

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION

Copy to:

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Report of: SA [REDACTED]
Date: 11/9/79

Office: Washington, D.C.

Field Office File #: 117-273

Bureau File #: 117-2564

Title:

[REDACTED]

b7c / 3

Character:

ATOMIC ENERGY ACT;
OBSTRUCTION OF JUSTICE

APPROPRIATE AGENCIES
ADVISED BY ROUTING SLIP(S)
DATE 4-30-84
Classified

Synopsis:

Set forth are interviews of individuals from either various Government agencies of formerly associated with Numec Corporation in Apollo, Pennsylvania. [REDACTED]

B10X412

[REDACTED] as well as interview of former Attorney General RAMSEY CLARK. None of those individuals interviewed could provide any new information that might resolve the disappearance of nuclear material from NUMEC.

-P-

DETAILS:

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
EXCEPT WHERE SHOWN
OTHERWISE

Classified by *SP-6 BJA/RBG*

Declassify on: *CRS*

2/18/84

5668 SLD/mly 5/21/85

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FEDERAL BUREAU OF INVESTIGATION

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Date of transcription 9/24/79

[REDACTED] (b)(1)(4)(b)
(c)

[REDACTED] (b)(1)(4)(b)
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Invest set on on 9/19/79 at Washington, D.C. File # WFO 117-273

by [REDACTED] b7c/1 Date dictated 9/21/79

FEDERAL BUREAU OF INVESTIGATION

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Date of transcription 9/26/79

[REDACTED] b7D X4(b)

[REDACTED] (C) TXD

[REDACTED] (b) (7) (D) (b) (C)

[REDACTED] (b) (7) (D) (b) (C)

[REDACTED] (C)

[REDACTED] (b) (7) (D) (b) (C)

[REDACTED] (b) (7) (D) (b) (C)

[REDACTED] (C)

[REDACTED] (b) (7) (D) (b) (C)

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[REDACTED] (b) (7) (D) (b) (C)

Investigation on 9/25/79 at Washington, D.C. File # WFO 117-273

by SA [REDACTED] b7C/1 Date dictated 9/26/79

FEDERAL BUREAU OF INVESTIGATION

Date of transcription 10/3/79

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~~TX~~
RAMSEY CLARK, [REDACTED]

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[REDACTED] was interviewed by Special Agents (SAs) [REDACTED] and [REDACTED] regarding the alleged diversion of nuclear materials from the Nuclear Material and Equipment Corporation (NUMEC), Apollo, Pennsylvania.

CLARK advised that his knowledge of this incident stems primarily from news accounts and questions he has received in the past from news reporters.

(b)(1)(4)(b)

[REDACTED]

(c)
[REDACTED]

(c)

(b)(1)(4)(b)

[REDACTED]

(b)(1)(7)(a)

CLARK further advised that he does not believe that he was ever contacted by anyone from NUMEC. CLARK advised that he does not have any knowledge that President JOHNSON tried to stall the investigation into this case. CLARK advised that he himself made no attempt to encourage the Federal Bureau of Investigation (FBI) to stall or slow its investigation of this matter.

(c)

[REDACTED]

CLARK advised that he was unable to provide any additional information regarding this investigation.

(b)(1)(4)(b) - (b)(1)(7)(a)

(b)(1)(4)(b)

Investigation on 10/2/79 at New York, New York File # NY 117-394-31

by SAs [REDACTED] b7c/1 Date dictated 10/3/79

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Date of transcription 10/26/79

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~~IRVING F. LEVITT~~ [redacted] advised that he is a former Director of NUMEC.

LEVITT advised that he had nothing to do with the operation of the NUMEC plant, and he was involved strictly in a business capacity. He advised that the Board met in a bank in Pittsburgh. He advised that he was Director of NUMEC for three to four years in the early sixties. He advised that he was only concerned with the business aspects of the operation. He advised that he was Chairman of the Board of Apollo Industries, and was looking out for the business interests of Apollo Industries.

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Investigation on 10/24/79 at New York, New York File # NY 117-224
by SA [redacted] b7c/1 Date dictated 10/24/79

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10/16/79

Date of transcription

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b7d/2

On October 2, 1979

[REDACTED] provided the following information:

[REDACTED]

[REDACTED]

[REDACTED] knew little of the technical side of NUMEC.

[REDACTED]

[REDACTED] stated that NUMEC was not so financially unstable as to require a diversion of material for financial gain.

[REDACTED]

[REDACTED]

Investigation on 10/2/79 at Washington, D.C. File # WFO 117-273

by SA [REDACTED] b7c/1 Date dictated 10/9/79

OS. J. [REDACTED]

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b7D/2

[REDACTED] that there was never any concern at NUMEC concerning a diversion of material after the losses became known. [REDACTED] considered it a process loss. A monetary penalty was imposed on NUMEC and a \$1.2 million loan was arranged with either Pitt National Bank or Mellon Bank. [REDACTED] no foreign influence in obtaining the loan.

[REDACTED] knows of no diversion of nuclear material, official or otherwise, or of any attempt to interfere in any investigation involving that loss.

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Date of transcription 9/27/79

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Leon Falk, Jr. [redacted] was interviewed at his office, [redacted]

Mr. Falk stated he was formerly a director of both the Nuclear Materials and Equipment Corporation (NUMEC) and the Israeli Numec Isotopes and Radiation Enterprises, Ltd., (ISORAD). He was uncertain as to the dates the companies were formed and stated his files are in storage and not readily available. As best he could recall, the companies were bought up by the Atlantic Richfield Company some time around 1967 or 1968.

Mr. Falk advised that he became involved with the two concerns when Dr. Shapiro (Zalman Mordecai Shapiro) came to him and asked if he would be interested in investing in the companies. He said he knew Dr. Shapiro while he, Shapiro, was working at Westinghouse Electric Corporation and had a great deal of respect for him. As a result of his investment, he was made a director.

Mr. Falk stated that he had nothing to do with the operations of the two companies and was unable to furnish any information concerning the accountability, handling, recording, processing or security of the nuclear materials. He recalled a fire at NUMEC but cannot recall what, if anything, was destroyed.

Relative to the alleged diversions of nuclear material from the NUMEC plant, Falk stated he was aware of the speculation concerning the losses through articles appearing in the newspapers from time to time. He stated he has no personal knowledge relative to the diversion, and he can neither affirm nor deny the allegations. He stated that he, personally, does not believe that a diversion took place.

Interviewed on 9/27/79 at Pittsburgh, Pa. File # WFO 117-273
by SA [redacted] Date dictated 9/27/79

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PHILLIP H. POWERS, [REDACTED]

[REDACTED] was interviewed at his residence. He was advised as to the identity of the interviewing agent and that the purpose of this interview was to discuss any knowledge he might have concerning the alleged diversion of special nuclear material from the Nuclear Materials Equipment Corporation, (NUMEC), Apollo, PA. Also present during the interview was POWERS' wife, MARGARET POWERS. POWERS furnished the following information:

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[REDACTED]

He indicated, however, that he would try to recall as best as possible any information which may be of value. [REDACTED]

Subsequent to his retirement, the exact time unrecalled, he indicated that he served on the Board of Directors of the NUMEC. He believes his service was of short duration. He did attend some Board meetings but described himself as an operating man with no technical background in nuclear power. He described the West Penn Power Company as a company which generated power from the use of coal and hydro-electric plants.

He recalled taking a trip to Tel Aviv, Israel, in October of 1965. The purpose of the trip was to find a chemical that could be used to extend the shelf life of the Israeli citrus crop. He explained that the shelf life of the Israeli citrus fruit was very short and Israel was in need of some development to improve the shelf life of their citrus fruit. He explained that eventually the shelf life of the citrus fruit was extended. He indicated that he

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Investigation on 10/25/79 at [REDACTED] File # PH 117-174

by SA [REDACTED] b7C/h Date dictated 10/29/79

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made this trip to Israel with LEON FALK, BENJAMIN ROSEN and ZALMAN SHAPIRO. POWERS also indicated that his wife also accompanied him on the trip. Two other wives also made the trip but he was unable to recall exactly who they were.

POWERS indicated that he left NUMEC shortly after the trip. He described himself as "window dressing". He explained that in his opinion he was given a position on the Board of Directors to add a sense of expertise in the energy field.

The Israel NUMEC Isotopes and Radiation Enterprises, Ltd., (ISORAD), was unfamiliar to him.

POWERS was unable to recall any additional pertinent information regarding his service with NUMEC.

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Mr. EDUARD H. ROSEN

[REDACTED]
[REDACTED] was interviewed at his residence.

Mr. ROSEN was advised of the identities of the interviewing Agents and of the nature of the interview. He immediately inquired if the Agents had any objections to his recording the interview on a tape recorder. He was advised Agents preferred the interview not be recorded. He then asked if Agents objected to his taking written notes of the interview and he was advised there was no objection to this.

Mr. ROSEN advised that he was formerly a Director of a company which produced nuclear fuel rods known as Nuclear Materials Equipment Corp. (NUMEC). A small subsidiary of NUMEC was known as ISORAD, Isotopes and Radiation Enterprises, Limited. The nuclear fuel rods produced by NUMEC were sold to private companies to be used in nuclear reactors.

(b)(1)(4)(b)(c)

Mr. ROSEN was asked if he had any knowledge of the diversion of nuclear materials by NUMEC or its subsidiary [REDACTED] or anywhere else. He stated he did not. (P)

Mr. ROSEN expressed surprise that the Federal Bureau of Investigation was inquiring into this matter as he felt it had all been hashed out in the past. He said that in any chemical reaction there is a certain amount of material lost in the reaction and any company engaged in the manufacture of nuclear fuels has these losses. He didn't feel this reflected anything sinister.

No additional information was provided by Mr. ROSEN.

Investigation on 11/7/79 at [REDACTED] File # 104 117-55
by SA [REDACTED] SA [REDACTED] Date dictated 11/7/79

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11/2/79

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EARL F. LANE, former Associate Director, Division of Security and Safeguards, Atomic Energy Commission (AEC), Washington, D.C. (WDC), was interviewed at his residence, [REDACTED]. He was given the identity of the interviewing Special Agent (SA), Federal Bureau of Investigation (FBI), WDC. He was told that he was being interviewed in regards to the loss of nuclear fuel from the NUMEC facility, Apollo, Pennsylvania, in the late 1960's. LANE said that he was willing to be interviewed concerning the matter.

LANE said that he was interviewed at length in the past by representatives of the FBI concerning the incident. He said that he had no additional information to furnish at this time.

LANE recalled that at the time he interviewed ZALMAN SHAPIRO in the late 1960's, it was determined through conversation that he, SHAPIRO, was attempting to borrow money from a local bank, possibly in Apollo, Pennsylvania. He believed that the individual in the banking business had a financial interest in the NUMEC company and was a close friend of SHAPIRO. SHAPIRO also mentioned that he had to borrow money. LANE said that he did not question SHAPIRO to any length regarding his financial conditions at that time. He had no additional information regarding the conversation pertaining to borrowing money and speculates that this was an attempt to obtain funds to pay the fine imposed by the AEC for the loss of the nuclear material.

LANE had no additional information to provide inasmuch as he has furnished complete details in the past to the FBI concerning his involvement with NUMEC.

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b7c/2

On November 5, 1979, [REDACTED]
[REDACTED] Department of Energy (DOE), Germantown,
Maryland, provided the following information:

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[REDACTED] advised that he has never met ZALMAN M.
SHAPIRO, has had no connection with NUMEC, and was not
involved in the earlier NUMEC investigations.

He advised that he had previously been
interviewed by DOE's Inspector General's Office
concerning NUMEC and had reviewed reports on NUMEC,
including an inventory difference report, which he
helped prepare. He was never influenced in this regard.

b7c/2

[REDACTED] provide no further information
concerning this matter.

Investigation on 11/5/79 at Germantown, Maryland File # WFO 117-273

by SA [REDACTED] b7c/1 Date dictated 11/6/79

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EDWARD J. BLOCH, former Deputy Director, Office of Safeguards and Security, Atomic Energy Commission (AEC), was contacted for an appointment for interview.

BLOCH stated he has been retired about six years and preferred to furnish his information telephonically.

He advised as follows:

He visited the NUMEC facility at Pennsylvania many years ago when it was "just starting up making low enrichment" fuels.

"One of the problems was that in a plant certain process losses were inevitable." Also "contaminated waste materials were buried."

He recalls the investigation into a loss at NUMEC but has no knowledge of any nuclear material being diverted to any foreign power.

(b)(1)(4)(b)

He recalls hearing that Mr. SHAPIRO did [redacted] but has no personal knowledge of this.

(c)

(b)(1)(4)(b)

He met Mr. SHAPIRO once only, and has no knowledge of him being [redacted]

(c)

He was unaware of NUMEC having been assessed a fine for loss and he has not been approached by anyone regarding the investigation of NUMEC.

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He resides at [redacted]

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Investigation on 10/19/79

[redacted]

File # WFO 117-273

SA

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RAY E. CHAPMAN, Director, Office of International Security, Department of Energy (DOE), Washington, D.C. (WDC), was interviewed. He was given the identity of the interviewing Special Agent, Federal Bureau of Investigation (FBI). He was told that an investigation is being conducted in regards to the loss of nuclear fuel from the NUMEC Company, Apollo, Pennsylvania, in the late 1960's. Mr. CHAPMAN said that he was willing to be interviewed regarding the matter.

Mr. CHAPMAN said that he had been interviewed in the past by representatives of the DOE Inspector General's Office, concerning the NUMEC incident, and at that time, he made a statement which was made a part of DOE records.

Mr. CHAPMAN advised that he has no first hand knowledge of the NUMEC incident or the investigation.

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Date of transcription

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RAY E. CHAPMAN, Director, Office of International Security, Department of Energy (DOE), Washington, D.C. (WDC), was interviewed. He was given the identity of the interviewing Special Agent, Federal Bureau of Investigation (FBI). He was told that an investigation is being conducted in regards to the loss of nuclear fuel from the NUMEC Company, Apollo, Pennsylvania, in the late 1960's. Mr. CHAPMAN said that he was willing to be interviewed regarding the matter.

Mr. CHAPMAN said that he had been interviewed in the past by representatives of the DOE Inspector General's Office, concerning the NUMEC incident, and at that time, he made a statement which was made a part of DOE records.

Mr. CHAPMAN advised that he has no first hand knowledge of the NUMEC incident or the investigation.

Investigation on 10/19/79 at Washington, D.C. File # WFO 117-273

by SA [REDACTED] *b7c/1* Date dictated 10/26/79

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Date of transcription 11/13/79

On November 5, 1979, MARTIN J. DOWD, Assistant Director, Internal Security Branch, Office of Safeguards and Security, Department of Energy (DOE), Germantown, Maryland, provided the following information: (S)

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DOWD first became aware of the NUMEC facility at Apollo, Pennsylvania, in 1958 when he was assigned to the New York Operations Office for Security, Atomic Energy Commission (AEC). Pennsylvania was handled regionally by the New York Office. DOWD was [REDACTED]

[REDACTED] DOWD stated that security was always a problem at NUMEC, but that after security violations were issued, NUMEC would institute corrections and deficiencies were corrected within 30 days, allowing the plant to continue operations. (S)

However, DOWD indicated that his department would only monitor security classified material and that losses of material were considered an accounting responsibility not in his domain. (S)

b7c/2
In 1968, DOWD was assigned to Washington, D.C. (WDC), where he was placed in the Internal Security Department's Alien Control Section. In this capacity, he became aware of SHAPIRO's interaction [REDACTED] (b)(1)(4)(b) (c)
Investigation of this was turned over to the Federal Bureau of Investigation (FBI) and DOWD was [REDACTED] (S)(2)(u)

DOE's (then the Energy Research and Development Administration) (ERDA), concern at the time was whether SHAPIRO should retain his security clearances. DOE considered SHAPIRO a security risk and was subsequently interviewed twice by DOE's Director of Security and by a Department Legal Counsel. SHAPIRO's clearances were not lifted, but he was not allowed to review classified documents relating to weapons information. (S)

DOWD advised that SHAPIRO was always closely monitored by DOE (whether it was AEC or ERDA) concerning his access to [REDACTED]

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sensitive information. (S)

DOWD could provide no factual information regarding a possible diversion nor could he recall any attempt to interfere in any investigation by SHAPIRO or anyone else. (S)

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EARLE HIGHTOWER, former Assistant Director, Policy and Plans Office of Safeguards and Security, Atomic Energy Commission (AEC), telephonically contacted the interviewing Agent at the Washington Field Office of the Federal Bureau of Investigation (FBI). He stated he called in response to two telephone calls to Mrs. HIGHTOWER advising that the FBI desired to talk to him. (S)

He furnished the following information (S)

b7c/16 In the early 1960's, he was employed as above and during the course of his work at the AEC, he supervised employees who visited NUMEC - a plant operated by a Mr. SHAPIRO, [REDACTED]

He never went to NUMEC but heard from those he supervised that it was a sloppy processing operation. (S)

"I remember quite a bit about the case. There were a lot of suspicions." (S)

The data concerning NUMEC was available only down to the Assistant General Manager level at AEC. (S)

NUMEC's "material accountability was sloppy." (S)

Even the "trees and bushes" (surrounding NUMEC) would be covered by a white residue" indicating obvious losses of material. "I think it (material) might have been lost in two ways." (S)

"I think it might have been intentionally diverted" and "losses were frequently 'written off.'" "Probably there was a lot more lost than shows" in the loss data report. (S)

[REDACTED]

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S. [REDACTED] b7c/1 Date dictated 10/22/79

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[REDACTED] (S)(C)

"Also we had a number of scientists leave the U.S. on sabbatical" and go to Europe during the same time span. (S)

"NUMEC, incidentally, had some contacts in the weapons program" then. (S)

"SHAPIRO had a number of contacts" and he was a Zionist. (S)

He does not know specifically any of those contacts or factually that any material was diverted from NUMEC to a foreign power. (S)

b7c/16

HIGHTOWER is employed [REDACTED] (S)

He resides [REDACTED] (S)

He would be willing to testify. (S)

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On November 5, 1979, THOMAS ISAACS, Deputy Director, Office of Safeguards and Security, Department of Energy (DOE), Germantown, Maryland, provided the following information:

ISAACS stated that he had no contact with the NUMEC investigation until 1977, when he was assigned as Lead Action Officer to answer questions set forth by a Congressional Committee headed by Representative DINGELL.

ISAACS advised that he assisted in the preparation of those answers without interference from anyone, and that those responses are a matter of record.

ISAACS was interviewed a year ago by DOE's Inspector General's Office regarding NUMEC and that too is a matter of record.

ISAACS has never met SHAPIRO nor has he ever visited the NUMEC facility.

