theft or diversion of nuclear material to be definitely resolved to the satisfaction of the Congress and the President.

We also recommend that the Attorney General, working with the FBI, take the lead in establishing the interagency plan since the FBI, under the Atomic Energy Act of 1954, is responsible for investigating incidents involving the diversion or theft of nuclear materials.

RECOMMENDATION TO THE CONGRESS

The committees of Congress having jurisdiction for domestic nuclear safeguards should

--review the nuclear safeguards plan to be submitted by the Executive Branch to assure that an adequate system is developed which deters and investigates thefts or diversions of nuclear materials.

--request that the FBI and DOE's Office of Inspector General complete their investigations of the NUMEC incident as soon as possible and submit their reports to the committees.

These reports should be reviewed to determine the adequacy of the investigations and their implications for developing a more effective future system.

The committees should note that with the passage of time it is difficult to conclusively determine what specifically happened at NUMEC. However, the important point to remember is that we should use this lesson and make certain that the Nation develops an adequate detection and follow-up system to deter future nuclear thefts or diversion.

AGENCY COMMENTS

DOE's comments on the report are contained in a letter dated July 25, 1978. (See appendix II.) DOE agreed with the thrust of the report. However, it disagreed with our recommendation concerning the need to enter into a formal interagency agreement with NRC, the FBI, and the CIA for more timely and effective action in investigating incidents of suspected or real diversions of nuclear materials. DOE states in its letter that a comprehensive plan and a memorandum of

understanding with the FBI already existed for joint responses to nuclear threat situations. Further, DOE stated that it has open channels of communication to other agencies, including the CIA, for the exchange of information pertinent to nuclear threat situations.

These factors were known to us and are commendable. The current memorandum of understanding between DOE and the FBI is the beginning of an effective response plan to incidents of nuclear diversion, but it is inadequate since it does not include CIA participation and cooperation. Without a formal interagency agreement placing positive reporting and investigative responsibilities on DOE, NRC, FBI, and the CIA along the lines recommended by GAO, we believe the possibility exists for a repetition of the 13-year NUMEC investigation.

The comments received from the CIA are contained in a letter dated September 1, 1978. (See appendix III.) The letter takes no issue with the facts or recommendations included in the report. It does, however, point out some CIA concerns about certain information in the report.

We believe that the CIA's concerns have been adequately addressed in the report. However, we did not specifically address the CIA's concerns regarding its degree of cooperation with DOE and the FBI on the alleged NUMEC incident.

In its letter the CIA disagreed with the statement in the report indicating that they failed to cooperate with DOE and the FBI. The CIA based the disagreement on the fact that its officials briefed a large number of officials in the executive and legislative branches of Government on the NUMEC matter in 1976 and 1977.

We were aware that such briefings were provided. However, we believe that since the briefings were provided 4 to 6 years after some of the key information was developed their utility in helping to resolve the NUMEC matter was greatly diminished.

[redacted]

The Department of Justice and the FBI did not furnish formal written comments. We provided them more than 3 months to do so, a time period longer than that provided DOE, CIA, and NRC. While we did not have the benefit of official

written comments from the Department of Justice and the FBI in preparing the final report, we did consider the views and comments of the FBI staff familiar with the alleged NUMEC incident.

NRC had no comment on the content of the report. However, the Commission did state that the recommendations to the Heads of Agencies appears reasonable. (See appendix IV.)

CHAPTER 5

SCOPE OF REVIEW

We obtained the information contained in this report by reviewing documents, reports, correspondence, and other records of the former AEC and ERDA, and DOE and NRC. We also interviewed officials at

--DOE headquarters, Washington, D.C., and Germantown, Maryland;

--CIA headquarters, Langley, Virginia;

--FBI headquarters, Washington, D.C.;

--NRC headquarters, Bethesda, Maryland; and

--many other locations across the country.

Because we were unable to obtain source documents from some of the organizations involved in the matter, we conducted extensive interviews with former and current Government agency employees about their knowledge of the incident. We also interviewed people outside of the Government having an involvement with the NUMEC operation. Specifically, we contacted 42 former and current employees of DOE and NRC. We contacted 12 former and current officials of the Department of Justice and the FBI, 11 from the CIA, and 20 other individuals, including 7 people that formerly worked at NUMEC. Our interviews were with those most knowledgeable of the incident at all levels of these organizations, including the former Chairman of AEC, two former Attorneys General of the United States, the president of NUMEC, former and current presidential aides, and FBI/CIA/DOE investigators. (See appendix I for a summary listing of individuals contacted during our review.)