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Date of transcription 11/13/79

On November 6, 1979, JOHN B. LABARRE, Director, Office of International Affairs, Department of Energy (DOE), Washington, D.C. (WDC), provided the following information:

LABARRE stated that he had no connection with the NUMEC investigation until 1977, when he was asked to prepare answers to questions submitted by the DINGELL Subcommittee of the U.S. House of Representatives. LABARRE prepared answers to those questions relating to intelligence information. LABARRE recalls that the first set of questions was not acceptable to the DINGELL Subcommittee and that they were redone and resubmitted.

About one year ago, LABARRE was interviewed by DOE's Inspector General's Office regarding preparation of those answers. LABARRE stated he has no other information regarding the possible diversion of nuclear material from the NUMEC facility.

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 by SA [REDACTED] *b7c//* Date dictated 11/6/79

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Date of transcription 11/15/79

b7c/2

On November 8, 1979, [redacted] Office of Current Reporting, Department of Energy (DOE), Washington, D.C. (WDC), provided the following information:

[redacted] he was asked to prepare answers to a couple questions presented by the DINGELL Subcommittee, U.S. House of Representatives. Approximately a year later, he was interviewed by DOE's Inspector General's Office regarding the preparation of those answers.

[redacted] had no information regarding the possible diversion of nuclear material from NUMEC.

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JOHN WEINHARDT, Acting Chief, Resource Management, telephone number 252-7117, and former Executive Officer, International Security Affairs, United States Department of Energy (DOE), Washington, D.C. (WDC), was interviewed regarding his knowledge of **ZALMAN SHAPIRO** and the NUMEC company, Apollo, Pennsylvania. (S)

WEINHARDT said that he was initially employed at DOE in February, 1975, as the Executive Officer, International Security Affairs. He held the position until August, 1979, wherein he became Acting Chief, Resource Management. (S)

WEINHARDT advised that he has no direct knowledge concerning the NUMEC company, SHAPIRO, his associates, or his representatives. (S)

(b)(1)(2)(a)

(b)(1)(4)(b)

[REDACTED] (S) (S)

(b)(1)(2)(a)

(b)(1)(4)(b)

[REDACTED] (S) (S)

WEINHARDT could not provide any additional first hand information concerning the NUMEC investigation. (S)

(b)(1)(4)(b)

[REDACTED] (C)

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On November 5, 1979, RALPH SCHULL, Chief, Nuclear Safeguards Operations and Supervisor of Physical Science, Department of Energy (DOE), Germantown, Maryland, provided the following information:

SCHULL advised that he has had no connection with ZALMAN M. SHAPIRO, NUMEC, or any investigation regarding the possible diversion of nuclear fuel at NUMEC other than being interviewed one year ago by the DOE Inspector General's Office regarding NUMEC.

SCHULL could furnish no additional information.

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ALFRED D. STARBIRD, retired Lieutenant General, currently assigned as the Director of the Department of Defense (DOD)/Department of Energy (DOE), Long Range Resource Planning Group, at the Pentagon, was advised of the identity of the interviewing Agent, as well as the purpose of interview. (S)

General STARBIRD stated that from 1955 to 1961, he was assigned as the Director of Military Application for Research Development, Test and Production of Atomic Weapons, assigned to the Atomic Energy Commission (AEC), as a Military General Officer. (A)

General STARBIRD stated that the next contact with the former AEC occurred in mid-1975, when he entered on duty as a civilian in the capacity of Assistant Administrator for National Security, attached to the Energy Research and Development Administration. General STARBIRD was responsible for four divisions at this time, including the Director of Military Application on Weapons, and Director of Safeguards and Security. (S)

General STARBIRD recalled that in 1976, a newspaper article was printed involving NUMEC. It was at this time that General STARBIRD, in the capacity of his employment, became entirely cognizant of the investigation concerning NUMEC, in order to answer both internal and external inquiries. In order to obtain a broader background on NUMEC, STARBIRD stated that he reviewed the initial AEC investigative report, the Joint Commission on Atomic Energy letters, the Department of Justice security investigation regarding SHAPIRO and a Government Accounting Office (GAO) report. (A)

General STARBIRD stated that in this review, he concerned himself primarily with the safeguards and procedures utilized at the nuclear plants during the late 1950's and early 1960's. (A)

General STARBIRD recalled that the 1966 investigation by AEC revealed that there was no evidence of any diversion of nuclear materials at NUMEC, although the report did not rule (A)

Investigation on 10/31/79 at Arlington, Virginia File # WFO 117-273

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out the possibility. In his review of the report, he noted that a thorough investigation was conducted by the AEC team sent to NUMEC, and he concurred with the findings. (S)

General STARBIRD stated that in 1977, he testified before a Subcommittee of the House Commerce Committee and answered several questions relating to NUMEC. General STARBIRD advised that his knowledge of NUMEC and SHAPIRO came entirely from reports, letters, and information furnished by subordinates and peers. He stated that at no time did he have any first hand knowledge of the NUMEC investigation. (S)

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On November 5, 1979, [redacted] Division of International Affairs, Department of Energy (DOE), Germantown, Maryland, provided the following information:

[redacted] had only one contact with the NUMEC facility in Pennsylvania when in 1967 or 1968, he escorted a Swedish visitor through the NUMEC plant and was introduced to ZALMAN M. SHAPIRO, his one and only meeting with SHAPIRO. [redacted] only knew JIM LOVETT, a former Atomic Energy Commission (AEC) employee who was employed at NUKEC.

[redacted] no other contact with NUMEC other than being interviewed by DOE's Inspector General concerning NUMEC approximately one year ago.

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by SA [redacted] b7c|1 Date dictated 11/6/79

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FEDERAL BUREAU OF INVESTIGATION

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11/2/79

Date of transcription

ROBERT E. UPCHURCH, Chief of Assessment Branch, Division of Defense Intelligence, and former Intelligence Analyst, Office of International Security Affairs, U.S. Department of Energy (DOE), Washington, D.C. (WDC), was interviewed. He was given the identity of the interviewing Special Agent (SA), Federal Bureau of Investigation (FBI), WDC. UPCHURCH was told that he was being interviewed regarding the loss of nuclear fuel at the NUMEC facility, Apollo, Pennsylvania, in the late 1960's. UPCHURCH said that he was willing to be interviewed.

UPCHURCH said that he had no involvement with the NUMEC investigation or its personnel.

Investigation on 10/19/79 at Washington, D.C. File # WFO 117-273
 by SA [REDACTED] b7c/1 Date dictated 10/26/79

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FEDERAL BUREAU OF INVESTIGATION

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Date of transcription 10/23/79

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 [REDACTED] ROBERT W. FRI [REDACTED] was contacted for an appointment to be interviewed. He was advised of the official identity of the interviewing Agent and the reason for the interview. (X)

He stated he preferred to furnish his information telephonically and advised as follows: (X)

He is aware of NUMEC, but has never been to the plant nor met Mr. SHAPIRO, formerly of NUMEC. (X)

He recalls the investigation of possible loss from NUMEC of nuclear material. (X)

"At the time I was the Acting Administrator of ERDA" of the U.S. Government which "collected data on nuclear material unaccounted for or 'MUF' as we called it." (X)

The 'MUF' data "was classified" and a decision was to be made that "the data should be unclassified and made public." (X)

Before this was done, however, he and other ERDA employees only reviewed all available MUF reports. (X)

Of these, NUMEC had perhaps twice as much recorded loss as other plants doing similar conversions. (X)

For example is the average processing loss of 1%; NUMEC would have shown losses of perhaps 2%. (X)

There were a whole series of allegations and investigations that NUMEC had "released" nuclear material "to somewhere." These were made by others; he only reviewed the results and "did no new investigation." (X)

Based on the review of the old data on MUF at NUMEC, "I drew the conclusion that no diversion took place." (X)

The unexplained losses could have occurred at NUMEC as a result of their processing technique, which may have (X)

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caused the material to be run through the NUMEC facilities "two or even three times" and in so doing, "some would hang up (become lost) in the pipes." (S)

"I don't think any material moved (was diverted) abroad." (S)

"NUMEC handled the material sloppily. AEC didn't have the right rules" for control. "I concluded there was no basis for prosecution." (S)

Asked at this point if he had any involvement in the investigation, he stated, "I have no first hand knowledge of this." (S)

Also, he was not approached by anyone from either NUMEC or the United States Government about interceding in the NUMEC investigation. (S)

He has no idea how Mr. SHAPIRO paid any fines levied, but the rules at the time were that the processors paid for the value of any material lost during production. (S)

His business telephone is 457-0868. (S)

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11/5/79

Date of transcription _____

EDWARD B. GILLER, retired Major General, Joint Chiefs of Staff (JCS), representative to the Comprehensive Test Ban Talks currently assigned at the Pentagon, was advised of the identity of the interviewing Agent, as well as the purpose of interview. (S)

General GILLER advised that from 1964 to 1967, he was assigned as the Deputy Chief of Staff for Research and Technology, Air Staff, U.S. Air Force (USAF). (S)

In 1967, General GILLER was assigned to the Atomic Energy Commission (AEC) in the capacity of Director of Military Application, Manufacturing and Development of Nuclear Weapons, which by law requires that a military officer assume this position. In 1972, General GILLER retired, but remained with AEC as an Assistant General Manager for National Security. (S)

General GILLER stated that all his knowledge of ZALMAN SHAPIRO and NUMEC is based on records, reports, and hearsay information, with no first hand knowledge. (S)

General GILLER made the following observations pertaining to the NUMEC investigation: (S)

(b)(1)(4)(b) (S) GILLER stated that he could not positively attest to the fact that SHAPIRO did not divert the materials [redacted] although in his opinion, the probability that there was a diversion is small. General GILLER felt that the material disappeared in the nuclear material conversion process. He additionally stated that he felt that the NUMEC plant was "sloppily run with poor management." (S)

General GILLER advised that he was never approached by anyone to intercede in the Government's investigation on behalf of SHAPIRO. He additionally stated that he did not know from what source SHAPIRO received the money to pay the penalty imposed on NUMEC for the loss. (S)

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by SA [redacted] b7c/1 Date dictated 11/1/79

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Date of transcription 10/17/79

b7c/16

[REDACTED] HARVEY EUGENE LYON, [REDACTED] was advised of the identities of the interviewing Agents, as well as the purpose of interview. Mr. LYON advised that subsequent to his retirement from the Navy in 1975, he assumed the position of Director of the Office of Safeguards and Security for the Energy Research and Development Administration (ERDA), which title he held until 1978. Mr. LYON explained that it was his responsibility and that of his staff to probe the losses of nuclear materials at various nuclear facilities around the country. (S)

Mr. LYON stated that at no time did he ever know ZALMAN SHAPIRO, and indicated that all his knowledge of NUMEC and SHAPIRO originated in the various reports of the Atomic Energy Commission (AEC), which agency had initially probed the nuclear material losses at NUMEC. Mr. LYON stated that although NUMEC had sustained a loss of materials, the reports never reflected that these materials had been stolen. Additionally, subsequent investigation of NUMEC accounted for most of the missing materials, with 65 kilograms unaccounted for. (S)

(b)(1)(4)(b)

Mr. LYON stated that he personally felt that although SHAPIRO [REDACTED] (S) He attributed the loss of the materials to poor business management on the part of SHAPIRO, without any criminal intent. (S)

Additionally, Mr. LYON stated that to his knowledge, SHAPIRO obtained the money to pay for the loss of the materials through a bank loan. He stated that in his review of NUMEC reports, he was never approached by any individual requesting that he (LYON) intercede on behalf of SHAPIRO in the United States Government investigation. (S)

Mr. LYON stated that he has already been queried by various House Committees on his knowledge of the NUMEC matter. He reiterated that all his knowledge of SHAPIRO and NUMEC was obtained through AEC investigative reports. (S)

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b7C/16

LES TAYLOR, [REDACTED] was advised of the identities of the interviewing Agents, as well as the purpose of interview. (S)

Mr. TAYLOR advised that prior to his retirement from the Department of Energy (DOE) in 1977, he held the position of Assistant Director for Security Affairs, Division of Safeguards and Security. (S)

Mr. TAYLOR recalled that prior to 1968, at which time he was assigned to the Internal Security Branch of the Atomic Energy Commission (AEC), a team of investigators for AEC traveled to Pennsylvania to conduct an audit of the NUMEC loss. Mr. TAYLOR stated that the conclusion reached by this team of investigators was that the nuclear materials had not been diverted. Mr. TAYLOR advised that he did not actively participate in this investigation. (S)

Mr. TAYLOR stated that he had never met SHAPIRO and his knowledge of the NUMEC loss is based strictly on investigative reports and hearsay information. (S)

Mr. TAYLOR stated that he has never been approached by anyone to intercede in the Government's investigation on behalf of SHAPIRO, and he advised that he did not know from what source SHAPIRO had obtained the money to pay for the loss. (S)

b7C/16

Investigation on 10/17/79, [REDACTED] File # WFO 117-273

by SAs [REDACTED] b7C/1 Date dictated 10/18/79

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Date of transcription 10/4/79

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b7c/16

On October 1, 1979, [REDACTED]

[REDACTED] was interviewed and furnished the following information:

[REDACTED] is a former Special Agent (SA) of the Federal Bureau of Investigation (FBI).

[REDACTED] advised that the affairs concerning the alleged diversion of nuclear material from the NUMEC facility at Apollo, Pennsylvania, occurred such a long time ago and that the facts in his own mind are now confused. [REDACTED] stated that he was eager to cooperate, but that in all fairness, he could not relate factual material concerning the diversion at this late date.

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by SA [REDACTED] b7c/1 Date dictated 10/2/79

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Date of transcription 9/13/79

b7c/16

On September 11, 1979, [REDACTED]

[REDACTED] furnished the following information:

He stated he is a former Special Agent of the Federal Bureau of Investigation (FBI) and was the Pittsburgh Office's case Agent in the investigation of Zalman Mordecai Shapiro from June, 1965, [REDACTED]

b7c/16

[REDACTED] He advised he had no personal knowledge of any diversion of nuclear material from the Nuclear Materials and Equipment Corporation (NUMEC), Apollo, Pa., and that there was no evidence of any diversion. He stated his opinion was based on an intimate knowledge of the information furnished by witnesses and sources while he was the case Agent.

(b)(1)(4)(5)

[REDACTED]

b7c/16

[REDACTED] advised that he did not know of, and has not heard of any attempt by anyone in the Executive Branch of the United States Government to prevent or impede any investigation into the alleged diversion of nuclear materials at NUMEC, or to withhold any information concerning this matter from any investigative body.

b7c/16

Interviewed on 9/11/79

[REDACTED]

at Pittsburgh 97-1
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by SA [REDACTED]

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9/12/79

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10/22/79

Date of transcription

JOHN F. AHEARNE, Commissioner, United States Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed by Special Agent (SA) [redacted] regarding the investigation of the NUMEC company. (X)

b7c/1

AHEARNE hereafter provided the following information in response to questions set out by the Department of Justice (DOJ): (X)

He advised that he has never met ZALMAN SHAPIRO, nor can he recall ever visiting the NUMEC company. (X)

He does not have any factual knowledge or information as to any diversion of nuclear fuel from NUMEC to a foreign government. [redacted]

(b)(1)(2)(a)
(b)(1)(4)(b)
(b)(1)(5)(a)
(b)(1)(7)(a)

[redacted] (X) (S)

He does not have any first hand information regarding SHAPIRO [redacted]. Again, the only information he has is what was noted in the various reports and briefings since the investigation was initiated. (X) (S)

(b)(1)(4)(b)

The only involvement AHEARNE has had regarding a diversion of nuclear fuel has been with the NUMEC company. At one time, he was a Special Assistant to Energy Secretary ARTHUR SCHLESINGER, at which time he reviewed information from ERDA, which is the Energy Research Development Administration, and prepared reports for Congressman JOHN DINGELL and his colleagues. In essence, he was in a position to review reports, and therefore has become fairly knowledgeable on the subject matter. (X)

James

AHEARNE advised that he has never been approached by any representative of NUMEC or by an official of the [redacted] (X)

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(b)(1)(4)(b)

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United States Government to intercede in the Government's investigation on SHAPIRO's behalf. (P) ~~TOP SECRET~~

Finally, AHEARNE advised that he has no idea from what source SHAPIRO received the money to pay the penalty imposed on NUMEC for the loss of the nuclear material. The only knowledge he has on this is what he has learned from reports from the Department of Justice. (P)

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11/14/79

Date of transcription

ROBERT P. BURNETT, Director of Safeguards, Nuclear Regulatory Commission (NRC), 7915 Eastern Avenue, Silver Spring, Maryland, Room 873, office phone 427-4033, was interviewed at his place of employment regarding any knowledge he may have of a loss of nuclear fuel from NUMEC Corporation's Apollo, Pennsylvania, plant in the 1960's. Special Agent [redacted] identified himself by display of credentials, after which BURNETT voluntarily furnished the following information: (S)

b7c/1

b7c/2

[redacted]

BURNETT has no first hand knowledge of ZALMAN SHAPIRO, Apollo, Pennsylvania's NUMEC facility, has never visited there, has never investigated the matter, nor has any knowledge of SHAPIRO's or NUMEC's finances. (S)

BURNETT has had access to Defense Intelligence Agency's (DIA) WATCH reports and became aware of the possible loss through this publication. (S)

About one year ago, Secretary UDALL asked for a "snapshot in time" of security precautions at the NUMEC plant in the 1960's. The final conclusion from this approximate one year study is that a diversion of fuel is not only possible from any major facility in the U.S. in the 1960's, but also would not have been detected by the then current security systems in effect. BURNETT explained that physical security precautions have been greatly enhanced since then; however, because of inherent accounting problems in the processing of nuclear fuel, accounting for the material itself is still a problem. (S)

BURNETT could provide no positive first hand information to this investigation. (S)

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by SA [redacted]

Date dictated 11/9/79

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b7c/2

[REDACTED] telephonically contacted the interviewing Agent at the Washington Field Office (WFO) of the Federal Bureau of Investigation (FBI) in response to a previous contact made with [REDACTED]

He furnished the following information about NUMEC:

At the time the alleged losses occurred, he was [REDACTED] that published Material Unaccounted For (MUF) data some of which involved NUMEC. This was in connection with his employment in Safeguards and Security of Atomic Facilities.

He never met Mr. SHAPIRO, nor went to NUMEC, but did read and publish data concerning NUMEC.

This was NUREG report #350 published August, 1977, which has been furnished the FBI.

He has only heard rumors about any foreign contacts made by Mr. SHAPIRO

As for NUMEC's losses in the MUF data, "they were unusually large."

"It could have been a measurement error."

He is aware that there is an ongoing investigation of NUMEC and would be willing to testify.

b7c/2

His business phone is [REDACTED]

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by SA [REDACTED] b7c/1 Date dictated 10/22/79

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11/13/79

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MR. WILLIAM J. DIRCKS, Director, Office of Nuclear Material, Safety and Safeguards, Nuclear Regulatory Commission (NRC), 7915 Eastern Avenue, Silver Spring, Maryland, telephone 427-4063, was interviewed at NRC Headquarters, 1717 H Street, N.W., Washington, D.C. (WDC). Special Agent (SA) [REDACTED] identified himself by display of credentials, after which DIRCKS voluntarily furnished the following information: (S)

DIRCKS has been an employee of the Atomic Energy Commission (AEC) and Energy Research and Development Agency (ERDA), then moved to NRC when it was formed in 1975. DIRCKS was never acquainted with ZALMAN SHAPIRO, never visited the Apollo site, was not aware of nuclear fuel loss, nor acquainted with any principals or employees of NUMEC, and was never officially aware of an investigation into a loss until approximately 1976 - 1977, when he began reading intelligence summaries from Defense Intelligence Agency (DIA), which reported during this period that there was a possible diversion of nuclear fuel [REDACTED]. In 1978, DIRCKS (S)(b)(1)(4)(5) sat in on a briefing by SA [REDACTED] (S)

b7C/1

In 1976, Congressman MORRIS UDALL asked NRC to investigate or to study the differences between security systems at Apollo NUMEC in the 1960's versus modern security systems at Apollo, and similar plants in the late 1970's. The study was long and exhaustive and the "bottom line" was that because of the inherent weaknesses in both the security and accounting systems at all nuclear fuel facilities in the 1960's, anyone could have stolen nuclear fuel during that period. Fortunately, DIRCKS states modern physical security systems have been upgraded tremendously and an actual theft of fuel would be extremely difficult at this point. (S)

During the period of the aforementioned study, Department of Energy (DOE) sent an initial copy of the study report to many people for critical comment. One individual who commented about the study was [REDACTED] (S) b7C/2

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[REDACTED] parts of which were excerpted and included in DOE's critical comments of the report. [REDACTED] said that he had seen losses of nuclear fuel in the 1960's and that no one would pay any attention to him during that period. He further stated something to the effect that it was about time someone made an honest appraisal of the situation - implying that the NRC study had made a good appraisal of the matter. (S)(X)(A)

(b)(1)(a)(a)

(b)(1)(4)(b)

(b)(1)(5)(a)

[REDACTED]

(S)(C)

DIRCKS has no first hand knowledge of the SEAPIRO-NUMEC matter, was never approached by any Government official to intercede into any investigation, and has no knowledge regarding SEAPIRO's or NUMEC's finances. (S)

(b)(1)(4)(b)

[REDACTED] (c)

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Mr. ROBERT A. ERICSON, Chief, Physical Security Branch, Division of Safeguards, Nuclear Regulatory Commission (NRC), 7915 Eastern Avenue, Silver Spring, Maryland, telephone 427-4194, was interviewed at his place of employment regarding any knowledge he may have of possible diversion of lost nuclear fuel from Apollo NUMEC in the 1960's. Special Agent [REDACTED] identified himself by display of credentials, after which ERICSON voluntarily provided the following information: (S)

ERICSON retired as a Colonel from the U.S. Air Force (USAF) on October 31, 1970, where he was a Systems Analyst with the Office of the Secretary of Defense. He went to work for the old Atomic Energy Commission (AEC) and later the Nuclear Regulatory Commission when it was formed. (S)

In late 1975 or early 1976, the NRC and Department of Energy (DOE) were asked by outgoing Senior Commissioner ANDERS to do a report on current safeguards at nuclear plants versus safeguards as they existed in the 1960's. ERICSON participated in some of this study and during this period, was the first time he became aware of the question of lost fuel from NUMEC Corporation, Apollo, Pennsylvania plant. (S)

(b)(1)(4)(b)

On one occasion, ERICSON saw what appeared to be a hastily written blind memorandum from General STARBIRD's office at DOE, which, according to ERICSON's memory, first mentioned the possibility of ZALMAN SHAPIRO misappropriating fuel and diverting it [REDACTED] (c) The memorandum was classified secret and because it was germane to ERICSON's portion of the study, ERICSON copied it and kept it in his files for a time. Sometime later, ERICSON saw an article in the Washington Star by JOHN FIALCA (Phonetic), which had much of the same information as the memorandum. Sometime after the article appeared in the Star, ERICSON destroyed his copy of the memorandum. (S)

In 1977 or 1978, ERICSON was asked by members of NRC's Office of Investigations and Audit (OIA) to give a deposition regarding knowledge he had of the question of fuel. (S)

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loss at Apollo NUMEC. ERICSON thinks OIA's report was compiled and presented approximately a year ago and suggests the Federal Bureau of Investigation (FBI) obtain a copy. (P)

Because ERICSON was not associated with nuclear matters whatsoever before he retired from the Air Force in 1975, he has never met ZALMAN SHAPIRO, nor toured the Apollo facility. He has never been involved in the investigation of missing fuel at Apollo, has never knowingly met any employee of NUMEC, has no first hand knowledge of the matter, and could offer no further information. (P)

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10/26/79

Date of transcription _____

b7c/1

VICTOR GILINSKY, Commissioner, United States Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed by Special Agent (SA) [redacted] regarding the investigation of NUMEC. GILINSKY hereafter provided the following responses to questions provided by the Department of Justice: (S)

He advised that he has never met ZALMAN SHAPIRO; however, he has had the opportunity to visit the NUMEC facility in either 1975 or 1976. He visited the facility in the capacity of Commissioner to the U.S. NRC to inspect and look at safeguards at the facility. This inspection was conducted with the idea of improving various facets of that facility, as well as others around the country. (S)

GILINSKY has no factual or first hand knowledge of any diversion of nuclear fuel from NUMEC to a foreign government. [redacted] (S) (C)

(b)(1)(4)(b)

He further advised that he has no information or factual knowledge of any contacts SHAPIRO may have had [redacted] (S) (C)

(b)(1)(4)(b)

By virtue of being a Commissioner, GILINSKY advised that he has conducted inspections and has looked into various facilities dealing with nuclear material. His role involving the NUMEC facility concerning the diversion of nuclear fuel has been only as Commissioner. (S)

GILINSKY advised that he has never been approached by any representative of NUMEC or by any other official of this Government to intercede in the Government's investigation on SHAPIRO's behalf. (S)

GILINSKY finally advised that he has no idea from what source SHAPIRO received the money to pay the penalty imposed on NUMEC for the loss of nuclear material. (S)

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by SA [redacted] b7c/1 Date dictated 10/25/79
(c)(b)(1)(4)(b)

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Date of transcription _____

b7c/1 PAUL F. GOLDBERG, Assistant to Commissioner VICTOR GILINSKY, United States Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., was interviewed by Special Agent (SA) [REDACTED] regarding the investigation of NUMEC. (A)

GOLDBERG hereafter provided the following responses to questions submitted by the Department of Justice: (A)

He advised that he has never met ZALMAN SHAPIRO, nor has he ever had the opportunity to visit the NUMEC facility. (A)

He further advised that he has no factual information or knowledge of any diversion of nuclear fuel from NUMEC to a foreign government. The only knowledge he has regarding this question is what he has read in official reports and what he has received in the various briefings he has attended. (S)(u)

(b)(1)(4)(b) GOLDBERG does not have any knowledge or information regarding any contact SHAPIRO may have had [REDACTED] (C)

He has never had any direct involvement in any investigation concerning the diversion of nuclear fuel.

GOLDBERG has never been approached by any representative of NUMEC or by any other official of this Government to intercede in the Government's investigation on SHAPIRO's behalf.

GOLDBERG finally advised that he has no idea from what source SHAPIRO received the money to pay the penalty imposed on NUMEC for the loss of nuclear material.

GOLDBERG reiterated the fact that he has no first hand knowledge or information regarding the allegations against NUMEC. The only information he has is from what he has obtained from briefings and various reports provided to the Commission.

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by SA [REDACTED] b7c/1 Date dictated 10/24/79

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10/29/79

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LEE VAN GOSSICK, Executive Director for Operations Nuclear Regulatory Commission (NRC), 7735 Old Georgetown Road, Bethesda, Maryland, was interviewed on October 25, 1979. GOSSICK was informed by interviewing Agent that the Department of Justice had instructed the Federal Bureau of Investigation (FBI) to investigate allegations that the NUMEC Corporation of Apollo, Pennsylvania, and the head of NUMEC at the time, ZALMAN SHAPIRO, ~~may~~ have diverted nuclear material ~~in violation of U.S. Federal law~~. GOSSICK was informed that he was being interviewed concerning any knowledge he may have regarding this matter.

(b)(1)(4)(b)

GOSSICK advised that he is a retired United States Air Force Major General and is a former Commander of the Air Force Systems Command based at Andrews Air Force Base near Washington, D.C. (WDC). GOSSICK advised that he began employment with the Atomic Energy Commission (AEC), the predecessor to the NRC, in 1973, following his retirement from the United States Air Force.

GOSSICK explained that his first direct involvement in the NUMEC matter occurred in approximately June, 1977. At the time, GOSSICK was occupying the position of Executive Director for Operations and was instructed to represent the NRC in this matter by giving testimony before the Subcommittee on Energy and Environment of the Committee on Interior and Insular Affairs of House of Representatives, which was chaired at the time by Representative MORRIS UDALL. GOSSICK explained that the Committee was attempting to resolve the NUMEC matter, specifically and in general, to study allegations of inadequate safeguards in the domestic nuclear industry. GOSSICK testified before this Committee on July 29, 1977, and the results can be found in House of Representatives publication 95-23 entitled Allegations Concerning Lax Security in Domestic Nuclear Industry. GOSSICK advised that he also testified before the Subcommittee on Energy and Power of the Committee on Interstate and Foreign Commerce. The results of his testimony can be found in House publication 95-66.

Regarding his testimony on July 29, 1977,
~~GOSSICK advised that he was criticized for being less than~~

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candid with the Committee in that he answered a particular question regarding any existing evidence of diversion by NUMEC by saying the NRC had no evidence. GOSSICK advised that in retrospect, his response was poorly worded and should have been that there was "no conclusive evidence" of a diversion of nuclear fuels by NUMEC. GOSSICK defended his mistake by noting that the Commission of the NRC was without a quorum and as such, GOSSICK was acting head of NRC until a new Chairman of NRC could be selected. Because of this, he was required to testify without having been properly briefed on the NUMEC matter. GOSSICK advised because of the subsequent furor over his testimony, a joint investigation was conducted by the Office of the Inspector General and Office of General Counsel of NRC, which resulted in a report which has both a classified and unclassified version. GOSSICK advised that the report concluded that GOSSICK's statements before the committee were "incomplete" and not intentionally misleading.

GOSSICK, in response to questioning, stated that to the best of his knowledge, he has never met ZALMAN MORDECAI SHAPIRO. GOSSICK further advised he has never visited the NUMEC facility in Apollo, Pennsylvania.

GOSSICK advised that he has no direct factual knowledge of any diversion of nuclear fuel from NUMEC to a foreign government.

[REDACTED] (c) [REDACTED] (b)(1)(2)(a) (b)(1)(4)(b) (c)]

GOSSICK advised that he was never involved in any investigation concerning diversion of nuclear fuels. GOSSICK opined that General Accounting Office (GAO) may have conducted an investigation into this matter, but GOSSICK was never interviewed.

GOSSICK advised that at no time was he ever approached by a representative of NUMEC or by an official of the U.S. Government to intercede in the Government's investigation on SHAPIRO's behalf.

[REDACTED] (b)(1)(2)(a) (b)(1)(4)(b) (b)(1)(4)(b)]

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Mr. GOSSICK could offer no further pertinent information.

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JOSEPH M. HENDRIE, Chairman of the United States Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed by Special Agent (SA) [redacted] regarding the investigation of the NUMEC company. HENDRIE provided the following responses to the questions provided by the Department of Justice:

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He recalled visiting the NUMEC facility as an employee of [redacted]

b7c/2

[redacted]

HENDRIE does not have any factual knowledge or information of any diversion of nuclear fuel from NUMEC to a foreign government.

(b)(1)(4)(b)

[redacted] (c)

HENDRIE does not have any information of any contact SHAPIRO may have had [redacted]

(b)(1)(4)(b)

[redacted] (c) He can not elaborate on this point any further. (c)

HENDRIE has never been approached by any representative of NUMEC or by an official of the United States Government to intercede in the Government's investigation on SHAPIRO's behalf.

Finally, he advised that he has no idea where SHAPIRO received the money to pay the penalty imposed on NUMEC for the loss of nuclear material.

(b)(1)(4)(b)

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by SA [redacted] b7c/1 Date dictated 10/18/79

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FEDERAL BUREAU OF INVESTIGATION

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10/22/79

Date of transcription

b7c/1

ROBERT T. KENNEDY, Commissioner, United States Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed by Special Agent (SA) [redacted] regarding the investigation of the NUMEC company.

KENNEDY hereafter provided the following responses to questions provided by the Department of Justice (DOJ):

KENNEDY advised that he has never met ZALMAN SHAPIRO, nor can he recall ever visiting the NUMEC facility.

He does not have any factual knowledge or information as to diversion of nuclear fuel from NUMEC to a foreign government. The only information he can recall on this subject matter is from what he has read in the numerous briefings and reports.

(b)(1)(v)(b)

KENNEDY has no first hand information of SHAPIRO [redacted] He can not recall which report stated this, nor could he elaborate any further on it. (S)

KENNEDY has never been involved in any other investigation concerning the diversion of nuclear fuel. He was interviewed at one time regarding the accuracy of testimony of then Executive Director LEE GOSSICK. The interview was not specifically on the matter of diversion per se, but rather covered a wide scope of various subject matters.

KENNEDY has never been approached by a representative of NUMEC or by any official of the United States Government to intercede in the Government's investigation on SHAPIRO's behalf.

KENNEDY finally advised that he has no idea where SHAPIRO received the money to pay the penalty

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imposed on NUPEC for the loss of the nuclear material.

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FEDERAL BUREAU OF INVESTIGATION

11/13/79

Date of transcription

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DR. ROGER J. WATSON, Chairman, COMRAE Task Force, Nuclear Regulatory Commission (NRC), 7920 Kerfolk Avenue, Bethesda, Maryland, Room 1114, phone 492-7517, was interviewed at his place of business regarding any knowledge he may have of the diversion of nuclear fuel from the KWEC Corporation facility at Apollo, Pennsylvania. Special Agent (SA) [redacted] identified himself by display of credentials, after which Dr. WATSON voluntarily provided the following information: (P)

b7c/1

WATSON began working for the old Atomic Energy Commission (AEC) from [redacted]

b7c/2

In 1974, WATSON began working as a Technical Assistant for AEC Commissioner DOUB and was introduced during this period to the question of nuclear safeguards. In 1975, WATSON was moved to a branch within NRC, which dealt with safeguards, and then became introduced to [redacted] as a professional dissident within AEC and later NRC, and in 1976, wrote letters to both President FORD and Congressman DWALT. These letters brought up several embarrassing points concerning nuclear fuel and reactor safety, which NRC could not at that time answer satisfactorily. NRC responded to [redacted] letters by naming WATSON Chairman of a task force to look into [redacted] allegations (P)

As Chairman, WATSON controlled the task force and was responsible for the task force's decision to overlook the question of the old KWEC fuel loss. WATSON stated that at the time, he was new to the question of fuel losses and when the issues of the fuel loss at KWEC was introduced to the task force, because it was approximately ten years old, WATSON decided to overlook it in favor of more current

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by [redacted] Date dictated

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matters. MATTSON regrets now not having made an issue of the loss at Apollo NUMEC; however, once they had decided to avoid it, and that matter had become a topic in the public media, they could not then logically go back and conduct an investigation. (S)

(b)(1)(2)(a)

(b)(1)(4)(b)

(b)(1)(5)(a)



(b)(1)(4)(b)

(c)

(S)

MATTSON never met ZALMAN SEAPIRO, never visited the Apollo facility, never met any employee of NUMEC, never heard from anyone in the U.S. Government regarding halting any investigation, and has no factual first hand knowledge of the alleged loss of nuclear fuel at the Apollo facility. (S)

As an afterthought, MATTSON mentioned that Mr. MICHAEL WARD of Congressman DINGLE's Office on Capitol Hill had accumulated a voluminous file on the SEAPIRO-NUMEC matter and on one occasion told MATTSON that "SEAPIRO may have been an unknowing participant in the NUMEC loss." MATTSON feels WARD has a fair amount of knowledge, although much of it may be second hand knowledge on the subject, and feels that WARD should be interviewed.

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11/14/79

Date of transcription

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Mr. **GEORGE W. MC CORKLE**, Chief, Physical Security Licensing Branch Division, Nuclear Regulatory Commission (NRC), 7915 Eastern Avenue, Silver Spring, Maryland, telephone 427-4018, was interviewed at his place of employment regarding any knowledge he may have of the loss of nuclear fuel during the 1960's from NUMEC Corporation's Apollo, Pennsylvania, plant. Special Agent [redacted] identified himself by display of credentials, after which MC CORKLE voluntarily furnished the following information: (P)

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MC CORKLE retired from the United States Air Force (USAF) in 1974 and joined the old Atomic Energy Commission (AEC), then the NRC in January, 1975. Before NRC, MC CORKLE had been working [redacted]

[redacted] In the mid-1960's, MC CORKLE had been a Colonel in the USAF attached to Offut Air Force Base in Nebraska. (P)

In March of 1976, MC CORKLE first became aware of nuclear material missing from NUMEC's Apollo plant. It came to his attention because of a phone call MC CORKLE took late one working day when no one else could be reached to handle the call. After this phone call (MC CORKLE could not remember who called), it came to MC CORKLE's attention that NRC was trying to write a set of regulations to cover future incidents such as NUMEC. During this period there was a joint memorandum being authored by Mr. THORPE and Mr. MC DOWELL of Energy Research and Development Administration (ERDA) and General STARBIED's section of the Military Applications Branch of ERDA. MC CORKLE thinks the memorandum may have been addressed to the NRC; however, he is not sure. MC CORKLE was asked to brief members of NRC on the status of the memorandum and among Commissioners present, MC CORKLE remembers Mr. ROWDEN, who was then Acting Chairman because former Chairman ANDERS had left the Commission to become Ambassador to Norway. Commissioner KENNEDY was also present at the briefing. MC CORKLE thinks the date was in March of 1976 and MC CORKLE told the Commissioners that he had just become aware

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(b)(1)(4)(b)

(b)(1)(4)(b)

of the situation the day before, but that there was a question of the possible diversion of nuclear fuel from Apollo NUMEC [REDACTED] MC CORKLE thinks that prior to this briefing, the Commission members felt that the question of a diversion [REDACTED] was merely speculation; however, after this briefing, he thinks that they felt there was some possibility of the diversion having actually happened. MC CORKLE also briefed the Commission members on the Division of Safeguards' new added measures put into effect since the 1960's, to guard against losses

MC CORKLE explained that the method for accounting for nuclear fuel was to calculate the amount of material that came in, the amount of material that came out after processing, and determine whether or not a loss had occurred. Because the nuclear material actually changed forms several times during processing, a nominal loss is expected. It was obvious after events which occurred in the 1960's that a better accounting system would have to be developed. This is a question which NRC is still trying to resolve. However, physical safeguards have been greatly upgraded since the 1960's to prevent actual theft of materials.