We believe we conducted the most thorough and complete investigation possible under the severe limitations imposed on us by several Federal agencies.

SUMMARY LIST OF INDIVIDUALS

CONTACTED IN PREPARING REPORT

AEC/ERDA/DOE

1 former Chairman, AEC
2 former Commissioners, AEC
14 former staff members, AEC/ERDA
13 current staff members, DOE

CIA

Current Director
General Counsel
1 former Director
2 former Deputy Directors
6 current staff members

NRC

1 former Chairman
5 former staff members
6 current staff members

DOJ

Current Attorney General
2 former Attorneys General
3 staff attorneys

FBI

3 former agents
3 current agents

NUMEC

Former President of company
Former Vice President of company
Former Treasurer of company
Former Secretary of company
3 former employees

JCAE

2 former executive staff directors

Senate Select Intelligence Committee

1 current staff member

Others

6 former and current Presidential aides
2 staff members Pennsylvania Department of Revenue and Taxation
1 staff member U.S. Securities and Exchange Commission
1 official of Mellon Bank, Pittsburgh, Pennsylvania

APPENDIX II

Department of Energy
Washington, D.C. 20545

July 25, 1978

Mr. Monte Canfield, Jr., Director
Energy and Minerals Division
U. S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Canfield:

Thank you for the opportunity to review and comment on the GAO draft report entitled "Nuclear Diversion in the U.S. - 13 Years of Contradiction and Confusion."

In our July 21, 1978 meeting with Mr. J. Howard and other members of your staff, we discussed our comments and concerns with the draft report as written. As the result of our meeting, we understand that certain changes are to be made which will point out that DOE has made significant improvements in strengthening past safeguard policies and practices since 1965. We also understand that the report will be clarified in other respects consistent with our comments furnished under separate cover. However, we are concerned that the readers of the report and its recommendation might obtain an incorrect impression of DOE's ability to respond to threats or incidents of suspected or real theft or diversion of nuclear material (SNM).

DOE responds in a very timely and effective manner to terrorism threats and incidents of suspected or real diversions or thefts of nuclear materials in the U.S. We have a comprehensive plan and a memorandum of understanding with the FBI for joint responses to nuclear threat situations. We also have clear and open channels to other agencies such as the CIA and NRC for the exchange of information pertinent to potential nuclear theft, alleged black market incidents involving SNM, etc. Further, we have an arrangement with the FBI to provide formal in-service training for agents in the technical and scientific sophistications relevant to nuclear investigations. NRC has fully participated in this program. Also, we have briefed Congress in some detail on various aspects of our emergency preparedness and response program. Information on our emergency preparedness and response program, including our formal policies and procedures, continues to be available for review by your representatives.

APPENDIX II

Mr. Monte Canfield, Jr.

July 25, 1978

The thrust of the recommendations concerning investigation of threats was clarified during our discussion to apply to after-the-fact resolution of reasons for or causes of threat indications. It is proposed that these recommendations be restated to make clear that they are directed to agencies other than DOE and not to DOE or its ability to investigate and respond to threats or diversions of SNM in a timely and effective manner.

Sincerely,

Fred L. Hiser, Director
Division of GAO Liaison
Office of the Controller

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Central Intelligence Agency

Washington, D.C. 20505

APPENDIX III

1 September 1978

The Honorable Elmer Staats
Comptroller General of the United States
Washington, D.C.

Dear Elmer,

In the period August 1977 to August 1978 CIA was in sustained contact with the General Accounting Office (GAO) concerning its current investigation of nuclear materials unaccounted for from the facilities of the Nuclear Materials and Equipment Corporation (NUMEC) of Apollo, Pennsylvania. We believe that this dialogue has contributed to GAO's understanding of some of the key issues that are touched on in the GAO report titled, "Nuclear Diversion in the United States? Thirteen Years of Contradiction and Confusion." One needs to note, however, that the issues that have been of primary interest to GAO in its present investigation find their origins in a complex situation that first came to the attention of the United States Government in 1965. As a result, while it is agreed that the nuclear material that has been unaccounted for since 1965 is uranium-235, it is less clear, despite lengthy investigations and inspections conducted at different times over the past thirteen years by GAO, the FBI and DOE, as to what actually happened to this uranium. In view of these circumstances, CIA officers have spent a substantial number of hours during several different meetings in recent weeks in reviewing with GAO personnel a number of factual errors and misunderstandings in the earlier versions of the draft report which were eventually eliminated. We find, however, that the tone of the GAO report suggests a less than forthright approach to the NUMEC issue by CIA. Insofar as this agency's role in this matter is concerned, which is all that we can address, this report creates an unfortunate and inaccurate impression which in our view cannot be substantiated by the facts as we have been able to reconstruct them. This judgment leads us, therefore, to comment in the following paragraphs on our reactions to the GAO report before it is made final.