Because MC CORKLE was in the Air Force in the 1960's, he never met ZALMAN SHAPIRO. MC CORKLE did visit the Apollo plant in mid 1977 when he was inspecting physical security systems; however, the Apollo plant was then run by BABCOCK and WILCOX. MC CORKLE added he has no factual knowledge of the incident involving fuel loss under SHAPIRO, has no knowledge of SHAPIRO's finances, and could not provide any positive first hand information regarding this loss.

MC CORKLE was interviewed by NRC's Office of Inspection and Audit approximately 9 - 12 months previously, and gave them a deposition basically as is stated above.

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b7c/2

[redacted]
Office of Policy Evaluation, Nuclear Regulatory Commission (NRC), 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed (X)

b7c/2

(b)(1)(4)(b) (X)

[redacted] informed that the Department of Justice has instructed the Federal Bureau of Investigation (FBI) to conduct an investigation into the alleged diversion of nuclear fuel [redacted] by the NUMEC Corporation and its President during the 1960's, ZALMAN MORDECAI SHAPIRO. (X)(X)

b7c/2

[redacted] was originally with the Atomic Energy Commission (AEC) prior to joining the NRC, and has a total of twenty-one years with the Government. [redacted] advised that his first contact with the NUMEC matter occurred in 1968, when he joined the regulatory staff of AEC. Prior to this, he had been associated with the [redacted] working [redacted] his first contact with NUMEC was in the capacity of writing regulations regarding control of nuclear materials and rules relating to materials unaccounted for (MUF) (X)

b7c/2

[redacted] he visited the NUMEC plant in Apollo, Pennsylvania, as part of a six to twelve man inspection team. During these inspection tours, the team would conduct an inventory of materials and question NUMEC management in depth about their accounting procedures. [redacted] the NUMEC facility at Apollo, Pennsylvania, was devoid of adequate physical safeguards to insure proper handling of the nuclear material. In connection with these inspection tours, [redacted] SHAPIRO on two or three occasions, and in all cases, it was at the beginning of the tour of the NUMEC plant. These were introductory meetings, in which all six to twelve members of the inspection team were included. [redacted] that the principle contact of the group was with General Manager (First Name Unknown) WEBBER, NUMEC's Nuclear Material Manager JAMES LOVETT. (X)

b7c/2

[redacted] did not have any factual knowledge of any diversion of nuclear fuel from NUMEC to [redacted]

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a foreign government. (S) u

b7c/2

(b)(1)(4)(6)

[redacted] on no occasion did he observe or become aware of any contact SHAPIRO may have had [redacted]

b7c/2

[redacted] (S)(C) has never been involved in any investigation concerning diversion of nuclear fuel, nor was he ever approached by a representative of NUMEC or the U.S. Government to intercede in the U.S. Government's investigation on SHAPIRO's behalf. (S) u

[redacted] that he does not know from what source SHAPIRO received the money to pay the penalty imposed on NUMEC by the Atomic Energy Commission for the loss of the nuclear material. (S) u

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10/12/79

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MARCUS A. ROWDEN [REDACTED]

[REDACTED] WAS

interviewed. ROWDEN was informed that the Federal Bureau of Investigation (FBI) is conducting an investigation into allegations that a company identified as NUMEC in Apollo, Pennsylvania, and owned by ZALMAN MORDECAI SHAPIRO, may have diverted nuclear fuel [REDACTED]. ROWDEN was informed that because of his employment with the Nuclear Regulatory Commission (NRC), and its predecessor, the Atomic Energy Commission (AEC), he was being interviewed concerning this matter. (S)

(b)(1)(4)(b)

ROWDEN advised that he commenced employment with the AEC in February, 1958, as a Staff Attorney, remaining with the AEC and subsequently the NRC, until his resignation in June, 1977. ROWDEN held a variety of legal and administrative positions during his nineteen years, including membership on the NRC Commission from January, 1975, to June, 1977, and Chairmanship of the NRC from April, 1976, to June, 1977. (S)

ROWDEN's first contact with the NUMEC matter occurred in the mid-60's, when allegations were made that SHAPIRO, as head of NUMEC, may have diverted nuclear fuel [REDACTED]. At the time ROWDEN was the Assistant General Counsel for Administration and Litigation. ROWDEN advised that in this capacity, he was responsible for furnishing legal advice to the Division of Nuclear Materials Management and Division of Inspection, which at the time was conducting the investigation for AEC of the allegations against NUMEC. ROWDEN recalled that he instructed all the investigators at the time to specifically warn anyone interviewed in this case of their basic Constitutional rights prior to interview, and that the investigators were not to take any written statements from the interviewee. ROWDEN explained that he took this posture because in a previous unrelated case, AEC investigators had gone too far in their interviews without furnishing these rights, and as a result eventual prosecution by the Department of Justice was compromised. ROWDEN recalled having a telephone conversation with JACK NEWMAN, a WDC attorney who was representing NUMEC at the time. ROWDEN noted that NEWMAN was critical of ROWDEN's position. (S)

(b)(1)(4)(b)

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regarding furnishing rights and taking no written statements, claiming that this was not a criminal matter. ROWDEN advised, however, that he remained steadfast. (A)

ROWDEN then stated that in the mid 1960's, he, together with a number of senior AEC officials, met in the office of HOWARD BROWN, who was at the time, Assistant General Manager of the AEC. The group met with senior management officials of NUMEC to obtain their view of what happened to the nuclear fuels. ROWDEN noted that he suspects this was the purpose of the meeting, but his recollection on this point is not clear. ROWDEN advised that he never visited the NUMEC facility in Apollo, Pennsylvania, and recalls never having met SHAPIRO. (A)

Regarding any factual knowledge of any diversion of nuclear fuel from NUMEC to a foreign government, ROWDEN said he had no direct factual knowledge that this took place. ROWDEN explained that the first full and complete briefing he received regarding this matter was in February, 1976. The briefing came about as a result of a request by WILLIAM ANDERS, who was Chairman of the NRC at the time. ANDERS and the other commission members were concerned at the time because there were a number of newspaper articles concerning possible diversion of nuclear fuels. Also at the time an AEC employee, JAMES CONRAN, was making broad-scale as well as specific allegations of diversion of nuclear fuel to the Middle East. (A)

(b)(1)(2)(a)
(b)(1)(4)(b)
(b)(1)(7)(a)

[REDACTED SECTION]

ROWDEN concluded that at no time was he ever approached by a representative of NUMEC or by any official of NUMEC to intercede in the government's investigation of NUMEC on SHAPIRO's behalf. Lastly, ROWDEN advised he had no idea as to the source of the money SHAPIRO used to pay the penalty imposed on NUMEC by the AEC for the loss of the nuclear material. (A)

(b)(1)(4)(b)

[REDACTED SECTION] (C)

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FEDERAL BUREAU OF INVESTIGATION

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11/7/79

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b7c/2

[REDACTED] U.S. Nuclear Regulatory Commission, 1717 H Street, N.W., Washington, D.C. (WDC), was interviewed.

[REDACTED] was informed the Department of Justice has instructed the Federal Bureau of Investigation (FBI) to conduct an investigation into the alleged diversion of nuclear fuel [REDACTED] by the NUMEC Corporation and its President during the 1960's, ZALMAN MORDECAI SHAPIRO. (S)

(b)(1)(4)(b)

b7c/2

[REDACTED] his first involvement in any fashion was in July or August, 1976. [REDACTED]

[REDACTED] advised that any information he obtained regarding the NUMEC matter derived from reports from other U.S. Government agencies or other divisions within NRC.

[REDACTED] advised that he did not have any factual knowledge of any diversion of nuclear fuel from NUMEC to a foreign government. (S)

[REDACTED] advised that on no occasion did he observe or become aware of any contact SHAPIRO may have had with [REDACTED] (S)

(b)(1)(4)(b)

b7c/2

[REDACTED] that he has never been involved in any investigation concerning diversion of nuclear fuel, nor was he ever approached by a representative of NUMEC or the U.S. Government to intercede in the U.S. Government's investigation on SHAPIRO's behalf.

[REDACTED] concluded that he does not know from what source SHAPIRO received the money to pay the penalty imposed on NUMEC by the Atomic Energy Commission for the loss of the nuclear material.

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by SA [REDACTED] Date dictated 11/1/79

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b7c/8
b7D/2

[redacted] was interviewed at his place of employment, [redacted] was advised of the identity of the interviewing agent and that he was being interviewed regarding any information he had concerning the possible theft or diversion of special nuclear material from the Numec Plant. [redacted] stated that he understood the purpose of the interview, and indicated that he had no objection to being interviewed regarding this matter. He thereafter furnished the following information:

[redacted]

said that he had absolutely no personal knowledge of any illegal or unethical activity at the Numec Corporation, and that the only information he had regarding the possible theft or diversion of nuclear material was what he had read in the contemporary public accounts in the newspapers.

[redacted] the former Atomic Energy Commission conducted an investigation regarding the missing material, and to the best of his knowledge he recalled that the company management cooperated in all ways with the AEC investigation.

[redacted] said that he did not see any inhibition on the part of the company to cooperate, except for the normal complaints about the cost of the investigation and the cost of the attempts to find the missing material.

[redacted] that his private opinion was that it would be extremely difficult for special nuclear material to have been stolen from the Numec Plant, in that a diversion such as that would require a deliberate removal from the plant. He said the chances of this occurring were virtually nil, unless a legitimate purchase order had been entered and set out, and said that, although this is a possibility, he does not know that for a fact.

Investigation on 9/14/79

at [redacted]

b7D/2

File # XX 117-363
WFO 117-273

by SA [redacted]

b7c/1

Date dictated 9/20/79

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b7D/2

[REDACTED] he has always felt that the best way to obtain special nuclear material illegally would be a legitimate order through a dummy company. He explained that in this manner, employees inside of the company would be unaware of what was occurring, and that possibly only someone the the highest level of management would know what was happening. He said that a legitimate order through a dummy company would allow the company records to be clear and free of any juggling of account numbers. He said that diversion of material from a plant internally would require too much collusion, and that there would be too many persons involved and hence, the risk of exposure would be greater. [REDACTED] added that if this is what has occurred at Numec, he would have imagined that by now someone would have talked or have let slip accidentally the fact that a theft had occurred.

b7D/2

b7D/2

[REDACTED] that normally any order for nuclear material that came in was from a company already known to the personnel at Numec and therefore there would be no suspicions regarding that company's orders. He said that, to the best of his recollection, there were small orders from companies who were unknown to the Numec people, but that orders from companies such as these required a license number from the Atomic Energy Commission on the order. He said that there were other safeguards involved also, but that, being in the Research and Development area, he did not get that involved in these type of transactions.

b7D/2

[REDACTED] that the only complaint that he had against Numec's operation was that their operations were very "sloppy". He said that he had voiced this complaint many times during his employment at Numec. He explained that he felt that the production losses were higher than they should have been for that type of an operation. He then indicated that as to where the material might have gone, he had absolutely no idea. He said that whether it "went down a sewer or what" was anybody's guess, but that he had no knowledge of any deliberate diversion or theft of the material.

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b7C/8
b7D/2

[REDACTED]

and that at no [REDACTED] ever request him to do anything that was either illegal or unethical.

b7D/2

[REDACTED] could recall [REDACTED]

(S)(4)(b)

He said that he has heard of this since through his reading of newspaper stories, but that he considers this only hearsay evidence and said that he had no personal knowledge.

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[REDACTED]

b7c/1

[REDACTED]

b7c/3

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By memorandum dated January 19, 1979, the Knoxville Office of the Federal Bureau of Investigation (FBI) furnished the results of interviews of CHARLES L. WELLES on November 17, 1978, December 19, 1978, and January 17, 1979. The results of those interviews are attached hereto.



UNITED STATES DEPARTMENT OF JUSTICE

FEDERAL BUREAU OF INVESTIGATION

Knoxville, Tennessee

January 19, 1979

In Reply, Please Refer to
File No.

2

CHARLES L. KELLER

This memorandum reveals the results of interview of Mr. CHARLES L. KELLER, Assistant Manager for Manufacturing and Support, U. S. Department of Energy, Oak Ridge Operations, Oak Ridge, Tennessee, by a Special Agent of the FBI. Mr. KELLER was interviewed on November 17, 1978, December 19, 1978, and January 17, 1979, and this memorandum represents a synopsis of the three interviews. In the interest of clarity the results of interview of Mr. KELLER will be divided into three areas. The first a description of the arrangements under which private industry could possess enriched uranium during the 1960s, the second a background summary and third information regarding Numec.

I. ARRANGEMENTS UNDER WHICH PRIVATE INDUSTRY COULD POSSESS ENRICHED URANIUM.

First of all, a company would have to get a license from AEC to have physical custody of the material. To get a license they would have to (1) prove financial resource sufficiently large to cover the value of the quantity of material they wished to have in their custody at any time, (2) prove that they were technically capable of handling the material safely, and (3) could provide safeguards for the material to the extent specified by the AEC. Having gotten a license the company could then enter into several types of arrangements to obtain material. They could sign a lease agreement with the AEC whereby the AEC would provide them material for which they were financially liable and physically accountable. The company paid the government a fee (use charge) based on the value of the material for which they were responsible and paid full value for any material lost. Losses were to be paid for as soon as known and a physical inventory was required at least annually with payment for any losses established as a result thereof.

*Page 66-71 removed per DOE letter
4/10/85 & 6/10/85 5668 signed by 6/10/85*

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CHARLES L. KELLER

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Under the license lease arrangement materials could be shipped from one licensee to another with or without transfer of lease responsibility back to the government. Thus, Company A could (1) possess material under his lease for which he had responsibility back to the government, (2) possess material from Company B but not the government (Company A could hold material under (1) and (2) at the same time), or (3) Company A could receive material from Company B with transfer of full responsibility to the government if the transaction was approved by the government. In (2) Company B would remain responsible to the government; in (3) Company B would be relieved of responsibility. Comingling of materials identifiable to different lease accounts was not permitted without agreement between the leasees and that agreement approved by the government.

The second manner in which a company could possess material was under a station account. As in the first case a license was a prerequisite. If the company entered a contract either directly with the AEC or with one of its cost type contractors and such contract required the use of enriched uranium the latter would be provided as government furnished material with the company being financially and physically responsible for the material but would not be required to pay use charges on material and could be allowed some agreed upon level of losses before payment for losses became effective. The individual contracts forbade comingling with another contract or with leased material unless specifically agreed upon by the parties concerned. The contracts generally called for return of material and payment for losses within some specific time frame after completion of deliveries of product under the contract.

As work for the government and its contractors increases in the private facilities, the problems related to segregation of material by contracts, the red tape relative to approvals for comingling became onerous to all concerned so a new arrangement called the Supply Agreement was developed for providing material for use on government contracts. The Supply Agreement paralleled the lease agreement in many respects. A license was required, the company was required to pay use charges but these were offset through the issuance of credit vouchers in amounts agreed upon under each contract, the company was financially responsible for losses though credit vouchers could be issued to offset such costs in whole or in part.

CHARLES L. KELLER

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The Supply Agreement permitted comingling of materials from various government contracts but not with materials held under a lease agreement or under a station account unless agreement was reached among the appropriate parties.

It should be noted that during the time period under discussion a company could own source materials (virgin and depleted uranium) and mixing or comingling with any of the above accounts for enriched uranium could be done only with prior approval of concerned parties.

II. BACKGROUND INFORMATION

During the 1960s scrap material generated at various Atomic Energy Commission (AEC) locations was bid out to private industry for recovery of nuclear material from the scrap. The original program was started by the AEC New York operations office and was turned over to the Oak Ridge operations office in 1960. In June of 1962 AEC Oak Ridge operations office took over the responsibility of nuclear material accountability. This responsibility was handled by the Oak Ridge operations office from 1962 until January 1, 1968, at which time it was turned over to the Nuclear Regulatory Commission

One of the functions of nuclear material accountability was audit operations. AEC tried to make sure that the various accounts (described above) were kept proper. What could happen was that a company could shift material from a lease arrangement to station arrangement but prior AEC approval was required. This was to insure that a company did not move a shortage from an account where they had to pay for the loss to an account where they did not have to pay for any losses.

Accounting for the nuclear material contained in scrap was a very difficult procedure in that there was always differences in the amount that a shipper indicated that he was sending and in the amount that a receiver indicated that he had actually received. Mr. KELLER indicated that there was an intricate procedure of weighing, sampling and analysis of the various materials to come up with a statistical amount of material that should be on hand but that application of these procedures in the early 1960s was not followed to the maximum extent.

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CHARLES L. KELLER

III. NUMEC

The first survey of the Numec facilities by Oak Ridge operations covered the period from June 1, 1962, until June 30, 1963, and a report was issued in October of 1963. An on site survey was conducted in July or August of 1962. The last survey covered the period October 1, 1966, to September 30, 1967, and a report was issued in February of 1968. In the case of Numec when a physical inventory was conducted there was difficulty reconciling the physical inventory with what the books indicated should have been on hand.

Mr. KELLER said that because Numec had a poor system of books it was difficult to trace the nuclear material through the system and that the Atomic Energy Commission could not do a good job of certifying the inventories. This situation went on for some period of time and reached a culmination when Westinghouse sought to close out a contract, Westinghouse Astro Nuclear Lab Purchase Order 59NP12674, which involved material provided under the second type of leasing arrangement. It was determined that fiftytwo kilograms of enriched uranium were missing.

Thereafter, the situation became confusing in that first Numec indicated that the material was probably located in various filters but that when AFC checked the filters they could not account for the loss of the material. Numec then claimed that the material was buried in various dumps in the form of waste but when the dump was exhumed the material could not be accounted for. Mr. KELLER said that in this type of a situation you finally reach an end point beyond which you cannot go so that you can only say that the material is gone and you are not able to prove where it went.

Numec's plant was a "dirty operation" in that their procedures for handling uranium were very sloppy and the material was spread all over the facility. Mr. KELLER said that Numec Company placed facilities in very illogical places and that in Apollo, Pennsylvania, they took over an old steel fabrication building and tried to modify it to a uranium recover operation. He said that he would describe Numec's overall operation as "hand to mouth" and that they were always short of cash. He recalled that they were very hungry for work and that they would bid on jobs whether they could take them or not.

CHARLES L. KELLER

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With regard to the plant at Apollo, Pennsylvania, Mr. KELLER said that the employees were former steel workers and that the plant was basically very dirty. He said that he could see very well that a major part of the loss was probably just due to the sloppy operations. He added that this in no way reflected on the Numec management because he recalled that he was in the plant several years after ORO had the responsibility for the Apollo operation and that the plant was still dirty.

His gut feeling is that Numec probably lost a major part of the material through mishandling and sloppy operations. He said that he could not swear to this if he were asked where the material was but that his opinion was that he just did not feel that they were smart enough to divert the material.

Additionally, to divert the enriched uranium it would have to have been taken out of the plant and Numec had a guard force who were familiar with the procedures for securing special nuclear material. Mr. KELLER felt that a great deal of collusion would have been required to remove fifty kilograms of enriched uranium. It would also be difficult to ship this amount of material to another company with forged documents because this would require collusion with someone in another plant which would be even more difficult.

Mr. KELLER said that he realized that one of the things that bothers a lot of persons is that Numec had dealings with foreign countries but he is of the opinion that they were just trying to keep their heads above water and would take work where they could get it.

Mr. KELLER said that a major portion of the problem had to do with measuring the amount of material lost through plant operations. On July 21, 1965, he attended a meeting at Numec to discuss this problem. A copy of Mr. KELLER's notes of this meeting is attached to this memorandum.

Mr. KELLER also made available copies of his notes of meetings held at AEC headquarters regarding this matter on August 5, 1965, and August 9, 1965, and further a meeting with Numec personnel on August 10, 1965, another meeting at

~~TOP SECRET~~

CHARLES L. KELLER

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headquarters on October 29, 1965. Copies of these notes are attached to this memorandum. Mr. KELLER advised that again most of the discussions during this time frame was how to set proper accountability procedures for the nuclear material.

Mr. KELLER advised that on the balance Numec was not much worse than some of the other companies in terms of loss and accounting procedures at that time. He said that during that time period procedures and policies regarding inventories had not been established and that initially an inventory was conducted once a year and that it was very difficult to establish a margin for error when an audit was conducted only one time a year.

Starting in June or July of 1968 through June of 1969 there was a program initiated where a government inspector was located at each plant managed by Numec, Nuclear Fuel Services, and United Nuclear, Inc. These inspectors found that in many cases where material was spilled the spillage was mopped up and the amount of material lost was never entered on records. They also found a large difference in the terms of what the shipper of scrap said was in the scrap and what the receiver of this same material indicated that he got. The Atomic Energy Commission then set up an observer physically on hand whenever material received was processed up to a point where the amount of uranium in the material could be measured. The AFC observers were able to reduce the difference in the amount the shipper stated he sent and the amount the receiver stated that he received from ten percent down to two percent. He said in many cases this was caused merely by employee error but that these differences when entered on accounting books could add up to significant sums of uranium and that possibly some of the amount of material lost by Numec could have been a legitimate accounting loss of this type.

Mr. KELLER then explained the term "material unaccounted for" (MUF). He said that when a survey is run, samples are taken from the nuclear material on hand and that during the course of hundreds of samples being taken there always exists the possibility of error each time a measurement is made. He said the difference between a physical inventory and book inventory over a period of time will fluctuate around a mean

~~TOP SECRET~~

CHARLES L. KELLER

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average. This difference, otherwise known as MUF, generally will show a continual slight loss which is to be expected. Individually this slight loss is not measurable but over a period of time it builds up to a significant number. Mr. KELLER said that MUF should be a small percentage of the beginning inventory plus receipts in and that this amount should be generally less than one percent. He cited as an example one plant, which has been run over a number of years, has a MUF of approximately four tenths of one percent. However, a one or two percent MUF over an amount of ten thousand kilogram becomes a fairly large number.

Mr. KELLER said another problem is that laymen who are unfamiliar with nuclear material feel that every single gram of nuclear material can be accounted for and that this simply is not so. He said that as an example it would be like making a cake you can only scrape the bowl so much but that you will still leave a small amount of material in your mixing bowl and that if you baked a large number of cakes, over a long period of time you would wind up losing measurable amounts of flour and other materials.

Mr. KELLER indicated that during a survey on September 14, 1964, Numec's overall MUF was 6.01 percent, which was an exceedingly high figure but that it should be remembered that the other companies involved in this business at that same period of time had high figures also. His notes for September 30, 1966, indicated the following figures regarding nuclear material:

NOTES RE NUMEC SURVY, SEPTEMBER 30, 1966

	Numec inventory figures *	AEC Audit figures *
Facility material	U 2360941 U ₂₃₅ 2226931	2402426 2222688 P
Process losses	U 5983 U ₂₃₅ 5707	5983) took Numec's 5707) figures

X X

*page 72 and 73 per DOE letter 4/16/83 + 6-6-85
5665 CD/any 6/1/85*

CHARLES L. KELLER

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MUF	U	(76,596)	32466
	U ₂₃₅	44500	25237

Lease Material

	U	429480	370073	
	U ₂₃₅	28109	18394	
Losses	U	67541	67541	
	U ₂₃₅	1931	(26103)	*AEC inventory showed gain

Supply Agreement	U	39702	41369
	U ₂₃₅	37072	38518
Losses	U	0	0
	U ₂₃₅	0	0
MUF	U	0	(1667)
	U ₂₃₅	0	(1446)

TOTALS

		Numec	AEC	
Inventory	U	2830123	2813868	
	U ₂₃₅	2292112	2279600	
Losses	U	73524	---) AEC had
	U ₂₃₅	7638	---) to accept
) Numec's
) figures
MUF	U	(76,596)	4696	
	U ₂₃₅	44506	28,022	

*All figures in grams of material

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CHARLES L. KELLER

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Mr. KELLER surmised up by saying that a significant amount of material was missing at Numec but that there was no way that he could say that it was stolen or purposely diverted. He said that in his dealing with the principals at Numec and the other individuals responsible for the accounting procedures he never suspected any of them of being dishonest nor did he ever have the feeling then or now that the material was deliberately stolen. (He said essentially the problem in a nutshell is that the material was not there that the books said should have been there but there is absolutely no way to say how or where it went. His opinion is that sloppy plant operations, lack of records and improper sampling probably was the reason for the loss. He indicated, however, that if he was planning to steal nuclear material he would use exactly this kind of an operation, i.e., sloppy handling and accounting procedures.)

inches per DOE letter 4/10/85 + 6-6-85
56683 CD/only 6/11/85

9*

~~TOP SECRET~~

*unless per ME letter 1/16/54 6-6-65
5668 s.d. party 6/11/63*

ABBREVIATIONS USED

KAPL	Knolls Atomic Power Laboratory
LE	Limit of Error or Low Enriched
LRL	Livermore Radiation Laboratory
3M	Minnesota Mining and Manufacturing Company
NBL	New Brunswick Laboratory
NFS	Nuclear Fuel Services
PWR	Price Water House
SA	Supply Agreement
SNPO	Space Nuclear Propulsion Office
WANL	Westinghouse Astro Nuclear Laboratory
WEC	Westinghouse Electric Corporation

~~TOP SECRET~~

~~AX~~

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Visits --

7-21-65 at NUMEC-

Thru 7-20 midnight weighed 43 drums out of 192. 4-12 shift 7-20 weighed 10. Average approx. 8/shift.

1 of 2 scales out of order and requires new parts. Take couple of weeks to get repaired.

Net weights generally in agreement with Shipper. A few outside the L.E.'s Some of WANL tares arrived at poorly, e.g., w/o lids and tape.

Weighing by Accountability personnel. Only one on off-shifts and he is often required to do other things.

Plan to start processing three dissolution after approx. 100 drums are net weighed.

Plan to make test run on carbonate treatment 7-21.

7-21-65 Meeting with NUMEC.

Howard Brown, D'Amico, George, Nomkin, HQs., S. A. Weber, Pepkowitz, Newman, Schwartz, Shapiro, NUMEC, Schoeder, Yates, SNPO-C, Klein, SNPO, HQs. Keller, Oscar Gray, NUMEC.

Klein outlined purpose of meeting and desire to get detailed review of facts without decision being rendered today. Desire to walk through storage facility

George - Summary of material under contract in question -

	<u>U</u>	<u>U-235</u>	<u>Value x 10⁻³</u>	<u>Kgs. 235</u>
Net Del as UF ₆	1087 kgs.	93 +%	12,181.4	1012
Returns				
Heels	.8	93 +		.7
Prod.	765.1	93 +		712.5
Rec. Scrap & Sample	144.3	Various		133.1
Past 4/30	84.0	Various		72.8
Total Retns.	994.4	varies	11055.1	919.1
Inv. 6-30-65*	94.0	ave 43%	475.7	40.7
Net Unacct.	1.4		650.6	52.6

*Includes 728 filters @ est. 48 grms U/Filter @ 65% U-235.

*Under per. Doc letter 4/10/65 + 6-6-65
5668 507/ang 6/11/65*

~~TOP SECRET~~

Shapiro - Question remains on content of filters and assay. Feels more there than above indicates. Another area we inventoried that will result in return of material on which they have paid loss charges. This is material that has buried and processed as lab. waste.

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Max. amount down drain is 4 kgs. U-235/yr. max. on all NUMEC work per their survey of losses.

2600 kgs. HE U processed during period they had WANL order (Includes the 1000 kgs on WANL order).

3 Kem wipes/hr/technician at ave. 1 gr. U per wipe. These had been buried up to approx. 1 year ago. Have stopped burial.

17,088 lb. waste buried \$125,000 material recovered at approx. 10% enriched (from L.E. Mat).

27,000 g. waste on hand - ave. enr. est. @ 80-90% U-235 or approx. \$1.5X 10⁶ value of material on straight ratio basis.

This buried material has not been inventoried neither has the burnables. (Combustibles in their U mine after the filters).

(NUMEC has paid over \$1.5 X 10⁶ to AEC for losses.)

Did not make known to our Survey Group at time of recent inventory "out of embarrassment."

Approx. 120 Kgs. of L.E. material recovered from burning combustibles for \$125,000.

Re 48 gr/filter number this is average of numbers that ranged from 25 to 100 Filters checked a NBL as part of program approx. 1 year ago showed averages of approx. 100 grs/filter. These filters were thought to be representative of time WANL work was going on. Latest data supporting 48 gr number are more recent generation. Filters recovered at NBL ranged from 41 to 169 grs/filter on 2nd batch of 6.

2.8 to 46 grs per filter on 1st 6 checks at NBL.

Reworking filters on current basis at moment.

(What was assay of material recovered at NBL? Was assay measured or assumed?

(Doug thinks assay values were measured at NBL).

I pointed out that the "2 U mines" have materials related to all contracts done by NUMEC not just WANL order.

Weber - 75% enriched receipts

FY 1960	455 kgs.
61	612 kgs.
62	1105 kgs.
63	1435 kgs.
64	375 kgs.

Unclasp per DOE letter 4/10/85 + 6-6-85
5668 SCD/jmg 6/11/85

~~TOP SECRET~~

Active Contracts-

PWR 15 kgs. Inv.

Current Scrap

KAPL- B&W Navy fuel

(300 kgs in process)

N

\$966,000 of the 1.5×10^6 declared losses related to <75% enriched.

Last WANL scrap that is identifiable was processed in June 1965.

Stopped burial of combustibles in early 1964. Last true product deliveries under WANL contract made in late 63.

Doug raised question of whether NUMEC will enter 2nd mine on their records. NUMEC indicates that they will but what number will be bought.

A real question as to how much of their declared losses have been paid for. Navy losses 8 kgs. KAPL approx. 25 kgs. WEC equiv. 93%. Have arrangements with KAPL and Westinghouse to pay off the above losses by withholding part of payments due on current order.

228 kgs. U returned against WANL order from recovery.

Doug raised question of sampling ash from 270 filters asked since 4-30-65 to get the U-235 assay.

Can process approx. 500 drums combustibles/year. Current generation almost that much.

Klein - SNPO has closed out several similar contracts to WANL. (3M & NFS) and higher % of material accounted for.

Nomkin - raised question of non-compliance with contract isofar as mixing and blending.

Shapiro interprets this as not applying to filters, as being impractical.

Applies in his mind only to gross mixing during processing.

478 kg. order for Navy KAPL originally and subsequently transferred to B&W.

PWR core II Seed 2

1400 kgs. U 93% with Bettis are the major contracts on hand that will generate scrap. Neither of these will be Supply Agreement. Scrap recovered and returned 60 days after last product delivered.

If stopped all bidding and pulled back outstanding bids would still have to default on contracts in house and/or delay building program for next 6 months to get at cleaning up scrap for WANL. Plant booked for next 6 months.

NUMEC pay losses 8.3 kgs. plus degradation on material returned to date.

see DOE letter 4/16/85 & 6-6-83
5668 scd/pmj 6/11/83

X

Brown - Suggests 100 day of grace to establish - transfer physical inventory provisionally.

8-5-65, Headquarters Re NUMEC

Brown - Info paper read by Commission.

Need to prepare memo giving conclusions -

1. Material not there.
2. Time schedule not good.
3. What happened to material.
4. Longer we wait worse situation-considering how current we've been we may be on defensive.

~~TOP SECRET~~

Then give alternates of solution.

Ramey concerned about NUMEC being put out of business.

Alternatives

1. Wait 30 to 40 days and get better filter inventory.
2. Do 1 plus mining of buried.
3. Accept NUMEC proposal.
4. Go ahead with what is in Info Paper.

Discussed my sending letter to Shapiro saying no material under S. A. until they set up internal controls.

Question as to whether Commission wants staff recommendation. You think Commissioners will want only alternates presented without staff recommendation

Brown will try to get another paper to Commissions on Monday 8-9.

Based on Compliance survey - Only 328 drums, pails, etc. can be truly accounted for. An undetermined number were buried in Aug. 1963.

Drums vary 5 gal. pails, 35 gal. drums 55 gal.

Allegedly buried in layers in trenches 20' deep.

Buried material includes non-burnables and press sludge - 176 drums of sludge in the 328.

1368.88 grams U-235 estimated in 328 drums. Have 100 drums sludge plus 400 drums non-burnables above ground.

U content of sludge .01 to .1% of wt. of approx. 400 lb./drum. Assay 5 - 30% estimated approx. 10%.

8-9-65 Headquarters

Met with Commissioners G. M. Brown, Dick, Vinceguerra, Re NUMEC.

Seaborg seems in favor of billing for \$650,000 and then letting NUMEC return

other material as they recover. Transfer residues WANL material to S. A.

Are concerned about missing material and see need to review procedures.

*Unless per DOE letter 4/10/85 6-6-85
5668 SED/ang 6/11/85*

~~TOP SECRET~~

Concern about AEC image nationally and internationally if our nuclear material control procedures can't determine when as much as 60 kgs. of HE U lost.

No one willing to state an actual diversion has taken place but we are in no position to show that it hasn't.

8-10-65 - Duane Sewell

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Technically NUMEC excellent, particularly Pu-238.

Administratively a nightmare and have cut off doing business \$150,000 of Pu-238 Toss. NUMEC alleges in dry boxes. These to be sent to LRL.

8 kg. U-235 loss on Pluto work. May be due to analytical errors, etc. but Sewell doubts.

Returned price of electronic equipment that shouldn't have been contaminated but was with U-235.

LRL has tried to close out contract on Pu-238 for over a year. Been several exchanges of letters that have been conflicting. Cost estimates have varied by factors of 5 to 10.

8-10-65 Meeting w/NUMEC

Seaborg, Ramey, Tape, Bloch, Brown, Hennessey plus staff - Gray and Shapiro, H. Seaborg - Extreme concern about missing material. No decision on action.

Shapiro - 1st production experience on material. 1st large contract for material. Didn't go as well as expected from lab. work. Job drug out longer than expected. Came to attention during processing that loss > than expected so undertook investigation.

Shapiro described process for making UC₂.

High amount of recycle which tied up scrap recovery facility. Couldn't keep up with scrap as normally done.

A lot of cleaning up due to fact people were told to be cautious.

Shapiro told by NUMEC production & H&S personnel that paper (kimwipes, etc.) not worth recovering.

After learning losses running high he asked that burial be stopped. Then told 1 gr/kimwipe 3 kimwipes/hr/per 8 opr/shift.

Raffinate maximum 1.5 kgs. U per year from all work -per their check of raffinate. Did check with single channel analyzer and by fluorescence methods. Material samples routinely and have been since start of operations.

sent to hold tank pit filtered out then raffinate goes to 2nd hold tank for second check.

~~TOP SECRET~~ 80

Claims production people do material balance on an area basis at that time but not on process step basis.

*enclaves for DOE letter 4/10/15 + 6-6-63
5666 SED/mjg 6/11/15*

~~TOP SECRET~~

(Material balance checked in recovery area?)

When determined waste had lot of U - stopped burial (April 1964) and burned. After that 17,000 lbs. burned. Over 500 drums. Recovered \$111,000 of material average 10% U-235. Claim the material recovered was primarily from low enriched vs. high enriched before.

Discrepancy between 328 drums and 905 drums brought to Shapiro attention. (Alleges 350 drums bought plus 550 drums for purchased chemicals) 900 included WANL material and Navy fuel. Can't specify No. related to WANL only due to lac records.

NUMEC responsible for recovery. Says they've started.

Seaborg - Why shouldn't we bill you for loss and you pay with either recovery material and/or money. Pay use charges in interim.

Shapiro - To pay (or be billed) would place them in precarious position on balance sheet.

Again sad story of poor personnel in nuclear material control.

Shapiro claims they have been honest in their dealings.

Only 2 lots out of 100 of WANL were agreed upon as to content due to analytical problems. Did balance out to 44 gram difference.

Shapiro saying we have received more material as result of analytical errors. Dragged in scrap problem, i.e., [REDACTED]

[REDACTED] (b)(3) per DOE letter 6/6/95

5068 kgs -> 75% handled past 5 years per Shapiro.

Are pulling drums - opened one trench last week and started recovery on Monday.

Based on monitoring believe it contains considerable material.

Commissioners asked for recovery schedule. Going to select material by eye to get material. Air count off scrubber controls burning.

Ramey - can AEC and NUMEC work up sampling procedure. Shapiro says real -- 558 kgs HE U recovered on scrap recovery past year and returned 6000 kgs L.E. U. 1/3 of 858 on scrap rec contract - Rest from in-house.

Tape pressed for schedule for recovery.

\$100,000 estimate recovery cost by NUMEC.

NUMEC does not want to show laboratory now. Don't have enough dollars in escrow cover the \$650,000 plus what they've been accruing in losses.

Do go all out means cutting off all business and put company in financial jeopardy

per DOE letter 4/16/95 & 6-6-95
566 F.S.D. only 6/11/95

~~TOP SECRET~~

#barrels buried is estimated from # barrel purchased plus # from Chemicals purchases.

Seaborg proposes selling the material to them at this time and then ~~and then~~ they buy back they recover.

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Shapiro is to submit proposal stating what they'll do in next year and how they'll settle at that time.