The circumstances surrounding the identification of nuclear materials unaccounted for, when combined with media speculations on what may have happened to this material, have generated a number of allegations. It is important to note, therefore, that CIA's knowledge of those events which could in any way impact on these

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allegations stems from this agency's pursuit of foreign intelligence and counterintelligence objectives which deal with the issues of worldwide nuclear proliferation. In short, CIA's interest in intelligence and counterintelligence matters enables it to comment on events in overseas areas to include the making of estimates about the growing capabilities of foreign countries in the nuclear arena. This situation has been explained to the GAO investigators on several different occasions.

In a policy sense the key allegations that continue to circulate relative to the material unaccounted for are:

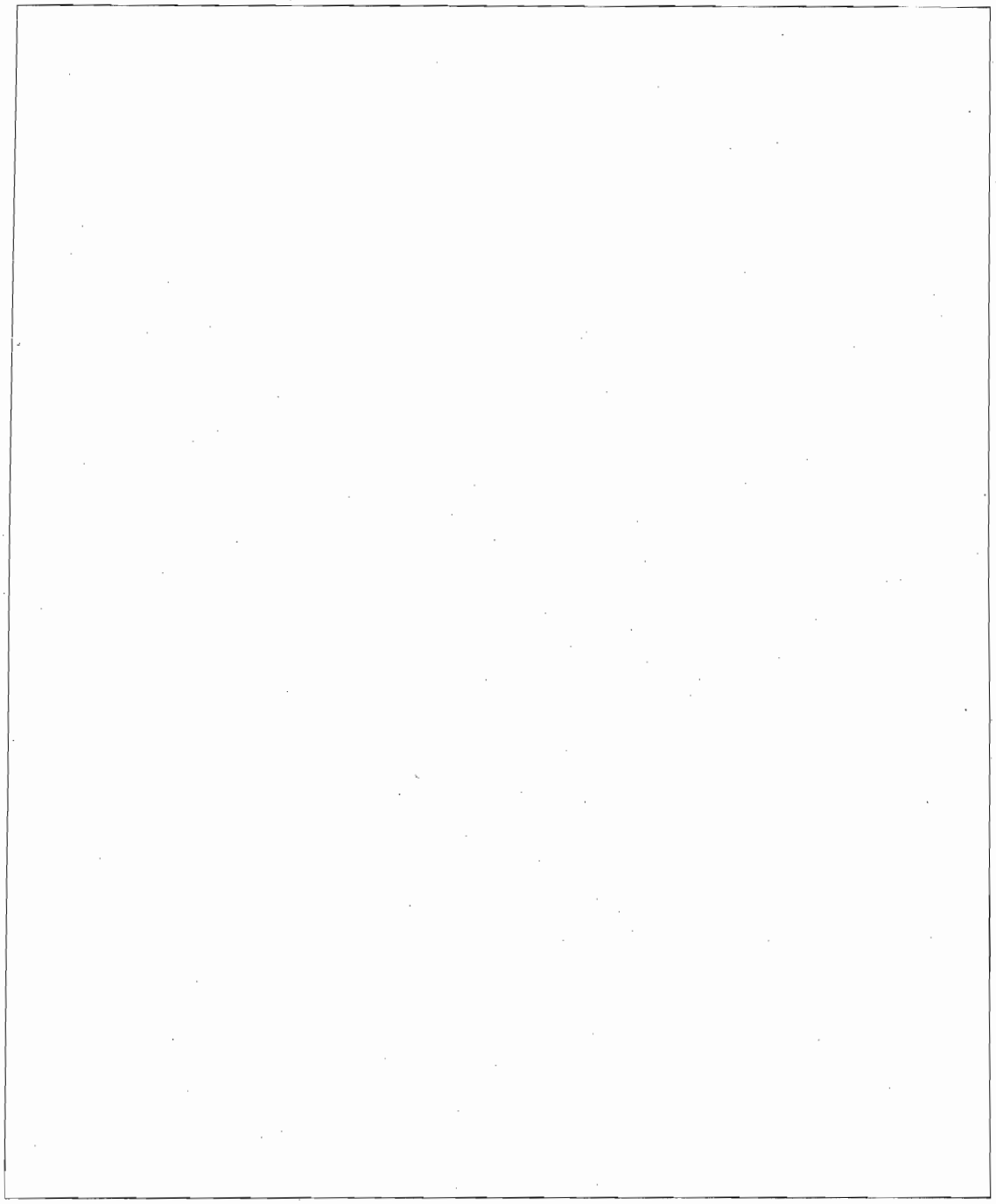
a. The material was illegally diverted to Israel by NUMEC's management for use in nuclear weapons.