10-29-65, Headquarters, Re NUMEC

George - 1963 pit of approx. 1400 lb. of combustibles processed

Approximately 30 grams U-235 recovered @ approx. 20% enriched.

Estimate there'll be about 15,000 lb. of combustibles from the pit .

Approx. 8 kgs. @ 5.5% from 62 pit.

Meeting with NUMEC

Brown, Klein, George, Kimball, Nomkin, Reisch, **Kreigsmann**, Abbadessa, Joe Smith Walker Campbell.

Gray advised Klein ready to pay based on April 30 inventory and don't want another inventory now.

Brown hard-nosed on taking another inventory.

George says Abbadessa willing to bill for 1.1×10^6 but may back off.

Is ~~this~~ as WANL contract action then have 2nd action to transfer residual inventory to S.A. and give credits. Transfer to S.A. to be adjusted based on upcoming inventory.

Brown - Bill on basis of April 30. Hold S.A. over their head - i.e., no agreement that we will put under S.A.

Gray & Newman - NUMEC joined meeting

Brown - 1st interest where is the material, i.e., 52 kgs of 93.15%. Efforts to date have failed to disclose major portion of this material.

Gray - Hopeful that large amount still show up in pits. Though no real data supports. Thinks there'll be <1% or UF after 8 years of operation in material in cracks, etc. Weber trying to put together history of all material handled to date. Thinks .5% can be accounted for in some manner. .75% would remain on UF.

Brown - We need to move ahead promptly with another physical inventory. Team under McDowell to start 11-1-65. Take 5 to 6 weeks resident and non-resident time. Ten men approx. one week then 3 men for added week.

Klein - Inventory will define quantity of material and 2nd provide basis for bill

Brown - Commission has directed rendered a bill

Nomkin - Re bill. Obligation of 1.1×10^6 under WANL ~~content~~. Covers material unaccounted for, i.e., lost; material apparently present plus material that may be there.

~~TOP SECRET~~

*including per Doc letter 4/14/65 & 6-6-65
5461 S.D. / mg 6/11/65*

~~TOP SECRET~~

Abbadessa - No alternative but to bill under contract.

Suggested billing for 1.1×10^6 w/payment of \$65,000 within 30 days. Adjustment approximately 60 days of bill to reflect results of physical inventory and transfer to S. A.

In event inventory transferred totals more as result of more being recovered the AEC pay for added material and place under S. A.

If show up less recovery NUMEC pays for as a loss.

Gray- Alternate to above re new inventory.

Explain billing on basis of w/o prejudice to what happened to material.

Not pleading inability to pay. Would hurt to pay $\$1.1 \times 10^6$ but could do.

----- Closed meeting -----

AEC

Abbadessa - Alternate to 1st proposal would be to bill for $\$1.1 \times 10^6$ and agree to bring back any material recovered and returned within a specific time (e.g., 180 days).

Under this arrangement the inventory would be for safeguards purposes only.

Brown - Inventory Monday regardless. Safeguards or transfer to S.A.

1st. Alt. the \$650,000.

2nd. Alt. Bill for $\$1.1 \times 10^6$

Inventory for safeguards

Modify contract to permit return of recovered material during specified period.

Abbadessa - If pay for material we still hold title.

Alt. 1

1. Contract amendment

a) Bill $\$1.1 \times 10^6$

b) Pay \$65,000 (\pm /30 days)

2. New Inventory.

3. Transfer to S. A. the inventory amount.

4. Adjustment \pm as recovery.

Gray - 1.1 would present some problem in 1 lump.

Pay up to \$650,000 immediately. Liquidate the rest over one year.

Alt. 2 acceptable.

Abbadessa -

1. Bill per contract approx. 1.1.

2. Provide cash payment \$500,000 - \$650,000 in 30 days.

~~TOP SECRET~~

unclase per DOE letter 4/10/85 & 6-6-85
566t SLD/jmg 6/11/85

*unclassified
JOC 10/14/85
4/26/85
576/6-85
W/H/85*

- 3. Pay 6% interest on unpaid balance after 30 days. Full payment in 12 mo
- 4. Give credit for return of material during 12 months.
- 5. Title remains w/AEC.
- 6. Conduct inventory for Safeguards purposes only.

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~~TOP SECRET~~

FEDERAL BUREAU OF INVESTIGATION

Date of transcription 1/22/79

~~TOP SECRET~~

Mr. CHARLES A. KELLER, Assistant Manager for Manufacturing and Support, U. S. Department of Energy, Oak Ridge Operations, made available a copy of a letter he had sent to HENRY MEYERS, House Interior Committee.

*enclosed per
DOE letter 4-16-85
6/10/85
5008 SLJ/mj
6/11/85*

Interviewed on 1/17/79 at Oak Ridge, Tennessee File # KX 117-365 -15
by SA [redacted] b7c/1 Date dictated 1/17/79

This document contains neither recommendations nor conclusions of the FBI. It is the property of the FBI and is loaned to your agency; it and its contents are not to be distributed outside your agency.

December 14, 1978

~~TOP SECRET~~

Mr. Henry Meyers
House Interior Committee
Room 1327
Longworth Bldg.
Washington, D. C. 20515

Dear Henry:

In accordance with your request I will try to describe the arrangements under which private industry could possess enriched uranium during the 1960's.

First of all, a company would have to get a license from AEC to have physical custody of the material. To get a license they would have to (1) prove financial resource sufficiently large to cover the value of the quantity of material they wished to have in their custody at any time, (2) prove that they were technically capable of handling the material safely, and (3) could provide safeguards for the material to the extent specified by the AEC. Having gotten a license the company could then enter into several types of arrangements to obtain material. They could sign a lease agreement with the AEC whereby the AEC would provide them material for which they were financially liable and physically accountable. The company paid the government a fee (use charge) based on the value of the material for which they were responsible and paid full value for any material lost. Losses were to be paid for as soon as known and a physical inventory was required at least annually with payment for any losses established as a result thereof.

Under the license lease arrangement materials could be shipped from one licensee to another with or without transfer of lease responsibility back to the government. Thus, Company A could (1) possess material under his lease for which he had responsibility back to the government, (2) possess material from Company B for which he had a financial and property responsibility to Company B but not the government (Company A could hold material under (1) and (2) at the same time), or (3) Company A could

*page 86-88 unless you see letter 4/4/85 & 6/6/85
5668 5/2/85 6/11/85*

~~TOP SECRET~~

Mr. Henry Meyers

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December 14, 1978

~~TOP SECRET~~

receive material from Company B with transfer of full responsibility to the government if the transaction was approved by the government. In (2) Company B would remain responsible to the government; in (3) Company B would be relieved of responsibility. Comingling of materials identifiable to different lease accounts was not permitted without agreement between the leasees and that agreement approved by the government.

The second manner in which a company could possess material was under a station account. As in the first case a license was a prerequisite. If the company entered a contract either directly with the AEC or with one of its cost type contractors and such contract required the use of enriched uranium the latter would be provided as government furnished material with the company being financially and physically responsible for the material but would not be required to pay use charges on material and could be allowed some agreed upon level of losses before payment for losses became effective. The individual contracts forbade comingling with another contract or with leased material unless specifically agreed upon by the parties concerned. The contracts generally called for return of material and payment for losses within some specific time frame after completion of deliveries of product under the contract.

As work for the government and its contractors increased in the private facilities, the problems related to segregation of material by contracts, the red tape relative to approvals for comingling became onerous to all concerned so a new arrangement called the Supply Agreement was developed for providing material for use on government contracts. The Supply Agreement paralleled the lease agreement in many respects. A license was required, the company was required to pay use charges but these were offset through the issuance of credit vouchers in amounts agreed upon under each contract, the company was financially responsible for losses though credit vouchers could be issued to offset such costs in whole or in part. The Supply Agreement permitted comingling of materials from various government contracts but not with materials held under a lease agreement or under a station account unless agreement was reached among the appropriate parties.

It should be noted that during the time period under discussion a company could own source materials (virgin and depleted uranium) and mixing or comingling with any of the above accounts for enriched uranium could be done only with prior approval of concerned parties.

Copies of the Special Nuclear Materials Lease Agreement and Agreements for Supply of Enriched Uranium for Conversion and Fabrication are enclosed.

~~TOP SECRET~~

Mr. Henry Meyers

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December 14, 1978

~~TOP SECRET~~

As one can discern from the foregoing, the performance of a nuclear materials audit was a complex matter in order to determine that all materials were properly identified by type of agreement covering them and particularly to see that losses were properly assigned. The problem was the same at all private facilities. The situation was brought to a head at NUMEC when Westinghouse sought to close out WANL Purchase Order 59-NP-12674 which involved material provided under the second of the above types of arrangements. At that point NUMEC was faced with the alternate of returning a considerable amount of enriched uranium or paying the government for the material. The rest of that story is familiar to you.

I hope that the above will be of help to you in understanding the mechanisms of enriched uranium supply to private industry during the 1960's. If you have any further questions please feel free to call.

Sincerely,

OFFICIALLY SIGNED BY
Charles A. Keller

Charles A. Keller, Assistant Manager
for Manufacturing and Support

HMS:CAK

Enclosures:
As noted above

~~TOP SECRET~~

FEDERAL BUREAU OF INVESTIGATION

1/22/79

Date of transcription

~~TOP SECRET~~

*unclass per
DOE letter
6/6/85
5095 sub
6/11/85*

Mr. CHARLES A. KELLER, Assistant Manager for Manufacturing and Support, U. S. Department of Energy, Oak Ridge Operations, made available notes taken from his personal diary pertaining to the NUMEC surveys.

(89)

Interviewed on 11/17/78 at Oak Ridge, Tennessee File # KX 117-365 -13
by SA [REDACTED] ^{MRS} 6741 Date dictated 11/17/78

~~TOP SECRET~~

6-20-62 - Lea Keller -

~~TOP SECRET~~

NEW YORK OPERATIONS OFFICE

NYOO has authorized progress payment to NUMEC to tune of \$30 - 35,000 as of yesterday. Wants Contracts, Legal and Finance contacted to see if they have any questions to follow up. Files are a mess. Not filed too well. Check Sec. Div. to see if we'll have truck in NY Area around July 1. Not a single contract has been completely closed.

7-18-62 - Oblinger - NUMEC -

NEW BRUNSWICK LABORATORY

Re scrap to referee sent GAT-7 composites 8 & 9 are low in U - 7 grams diff. between NBL & NUMEC. Would have to recomposite 129-NBL 122-NUMEC - Will referee on 7 only.

9-14-62 - Forscher -

NUCLEAR ENGINE ROCKET VEHICLE APPLICATION

Nerva Fuel - contract material UF₆ - 645 kgs. UF₆. Re need for feasibility report. Told him we would follow NY pattern also that I would prefer holding shipment until OK is given on report.

9-24-62- Fred White - called re Nerva job at NUMEC - advised him

that 11 cyls of hex were shipped last Friday to NUMEC. We have O.K'd their processing to UO₂ based on feasibility reports to NYOO but are holding up on O.K. of further processing until they give us a feasibility report which they will have in draft for review by our people who will be at the plant 9-26-62.

10-3-62 - Forscher -

Re feasibility report on NERVA fuel (Report #40). Advised him that would be sending an O.K today on this as well as the normal material.

2-10-63 - Forscher - NUMEC

~~TOP SECRET~~

Called about 10 p.m. and advised they had small fire in SS vault about 2 p.m. 2-9. Persl outside of vault heard a pop like large firecracker in vault. Upon opening door encountered

page 90-150 per doc letter 4/10/65
4/10/65 5266 5276 6/11/65

CUAL STORAGE

~~TOP SECRET~~

of small explosions resembling small firecrackers.

Persl. put on face masks and using metallex powder put out fire. Cause traced to UC_2 powder.

In process of producing UC_2 for Astro under NASA work UC_2 fines not meeting specs are collected and stored approx. 1-1/2 kgs U/ polyeth bottle. Mix w/aq. $Al(NO_3)_2$ to control rate of oxidation. Bottle caps not screwed on tight so that CH_4 formed can vent. Have been handling this way for long time w/o trouble. Think some one tight cap and a bottle blew up. 18 bottles in vault. 2 apparently broke. As soon as UC_2 exposed to air it ignited - small firecracker like explosions.

Heat charred some polyeth bottles located above bottle that exploded (U_3O_8) and below (ADU) so that when attempt was made to move bottles broke spilling contents in all 5 bottles containing 8.8 kgs. FE U involved. All station material.

Currently washing down and cleaning up area.

No radiation hazard. No disruptions to other plant operations.

Did not require fire assistance from outside. Fire out and clean up started within 2 hrs. Some persl entered in regular street clothes which were picked up for decontamination.

Forscher wants to know what reports are required. Told him I would check and advise.

Story on Pu contamination due to leaking package. Approx. two and one-half years ago NUMEC got contract from NYO to dev. technique for decontaminating and recovering precious metals. NUMEC asked for samples and NYOO sent them 14 crates of material

~~TOP SECRET~~

AMMORIA
DI-URINATZ

~~SECRET~~

Blackhawk Material
LABORATORY

of which NUMEC opened two. Process developed indicated cost of \$150,000 to recover the materials. NYOO turned decision, contract was complete but NYO left crates of material w/NUMEC. Recently NUMEC asked NYOO to take stuff off their hands since needed space. N said ship to BNL by commercial truck. NUMEC asked if couriers needed NYOO said no and advised that material was packaged in accord w/ICC regs., but asked NUMEC to put steel bands around boxes which was done. Shipment rehandled several times between NUMEC and Jersey City where leak was discovered . Left NUMEC 1/4 and arrived BNL 1/14. Check of leaking package revealed 15 gal. carboy contained in internal box surrounded by other box. Carboy had ceramic stopper taped in but not wired. Outer box marked to show upright position but had heavy bracing at top that might have been mistaken for bottom. Think someone up ended in handling and solution leaked. NUMEC had never been advised that Pu solutions were in shipment. Traced back to being a strip solution from Englehard who had decontaminated some Pu from Hanford.

No one has pointed finger at NUMEC on this. They hadn't opened package so looks like original shpper did a poor job of packaging. Question in my mind as to why NYOO didn't specify exclusive use truck. Forscher said after incident it was learned several millions of dollars of precious metal was in shipment.

2-11-63, Smith, Heacker, L. Keller, Marshall, Range -

Are any bio assays being run? Was this in vault with steel racks?
 Is there any forced ventilation in area, did anything get airborne into neighboring plant area.

Marshall will advise Doug George. I will advise Woodruff, Range will alert PI after I talk to Woodruff.

~~SECRET~~

2-11-63 - Forscher - (FRED FORSCHER NUMEC EMPLOYEE) ~~TOP SECRET~~

No public press releases. At time of fire dumb waiter door to 2nd floor open so smoke went to 2nd floor where further sucked out by ventilator. Roof around ventilator read 600 cts/min/100 sq....

2" snow on roof. Checked outside bldg. no contamination.

All persl. having urine analysis. Total area to be decontaminated not known still checking. Will have to clean vault, roof around ventilator, hallway, upstairs lab. area.

Scrub water from bottle storage area ran .1 gr. U/l.

2-11-63- RArmstrong

Sapirie wants me to call Milt Klein in Finger's office on NUMEC deal.

2-11-63 - George Kleg, DOD and Dick Smith -

Advised him of fire NUMEC . Copy to George and Nelson. Send TT.

2-11-63 Forscher -

Called me at home - NUMEC shut down all U operation 4 p.m. today. Figure this is best way to keep from tracking stuff around until they get decontamination done. Thinks they'll be able to resume about 4 p.m. 2-12.

In checking got some reading of 1000 - 1200 cts/min. In vault they have shelving down to 50 cts now w/300 - 500 on walls which they plan to paint.

1st 8 liter of scrub water from floor ran 8 gr./liter. 2nd washing w/8 liters had .3 gr/liter.

Urine samples have been sent off for analysis and results not expected for several days.

~~TOP SECRET~~

NUMEC has held meeting to review procedures to see what might be done to prevent reoccurrence of this type incident. Now plan to dissolve up UC

~~TOP SECRET~~

scrap promptly in 350 gr. U batches and to recover as soon as they get sufficient to make a run (approx. 5 Kgs.) Forscher says they'll make a run at least once per week under present operating levels.

Asked Forscher to prepare a report on the incident and give us a run-down on changes in procedures which they plan.

Forscher advised that Navy people from Schenectady and PNROO plan to NUMEC Friday for a nuclear safety review on handling of Navy core mat (Brotsky, Reaves and Scott were names that he mentioned as coming).

Forscher thought we might want some of our people to be there. Told him I appreciated notice and that I thought we'd want copy of any report they made.

NUMEC checked shoes on all persl leaving plant today and none exceeded 500 cts/min.

2-12-63 - George Kleg -

Read me a note that he had written on the NUMEC. Made few minor corrections. Also advised him of latest info from NUMEC.

3-11-63 - Bob Ohlinger - NUMEC

Re 31-D and 25J. Switched to Lea.

3-11 - Chuck Rosen - NUMEC

Invoice 8-61 . Have no record of being paid. Have we rec'd cancelled check. (We requested payment of \$27,768 + against \$32,275 bid).

3-14-63- Forscher-

Re fire loss. Quantity est. 500 Astronuclear job 1231 and Bettis job 85; assigned equally to the two. Haven't recovered yet. Is in a mixture of Metal X powder.

Fred will be here next week Tuesday or Wed. to discuss various programs.

All urine analyses were O.K on persl involved in the fire.

PITTSBURGH NAVAL
RESEARCH OPERATIONS
OFFICE

~~TOP SECRET~~

3-21-63 - Forscher

~~TOP SECRET~~

Re heels credit in hex cyls. Washington has put in fine print on no credit. on AEC material. Would like to send in proposal that they could send back heels and pay us for cleaning. Told him to go ahead and send in.

Objects to the withholding of full payment until all material is out of the plant. Hold 5% of value of material or not to exceed 50% of contract price. Suggested approach through AIF. Discussed proposed supply contract.

ATOMIC INDUSTRIAL FORUM

Cleaning inside of shipping containers. Need to clarify responsibility. Interested in the status of 2nd draft of holding contract. Need to provide procedures used to analyze returned material. Desire for partial payments as material is returned.

5-8-63 - Forscher -

Bettis wants complete feasibility report under provisions of contract they are writing with NUMEC. Fred doesn't want to do. Advised Fred that we would make results of our surveys and feasibility reports available to other interested offices. Also noted that AECPR permits use of license approval to cover contract work. Gave Forscher reference to revised AECPR which allows latitude on H&S provisions, i.e., makes reference to requirements for licensing as being binding.

5-9-63 - Beltram - NUMEC

~~TOP SECRET~~

Dissolving of batch they were going to start on tomorrow. Now find different alloy and character of scrap. Check SC 06 & SC 11. Problem on giving 7 day notices to start another lot. 40E. 2 day job. Lot 40-C U-Zr sub assys. cut sections some have Ti metal spacers some

~~TOP SECRET~~

instrumented which means added Cu, Al₂O₃, graphite. Westinghouse Ches
Told Beltram we'd examine need for advance notice on processing
to see if this could be made the exception rather than the rule.

5-13-63 - Forscher-

[REDACTED]

(b)(3) pw
Joe letter
6/6/85

5-13-63 Kushner- PNRO

Re NUMEC contract with Bettis. Suggested that they use provisions
of article 5e of standard lease agreement to cover.

6-7-63 - W. B. Knight - Bettis Purchasing

May 18 ltr. from NUMEC - Feasibility Report 42 - Bettis wants
copy of report on individual reports.

~~TOP SECRET~~

7-18-63 - Fred Forscher -

~~TOP SECRET~~

Re 7401 changes on health and safety. Explained our interpretation i.e., from here on out we'll be concerned only in respect to our ORO contracts. NUMEC unhappy about dispersion of responsibility to many s Fred wanted to know where to complain. I suggested Tremmel also that Fred might want to get AIF to register objections. Advised Fred that while Doug Geroge has said he is only interested in the security of the material behind this is a feeling that he needs essentially all the info in a feasibility report to determine that security is adequate.

9-3-63 Bob Fasulo - PNRO

Going to be forced to get depleted metal. Navy funded order. Wants to know if we could furnish metal. Told him we could do. Would assume.

Re agreement NUMEC and Cheswick on processing scrap. NUMEC ltr. indicated agreement on method of processing. Cheswick says no agreement.

5-30-64 - Charlie Luke- NUMEC

NUMEC wants to modify the Y-12 foam glass container and get acceptance w/o test. Want to use 18 gallon drum (ICC Spec 17H). What spec drum did Y-12 use.

NUMEC will use full drum height approx. 32" inside length. Plan to use 5" Sched 40 pipe 18-1/2" long with pipe cap ends. Luke would like opinion as to likelihood of this cutting thru the foam.

Y-12 recognized this problem in regard to buttons.

NUMEC plans to use for ADU. Gross wt. of pipe loaded is 42#. Luke worried about pressure build up in a fire that would cause ADU to break

down. ~~TOP SECRET~~

~~TOP SECRET~~

Luke wants to know how compressive strength data was computed and how it can be interpreted. Will a 2" x 2" x 6" high piece stand 400# load.

Luke worried about closure on even the Y-12 drum. Is planning to suggest an angle iron X in top to hold foam in place (and inner container) X would bolt to drum sides (asked Lea to follow thru).

5-19-64- Haycock -

Finance and accountability as we do leased materials. Mixed under Chicago 2 symbols 1 AEC material. 1 for leased plus supply - latter report to OR. We wouldn't survey but furnish the material info.

7-14-64 - Tom Morton, NUMEC

Re services at NFS. Wants us to witness operation for them or review records.

Suggested the use of Ledoux and Co. to perform this type service.

8-10-64, Fred Forscher-

Discussed problems related to 19D, 22H and 40B. Asked that he look into their claims and that we discuss further. He agreed to do.

STP'S WITHIN A CONTRACT

8-13-64, Fred Forscher -

Wants to hold up discussing questionable lots until visit. Agreed on 8-24.

9-10-64, Fred Forscher-

Re 42L and 42N. Haven't overshipped on \$ but have overshipped on quantity.

Feels they should be permitted to do (1) can do on leased material (2) could do under supply agreement (3) thinks station and lease material should move closer together (4) is permitted under their internal

~~TOP SECRET~~

11-12-64 - Shapiro - NUMEC

Re visit of Stimpson on Monday. Don't feel Tom Morton has proper background for long term. Thinking of putting Les Weber in as Accountability Rep. with Falsco (?) doing the book work as in past. Falsco out with flu until next week. Would like to delay Stimpson's visit for about 3 weeks until Falsco gets back and Les Weber get familiar with set up. Marshall agrees to delay until week of 12/7 or 12/14.

11-30-64, Michael Male, NUMEC

Re 11/23/64 on testing containers. Question re release from responsibility waiver under 2 under Alternate A. Worried about gov't taking title and not getting paid. Got Zachry on call. Agreed to a revision of the wording to reflect that waiver applies only so long as gov't. doesn't take over patent.

JEFFINGHOUSE
STAB NUCLEAR
LAB PURCHASE ORDER

3-31-65, Dick Yates - WANL P. O. on NUMEC 9/62 for 400 Kgs. later increased to kgs. of product. NUMEC due to technical difficulties created a lot of scrap requiring 1086 kgs U to be furnished. 100% financial resp. Inventory use charge 4-3/4% beginning 90 days after delivery of last of product. 10/30/64 date of last shipment.

WANL rec'd 762 kgs U as product. Also returned 70 kgs of material (recovered scrap) to AEC and this accepted. 253 kgs U still outstanding (book balance). P.O. says all scrap to be recovered within 180 days after final delivery. Apr. 28, 1965 is the crucial date. To be returned as U₃O₈.

NUMEC says they can't meet the Apr 28 date and wants to transfer material to Supply agreement.

~~TOP SECRET~~

~~TOP SECRET~~

SPACE NUCLEAR PROPULSION
OFFICE - CLEVELAND

MATERIAL
UNACCOUNTED FOR

Advised Yates that we could take material under Supply Agreement if SNPO-C decided in best interest to gov't. to do. I pointed out that they should consider this avenue carefully since it appeared that NUMEC could get a windfall by delaying payment of losses. (Expected losses + MUF = approx. 35 Kgs. at moment) Told Yates I thought a good physical inventory should be made before material put under Supply Agreement in order to determine what losses have occurred to date. Transfer Book Inventory and then adjust to physical with pay on difference to prevent any windfall.

4-5-65, Haycock

Re close out of WANL order with NUMEC. Gave him info on NUMEC holdings of enriched U. Gave him some of my views as previously expressed to Yates last week.

4-5-65, Haycock

Re NUMEC survey told him last week in May.

4-6-675, Doug George

Re NUMEC survey. George wants to send some people to participate to assist us and also provide first hand knowledge. Suggesting Lovett and Solem. Told him this would give us no pain.

Suggested that Doug's people try to get NYO to shift their Pu survey if we go up end of April.

4-12-65, Gutman, NUMEC

Have couple more drums to be tested for low assay. Originally agreed to test 4 drums for shipping. Tested 2 drums that didn't quite come up to desires. Would like to send in 2 more and have tested week of May 2. Ship in a week ahead of time. Do same tests as previously.

~~TOP SECRET~~

4-15-65, Walt Scheib

Re NUMEC - WANL job and shift of residual material to Supply Agreement. Hqs has agreed to let them go S-A route. Will transfer what is determined on hand at time of survey. Will pay for losses to WANL.

Still trying to find money on ^B back scatter gages
OK to do talking but don't spend \$'s until we get.

BETA

4-20-65, Jim Lovett

Re mixing study funding in FY 66. Are they going to be footing it all or are we going to support on a sharing basis. Told him this was something they need to work out with Baran since we have not been funding under development funds but as separate activity with Prod. Div. just making a total available. He will check out with Baran

4-20-65, Thielke-

Discussed situation re WANL and their apparent desire to put resident inspector at Y-12. Pointed out we do not buy resident idea. Also pointed needless junkets. Norm seems well aware of problem. Said they wouldn't go along with resident unless we concur. Trying to get visits under control but having internal problems. Agreed O.K for me to talk to Scheib.

Don't supply
to NUMEC

4-22-65, Hibbs-

WANL yesterday wants to have weekly Tuesday meeting to review program in lieu of all the visits we are now getting. We have agreed to this to see how it works out. First meeting next Tuesday. Advised him of my discussion with Thielke and plan to discuss with Scheib.

~~X~~ ~~X~~

~~TOP SECRET~~

6-10-65, Dick Yates

SNPO-C somewhat unhappy about recent award of scrap contract to NUMEC (WANL Scrap) due to fact they were having collection problem w/NUMEC. Wanted to know if we could hold up award. Told him we had no basis for such actions. Someone would have to get NUMEC on disqualified bidders list and this might be extremely difficult particularly since recently awarded opr. contract for B¹⁰ facility.

6-16-65, Haycock

WANL-NUMEC contract. Interested in getting report out.

6-25-65, Scheib -

RE NUMEC - WANL Contract. Sending a bill based on our survey numbers Will modify bill if we change our position on amount of material in filters.

6-28-65, Kimball - SNPO-C-NUMEC- WANL situation Re shipment of scrap on latest contract. Hqs (DNMM) indicating continuous surveillance should be effected (Bill is \$765,000 on old WANL contract).

Klein has switched position so that transfer to Supply Agreement can be made before bill is settled.

Kimball raised question of splitting transfers of material into filters and other - the latter being uncontroversial material.

Marshall - we proposed increasing filter content for 35 grams to 48 grams based on recovery data. NUMEC (Les Weber) answering our letter to effect that filters contain all losses.

DIVISION OF
NUCLEAR MATERIALS
MANAGEMENT

SNPO HQ
EMPLOYEE

ED MARSHALL
NUCLEAR MATERIALS
ACCOUNTABILITY BRANCH
OAK RIDGE OPERATIONS

~~TOP SECRET~~

~~TOP SECRET~~

7-6-65, Haycock

J. Haycock
DMMH-HQ

Re NUMEC-WANL and NUMEC - ORO scrap. Bill to NUMEC today for approx. \$750,000.

Discussed witnessing of scrap. Told him we could probably do with help and having my people work up a plan. We would follow only thru dissolution and sampling which Haycock agrees is enough. (Including sampling of residues).

Haycock asked my views on submittal of WANL invoice. Told him not matter of my concern but that I thought if a billing is in order they should submit. This could bankrupt NUMEC per Shapiro so getting Bloch on board as there may be political pressure.

7-6-65, Doug George - Re NUMEC-WANL deal

ASSISTANT GENERAL
MANAGER FOR ADMIN
REC-HQ

Milt Klein has discussed billing with Bloch. Bloch has said not to send until Howard Brown has reviewed. Doug has discussed with Brown who has been asked by Bloch to review and prepare info paper to Commissioners. Looks like it will come before the Commission. Advised Doug of info on plans to process scrap and our thought on how to cover.

7-8-65- Henderson-

NUMEC unpaid invoices of \$53,748.33 plus \$172.62 interest for over 30 day delinquent. 14 invoices - range from 3 to 95 days over due. Value varies \$22.50 to \$31,392.75.

7-9-65-Doug George

Bloch not sympathetic to a book inventory only on NUMEC. Can't ignore physical inventory that we've taken. Bloch raised question of covering the scrap material moving in for processing. Thinks should be done.

~~TOP SECRET~~

~~TOP SECRET~~

Doug George proposing (1) Sampling filters on random basis and recover at Y-12 to get data (2) Riffing and sampling ash of filters already asked (3) Doing Alpha scan.

7-12-65, Doug George

Meeting tomorrow SNPO, Counsel Controller, etc., to review staff on NUMEC. Lots of comments re inventory Supply agreement, etc.

7-14-65, Doug George -

Milt Klein's office would like me to be at NUMEC on 7-21-65.

7-22-65, Doug George -

Very little done after I left NUMEC.

Letter going from WANL to NUMEC (drafted in HQs) Confirming agreements made by Shapiro.

1. Write me augmenting 7-2 letter to me from Les Weber, stating precisely what added inventory exists that should be included in inventory, i.e., including mine 2.
2. In above letter or separate letter (probably to me) a proposal for verifying U content in Mine 2.
3. Confirm in writing probably SNPO HQ agreeing to 8.3 Kgs. loss and to pay for also to pay degradation charge on material returned to date (Total approx. 145,000). Will not pay degradation charges on material still in plant.

Will probably keep status quo on material in plant and not transfer to Supply Agreement.

*Reference to
"MINES" near
dump areas*

~~TOP SECRET~~

7-23-65, Jo. Moore

Jim Genty acting for Howard Brown asked that we develop answer-

1. Are we withholding any payments to NUMEC?
2. Do we have any outstanding claims-
 - a. Amount not in dispute more than 30 days (old).
 - b. Amount in dispute.
3. What has been past experience on NUMEC handling gov't furnished SNM-
4. 2-14-63 Memo from Vinceguerra establish policy on full financial responsibility prior to that what loss factors did we allow.

TAP S X

7-26-65- Lea Keller

Discussed 7-13-65 letter from Weber to me with Forscher on 7-24. Lea stated we would like letter from NUMEC addressed to questions raised in our 4/1 /64 letter. Forscher to talk to Gray and may let matters stand per our 4/1/64 letter. Forscher feels NUMEC being cheated by not being ^{given} credit for upgrading even though in conflict with contract terms and conditions.

Have gotten bugs pretty well worked out on processing NERVA dust. Rate low 2 kgs U/24 hr. day - hope to get to 5 or 6 kgs U/day within next 4 days. Residue will run about 2% of U charged. Product from furnace soluble in acidified water.

Riffle split samples -10 drums as special lot. Samples to NBL today.

Still only 86 out of 192 drums gross weighed inner contents through 7-25.

TAP S X

~~TOP SECRET~~

7-28-65 RCArmstrong

Briefed him on NUMEC situation both WANL and scrap.

7-30-65 -Doug George

Re NUMEC. Letter to Commission enrote to me has change - eliminate next last para in transmittal re reply from NUMEC. Another para follows last para. Just as this memo was being completed we learned that OR had requested letter from NUMEC. That letter now being studied. We will advise Comm. of results of our analysis and will indicate possible alternate courses of action.

Wants us to prepare answer to Shapiro letter and discuss with HQ Klein, Nomkin and George.

Wants us to look at proposed steps outlined in memo from Brown to Commissioners.

8-2-65 , Doug George

Letter went to Commissioners on Friday on NUMEC at least got to Bloch.

JCAE has concern on where did material get to, i.e., safeguards end of business. Not just interested in getting \$ - need to know what happened to material.

George understands that JCAE staff isn't going to intervene on behalf of NUMEC. Take best action we can to protect the gov't. without being too vindictive.

JCAE COMMITTEE
ON ATOMIC ENERGY

~~TOP SECRET~~

8-3-65, Haycock

Meeting this afternoon of staff of NUMEC. Read him my proposed letter to Shapiro.

Later call- Position reached at meeting this afternoon by Howard Brown.

1. Letter to NUMEC detailing background and our position of reasonableness.

Question material being there, Going to submit bill for WANL. Will permit transfer of remaining material to Supply Agreement - 11, based on physical inventory.

Brown feels bill should be submitted since Gray has indicated they are solvent.

Transfer would not include buried material. Base on 48 grams/filter.

8-6-65, Haycock

Page 2 of letter from NUMEC bottom next to last para re: 17,000 lb. waste. Material recovered hasn't shown up on inventory report.

8-6-65, George

Rainey wants shipments from NUMEC to foreign countries.

8-11-65, Haycock

In view of statements by Shapiro that ORO Survey Team indicated SNM ^{control} at NUMEC was greatly improved and that we were happy vs my statement that we were not satisfied. HQs wants statements from our personnel as to what they told NUMEC at close of Survey. Statements are to be to best recollection.

OAK RIDGE
OPERATIONS OFFICE
SPECIAL NUCLEAR
MATERIAL

8-11-65 Doug George

My position on transfer to Supply Agreement and fact that position taken early. Yesterday Shapiro indicated OR would take on Book Inventory.

~~SECRET~~

Told him we never indicated we'd take but would consider.
Gray to Klein to Brown to Doug - No one brought up buried
inventory on survey because "some one" from Oak Ridge told them
not to report. Did we ever tell them this?
To whom have we made shipments on S.A. when and assay.

SUPPLY
AGREEMENT

~~TOP SECRET~~

8-25-65 - Les Weber - NUMEC

Re accountability survey report. Would like to have detailed
discussion with our people on what is needed.

Told him our problem in great part due to fact you can't
follow material from one job to another internally.

9-23-65 - Marshall

NUMEC not likely to open pit dug in 1961 since think that not economic
worth while. Digging of 1963 pit required removal of 30' of overburden
(at least 40' deep to bottom of drums). The 63 pit has at least
2 active springs. This pit has a lot of WANL residues.

About one-half done on hand picking the 62 pit.

Trying to better determine what was buried in 63. Thinks 10-20 kgs.
may have been buried in carbon filters that shouldn't have been
buried. These used in connection with plasma spraying operation.

NUMEC has good set of records established w/internal control documents
that are being used. Mechanism now exists.

Manual about 50% written. To be complete Jan. 1, 1966.

9-13-65, Howard Brown

Re alleged statement by Marshall to Shapiro to effect that no
need to do further recovery of buried material.

9-14-65, Haycock, Weber, Farrar, Johnston, Fullam, Gunderson, Reed, McAluff
Marshall

I pointed out we'd not been contacted by field. Haycock referred to

~~TOP SECRET~~

~~TOP SECRET~~

SHIPPER-RECEIVER

Identify who in field has raised question.

HQS feels S-R differences important in control of material

They feel we are trying to eliminate S-R difference.

Haycock recognizes that we are trying to get resolution of S-R differences rather than eliminating. Doug can't read it this way. (Mental block?)

I pointed out we make adjustments of S-R differences for 10 grams or even less on U or U-235.

Haycock thinks we are blackmailing shippers when we bill for small differences.

Farrar say Campbell doesn't want to change from what we are doing.

Receiver put on records 496 units and put 4 units in a variance acct along with appropriate dollars.

I raised question of where we receive more than shipper shows. Haycock says that we would not permit shipper to correct.

Have variance accounts in 01, 02 and 03 only.

Under present procedures our Finance can not ignore receivers data.

9-21-65, McAlduff, L. Keller, Reed, Marshall

UNITED NUCLEON CORP.

Re request from UNC (Lou Swallow) for O.K. to shift contract residues to S.A.

Mac and Lea told Swallow we are reluctant to do on BPID basis, i.e., a book inventory. He countered with proposal to pay for losses as best can be determined.

I pointed out bind we are in with NUMEC and that if we permit UNC to shift to S. A. NUMEC will cry foul unless we are careful.

To transfer to Supply Agreement need to:

~~TOP SECRET~~

B-6-K - PHYSICAL
Inventory Difference

1. Identify material as to origin, i.e., contracts and relate to BPID. Be suspicious if quantity equal BPID.
2. Must sample and determine actual U and U-235 content of material to be transferred to best their ability and to our satisfaction.
3. Contract administrator of contract from which material is transferred will have to be notified of quantity transferred so that he can bill for losses and/or degradation.
4. Material transferred to S. A. must be remarked to tie to an accountability number under S. A. and internal control between this acct. and other internal accts. under S. A.

9-27-65, Doug George

Sharpino met with Brown and Tremmel 9-24. Shapiro agreed to open the 63 pit. Nothing will be done on billing on WANL order until we get more data from 63 pit.