b. The material was diverted to Israel by NUMEC's management with the assistance of the CIA.

c. The material was diverted to Israel with the acquiescence of the United States Government.

d. There has been a cover-up of the NUMEC incident by the United States Government involving a President of the United States.

Despite this historical record, it is implied in the GAO report that CIA failed to cooperate with United States officials who were concerned with the NUMEC case. We believe the facts of the matter argue otherwise. Of particular note in this regard is the reality that since the NUMEC case was reopened in 1976 by Presidential direction, a large number of officials in the executive and legislative branches have been briefed on NUMEC-related developments by CIA.



[redacted]

The GAO report accurately states that its officers were denied access to documents [redacted] It should be stated in the report with equal vigor that congressional staffers directly engaged in the NUMEC case did subsequently review relevant CIA files and others, including GAO, were verbally briefed on CIA's knowledge of pertinent events.

The GAO report makes a number of recommendations. We cannot foresee how these will be acted on by those who have the responsibility to consider these key points. CIA remains fully aware, however, of the need to cooperate with those in the United States who have the legal mandate to investigate nuclear material unaccounted for. We will fulfill this responsibility while simultaneously meeting our obligations to protect sources and methods.

As a final point, let me say that my staff is looking at the question of what portion of the GAO report can be declassified. We will be in touch with your associates on this matter in a prompt manner.

[redacted]

Yours,

STANSFIELD TURNER

~~SECRET~~ UNCLASSIFIED

APPENDIX IV

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 13 1978

Mr. Monte Canfield, Jr., Director
Energy and Minerals Division
U. S. General Accounting Office
Washington, DC 20548

Dear Mr. Canfield:

SUBJECT: GAO DRAFT REPORT, "NUCLEAR DIVERSION IN THE US? 13 YEARS OF CONTRADICTION AND CONFUSION" (SECRET/NSI)

The Nuclear Regulatory Commission has no comments on the content of the report. The recommendations to Heads of Agencies appears reasonable.

Sincerely,

Lee V. Gossick
Executive Director
for Operations

(30513)

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Washington, D. C. 20530

February 8, 1978

B-164102

Honorable Elmer B. Staats
Comptroller General of the
United States
Washington, D. C. 20548

Dear Mr. Staats:

This is in response to your letter to me, dated December 16, 1977, requesting access to records, reports and files in the possession of this Department which relate to the Nuclear Materials and Equipment Corporation (NUMEC) of Apollo, Pennsylvania. Your inquiry into this matter was at the request of Chairman Dingell of the House Subcommittee on Energy and Power. You also requested to be informed of the scope of our investigation and the estimated date of its completion.

As you may know, in response to a similar request from Chairman Dingell, the Deputy Attorney General informed him, by letter dated September 8, 1977, that Department policy has been to provide oral briefings by the FBI to Congressional committees which have inquired about this matter. Such a briefing was offered to Chairman Dingell.

The recent meeting of FBI representatives with Mr. Canfield, Director of the GAO Energy and Minerals Division and members of his staff, to which you refer in your letter, was in fact a briefing by the FBI as a result of the Acting Comptroller General's letter to me of August 30, 1977.

APPENDIX V

In view of the fact that our investigation into this matter is continuing, I am not able to accede to your request at this time. Consideration will, of course, be given to your request upon the conclusion of our investigation.

I am unable to estimate when the investigation will be concluded. You may be assured, however, that it is being carried out as expeditiously as possible.

Yours sincerely,

Griffin B. Bell

Griffin B. Bell
Attorney General

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