9-29-65, Outten - Insp. Div.

Re NUMEC - Gave him memorandum of info as I know it relative to WANL order. Apprised him of 20 kgs. on Bettis order. Suggested he contact Klein, George and Howard Brown for latest dope, previous correspondence, etc.

10-6-65, Haycock

Re putting some one at NUMEC to witness excavation of buried material. Started digging Monday. Have hit water at 2 gpm from face of pit. Stopped ¹drazing to get a shovel on job. D'Amico to be notified when shovel arrived.

I pointed out that this appears to be a contract matter and suggested that perhaps WANL could cover. Pointed out chances of our people being

~~TOP SECRET~~

claimed as accessory to the fact before, during and after if there is a dispute on how material was handled, i.e., because we failed to suggest any changes in procedure or action we considered questionable. I also noted that this might be prejudicial to our doing inventory of facility at later date. Pointed out we believe that once they have recovered material that complete physical inventory is necessary to be sure they haven't robbed Peter to pay Paul.

Raised question of subsequent witnessing of processing and need for a schedule to carry straight through other than as fill in.

Agreed that they will try to get PNR to cover since there is an interest there too.

PITTSBURGH
NAVAL REACTOR

10-7-65, Haycock

Brown want's overall loss figure on NUMEC compared with AEC operations if possible.

If they don't find 52 kgs in pit what do we do safeguardards wise?

10-26-65 Howard Brown

Meeting Friday with NUMEC fish or cut bait. Germantown 11 a.m. Brown's office.

11-1-65, Doug George

Discussed need to set up accountability for WANL residues at NUMEC in such a fashion as to prevent any windfalls to NUMEC and control of shifting material to other accountability, etc.

12-7-65, Elkildson-

Shipment to NUMEC on which safety problem exists. Navy order. Part of basic problem of who is responsible in transit. (Reed in on deal since he been talking to Brodsky).

~~TOP SECRET~~

12-17-65, Doug George

Questioned him concerning statement on Page 7 of Survey's trip report concerning cylinder of UF₆ that was returned for foreign customer and we rejected although material had not been touched. Told him I recalled no such incident. Doug at a loss as to how such story may have gotten started. Suggested I check McCluen and Jasný to see if they ever remember him making any such statement.

12-7-65, Doug George

Rebol doesn't remember any case of UF₆ being returned and not accepted even though not opened.

I suggested that Rebol take steps to alert our foreign representatives to scotch the story if they hear it.

2-9-66, Haycock, Armstrong, Marshall

Re info for Howard Brown.

1. List of industrial companies holding material and what they do, e.g., full fab. intermediate processor.
2. List of shipments over seas.
3. Volume of material handled by processors - total and by year.

3-21-66, Doug George

NUMEC situation - 2 teams visited two weeks ago - 1 of Sec. & Insp. 1 of Nu Matl & Control and DIA. Interviewed past and present employees and to look at overseas shipments. This per JCAE desires.

I interviewed many of current employees including 2 non NUMEC employees (previous). Later visited and interviewed 8 or 10 more previous employees. Couldn't conclude that any diversions took place but all agreed operations were sloppy.

Could determine nothing on foreign shipments from records that would indicate skull duggery.

Our next regularly scheduled full fledged survey is scheduled for Sept. 66. Doug thinks we need to do sooner mainly to see whether they are taking action on recommendations. Doug suggests June. Recommendations of last report have been given informally to NUMEC. Doug isn't sure whether they'll be sent formally but believes that action is being taken. Ed raised question as to who is responsible to see that recommendations are followed up on surveys of mixed facilities. Doug wants us to follow them the same way as if we had done the last NUMEC survey.

Records on privately owned material - Doug interested in our views. Staff paper recently revised to extent requirement for forms used for leased material to privately owned material even though some data are not needed.

3-24-66, Doug George

Re overseas shipments - UF₆ we retain analytical data and spectrographic plates. Hold the sample for umpire 60 to 90 days.

5-9-66, Cal Solem -

Controller's office,
Re visit by Lovijoy/who said he had rumor that NUMEC wanted to transfer material from a NY contract to S/A. Value \$202,848.

5-25-66, Dick Yates

Bid opening 800 kgs 235 for NERVA plus 4 options taking up to 1600 kgs. Question of any restrictions on NUMEC. Told him that we have to get O.K. from HQs for financial limits under S/A. Suggested he let us know if NUMEC is successful bidder so we could get a limit from HQS.

Bid opening 6-3-66.

6-9-66, Doug George

Campbell has finally talked to Doug re NUMEC situation. Doug feels some confusion exists. Gave Doug the background.

WP X

X

Doug sees in same light as we do and will try to get Campbell to rescind last para of his 5-23 memo.

6-27-66, Vinceguerra, George, Sapirie, Armstrong, Marshall

~~TOP SECRET~~

JCAE interested in what AEC is going to do to prevent diversion of material under private ownership to unauthorized uses. Want more than financial responsibility and criminal penalties.

Getting new look at control using industry representatives on group making survey study. Be an ad hoc committee.

7-5-66, Sam McDowell

Re fire at NUMEC in 1963 - Read him excerpts from my diary notes of Feb. & March 1963 concerning the incident.

Told him we had no one on the scene investigation since NUMEC had financial responsibility and there was no danger to public.

7-29-66, Jim Lovett

NUMEC Re: close out statements. Raised question of credit for upgrading. Told him we'd fought this battle before and answer was no. Personally I saw point of credit for upgrading since for every down grading there was upgrading. We got this recognized in contracts after we took over but couldn't do anything about early NYO contracts. Told him he was free to again raise question but I doubted anything would be gained.

8-15-66, Staff Meeting - Division of Contracts have held up processing of NUMEC extension for 3 years.

9-1-66, McDowell

Re NUMEC survey. Week of Oct. 8 is O.K. with everyone. Bill Gilbert. Cal Solem will be available to assist. Sam may also be available part of the week.

GAO may be here week of 9-12 to go over work papers of previous NUMEC

(Asked Ed Marshall to follow up with McDowell on details of timing, etc.)

~~TOP SECRET~~

9-7-66, George, M. T. Stewart, C. E. Kranz, Scott, Ed Angle will be here 9-12 to go over NUMEC work papers. Supposed to go to NUMEC with two from HQS on 9-19.

This gang will probably go to NFS at Erwin at some later date.

(Doug thinks may be in October).

9-7-66, Jim Lovett

~~TOP SECRET~~

Have 700 kgs. 3% U from Westinghouse job private lease. Dissolver meas. Want to add 100 kgs of 6 - 10% scrap into it for processing. Would like to transfer 1231 material to this material (Station to lease). Told him that I would see no objection to transfer of 1231 from station lease if done on basis of dissolver solution measurements and if WANL is agreeable.

9-7-66, Dick Yates

Discussed the NUMEC proposal on 1231 material being blended with lease Lovett had talked to Yates yesterday. Dick asked Lovett to put proposal writing to WANL.

Told Dick that if WANL and SNPO agree to the proposal that they should specify the sampling procedure and whether duplicates are to be taken and analyzed. I have not done anything on this since I feel it is a WANL-SNPO problem.

10-20-66, Doug George - GAO (Kelley) raised question about way we do inventory. Preparation of stds. - Told him we are working on this.

10-26-66, Dean Crowther - GAO

Re NUMEC. Want to visit re inventory and controls. Tom Stewart will be along.

10-27-66, Dean Crowther, Tom Stewart - GAO

~~TOP SECRET~~

Discussed the background on nuclear mat. mgmt. problems at NUMEC. GAO plans to issue statement of facts to JCAE with copies to AEC on 11-7, and have a close out meeting w/NUMEC on 11-10.

~~TOP SECRET~~

I pointed out situation not improving and only way I thought it could be resolved quickly was to stop flows of material but that this would probably bankrupt Co. GAO personnel noted same deficiencies in NUMEC inventory as we did. I pointed out that any action would have to be overall basis with full AEC HQS backing. I noted problem of long stand
11-10-66, George - GAO meeting with NUMEC on 11-18 to present statement of facts on NUMEC. There's possibility that an OR representative might be to attend.

11-14-66, Ray Sullivan - NUMEC samples 48 received from NBL. On 1st priority can't get answers by December 1. Will take 160 man hours of overtime to get by that date. Earliest 12/15 without overtime. Take 40-50 hour overtime to do by 12-9. Estimate 10 man hours/sample. Have only 3 peo that can d.o.

11-14-66, Ralph Jones, In Doug George's absence told him about problem w/samples at GAT. He will advise Doug.

11-15-66, Dick Yates - SNPO-C

Re return of material at lower assay than furnished. Should it be cut o when there is a U balance rather than U-235 balance. Read him clauses o the Supply Agreement covering blending (Art. 5). Told him I thought one must look at contract provisions re blending. Generally I feel that th contractor should be held to a U balance. In NUMEC case, however, we have a special situation.

Pointed out 2 ways to handle. Let NUMEC ship back against 1231 based on U-235 originally furnished with charges for degradation (cut off 11-22-66 per Yates). This recognizes fact that 1231 was dumping groun for all services.

The other alternate is to base on U-235 balance with charges for degradation and loss. This would complicate handling of xs, i.e., what to assign it to.

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The first of above while perhaps arguable by lawyers is probably best operationally and would get AEC most \$\$.

11-15-66, Ralph Jones

~~TOP SECRET~~

Re overtime on NUMEC samples. Dec. 15 date critical for report getting out. If we can live with Dec. 9 and still get report out O.K. If we need anything to O.K. overtime Doug will provide.

11-17-66, Lovett

Apologized for letter on filters. Wants to transfer some enriched U from S. A. to Station for CPFF 16.6 kgs. U_3O_8 93.15. Contract w/ANL PU and U Carbide development job. Told him I saw no reason why we could transfer and to submit a transfer document.

11-29-66, George Kimball and Dick Yates -NUMEC

Nov. 23 date. \$239,000 check to Westinghouse 2 scrap shipments 1 on 11-17 and 1 on 11-23.

#77, 11-3, #78, 11-4, #79, 11/17, #80 on 11/23

Would like assay and analysis ASAP. Explained problem on other samples for inventory.

11-30-66, Anderson, Been told would have 6 added samples for NBL by GAT.

Take about 60 more overtime hours. Rodden talked to Bates who told him to send to Portsmouth. Advised Andy I was unaware of this. Will raise overtime to 100 - 120 hours.

Advised Roy of SNPO request for data on NUMEC returns against WANL con

12-1-66, Yates

On WANL order they came out 68 kgs over on U and 67 kgs. under on U-2. Collected slightly over \$800,000.

12-1-66, Roy Anderson - Re added 6 samples. Bates has said to Sullivan that not to be done on overtime basis.

~~TOP SECRET~~

12-7-66, John Vinceguerra -

Re NUMEC - meeting with JCAE. Question on billing for use charges.

Told him Gunderson best man to answer these questions. He asked me to have Gunderson call him back right away. (Asked Carl to do).

12-9-66, Dean Crowther -

Re statement of facts on NUMEC. Told him we had no quarrel with facts.

Ed Marshall had made some comments that might be helpful in discussion:

1-10-67, Vinceguerra

NUMEC has problem with PW and want report sooner if possible. Agreed I would move date ahead as much as we can by resulting earlier receipt of data from NUMEC.

1-13-67, Doug George

Re where we stood on NUMEC survey. Advised him we'd queried them on added info.

Doug will be glad to come down and review.

George Kimball called Doug. Nov. 30 report reflected 11 kgs under 1231 per OR. NUMEC indicates they are holding on their books until they get receivers O.K. on shipment.

NUMEC has declared to WANL a loss 16 kgs U and 2.7 kgs 235 against 123

1-16-67, Doug George

Interested in costs incurred at GAT, Y-12 and NBL on analytical work on special PWR wafers.

1-17-67, Dean Crowther- GAO - HQS - Discussed status of NUMEC report. GAO report got same NUMEC haggle as ours.

11-18-67, Oscar Gray - NUMEC

Re the data they sent in on sample analysis data. Told him I had not completed review of our analysis of their letter. He wants me to call when I do.

1-20-67, Doug George

Thank we should send TT to NUMEC asking whether data sent by Lovett is the PI as of 9-30-66 and that their books will be adjusted and that the 12/31/66 report will also reflect. Also how about corrections.

Look at prior rec. e and i. Say "unless inventory was found in error".

1-20-67, Les Weber

Raised question of statement of inventory as of 9-30-66.

12-20-67, Vinceguerra - HQS Tuesday, NUMEC Wed. Home Wed. night. Go up Monday night.

1-20-67, Jim Lovett

Sent TWX confirming that data on work sheet are their figures.

1-23-67, Doug George

We're supposed to meet with GAO tomorrow but is delayed to 9:30 a.m. on Thursday - so I go to Washington from Apollo.

Doug taking 8:10 NW from Pittsburg to Washington.

1-30-67, RCA- Vinceguerra wants para or 2 for white paper to cover the inspection rights under the base. Winkles to work with McAlduff.

2-2-67, George

Sending us letter on next NUMEC survey saying it's our baby but that they'll help.

Asked him to check with Vince regarding how to treat NFS survey report, i.e., like NUMEC and by whom, particularly since GAO looked at NFS.

2-20-67, Jim Lovett

Re survey scheduled for April 1 but may want to delay until 4-15 and complete PWR. Looks like 4-15 - 4-20 would be completion. Would like

to schedule April 29 and 30.

~~TOP SECRET~~

Told him I would have no problem operationally but there might be polit problems. Suggested that Shapiro might best talk to Vinceguerra about doing this.

Jim talked to George who thought idea not too bad.

Agreed I would discuss with Doug and call back.

2-20-67, Doug George

Re NUMEC inventory shifts. Doug wants something to go to Vince from Shapiro before he talked to Vince. I talked him into touching base with Vince on how he'd like to see this played.

2-27-67, Doug George

SAN has had contract with NUMEC on Pu for Sefor Reactor. Have approx. - 3.5 kgs Pu in combustibles that NUMEC can't process. Doug has witness alpha scan which has -10% - 40% L.E. SAN and NUMEC would like to switch to a lease acct. Unaccounted for of approx. 1.072 kgs. on job which NUMEC will have to settle for. Are sending us copies of correspondence for review before we make up our mind.

3-6-67, Jim Verme,

Re Pu at NUMEC from SAN job. Trying different effort - going to check on having recovered at Isochem or Dow before putting under lease agreement.

4-12-67, Lovett

Questioned whether we've received their letter on inventory. Told him we had and were planning to meet with him and Les Weber on Monday.

4-21-67, Doug George

Another draft of GAO report being mailed to us. Appendix 3 is principal alteration - NUMEC letter. Want to put final blessing on the GAO report on Tuesday.

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~~TOP SECRET~~

Check Appendix 3 and changes in body resulting therefrom.

Doug has no real problems with draft.

~~TOP SECRET~~

4-25-67 , RCArmstrong , Marshall, Henderson, Re NUMEC inventory @ 1800 kgs.L

I. (60%)	1080 Kgs. U	± 1%	10.8	(30%)	540	5.4
II (15%)	270 Kgs. U	± 2%	5.4	(35%)	590	11.8
III. (15%)	<u>270 Kgs. U</u>	±	5.4	(30%)	540	10.8
	1800	± 55 Kgs. U	(±3%)		~ ±	10.8

4-28-67 Les Weber- NUMEC

They are going ahead with inventory regardless of fact that we aren't t
 Wasn't sure just what is to be discussed at HQs next week. Told him I'm
 not sure either other than an effort will be made to determine when NUM
 will have reduced the % of their inventory carried as scrap. I was not awar
 of details of Shapiro - Vince discussion. Noted that as a guide under
 original proposed categorization we expected inventory good to approx.
 ± 2%, their latest proposal was approx. ± 6% our compromise was
 approx. ± 3%. Based on this info one could say that we want their mater
 to point where inventory could be determined to approx. ± 2 - 3%.

5-22-67, Hansen-PNRO

Re Bettis order on PWR wafers. Have 760 Kgs. U as scrap. Wondered if
 we would take under S.A. agreement. Told him we aren't interested.
 There's a year time limit in Bettis order for recovery of scrap. Told
 him this was better check than we had in S.A.

5-23-67, Leo Dubinski

Re resident inspectors. Wants to have his field people check with
 inspectors when they visit. Wants to assure that our people are free
 to talk to Leo's people.

NUMEC 4-24-67 found high U in waste tank - recovered 1400 grams U-235.

NUMEC thinks they lost 200 down river at time. Now think 200-800 grams. Recovered material ran 65% U-235.

~~TOP SECRET~~

Knew material came in within 4 or 5 hours. Wasn't a seepage but a slug. Tank was emptied. ~~TOP SECRET~~
Inspector found from analytical info on effluents approx. 1 week after it happened.

6-1-67, Ralph Jones,

Talked to Geo Murphy. Murphy wants AEC to do inventory and pressing for a date. His approach is samples taken by NUMEC are their's and therefore no good.

7-5-67, Zal Shapiro, NUMEC

Re resident inspector job. Concerned about proprietary info aspects. I suggested they send us statement on more disclosure that they'll like signed.

Raised question of liability in accident. Told him our man covered under Gov't Employees benefits. In case of damage caused by our people they (NUMEC) could resort to Federal Tort claims Act.

Concerned about what man would do and whether he was involved in H&S aspects and safeguards but would be used for any other purposes where applicable.

7-5-67 Jack Newman - NUMEC

Re non-disclosure agreement. Plan to TT to us.

7-7-67, Jack Newman - NUMEC

Inquired about TWX. Advised him of status.

Don should talk to Shapiro on Monday. Shapiro - Ewin Becker will be point of contact.

7-7-67, Zal Shapiro, Re agreement NUMEC proposal on inspectors.

Would like to visit OR to discuss UF₆ mfg. Determine economics, tech. problems. Would like to make week 17th beginning or end.

Shapiro, Lew Bechtold (A-R) Chuck Showalter - Les Weber or
Homer Lowenberg. Is there a problem on Showalter?

7-25-67, Jack Newman - NUMEC

~~TOP SECRET~~

Interested in getting UF_4 as starting material for SOH_2 catalyst.

Told him we aren't selling and have no published price. Have furnished
to commercial processors as part of allocation set aside for DOD use.
Suggested that perhaps they should start with Tremmel if they want to
get. Advised him that while we do have material available now it might
not be good to bank on it for long term. We would want to pull out from
available material that amount required for internal use over some
period of time and I don't know what this might leave as available.

8-1-67 , Tom Stewart, Dan Stanton, Roger Sperry

Discussed Be reviewed background and future requirements. Cost
picture, completion, disposal of scrap, future use of scrap and future
scrap generation.

Discussed B-10 operations. NUMEC doing good job technically.

8-15-67 Crowson

Discussed NUMEC inventory. We should be independent verifiers. Wants to
get as good an inventory as possible.

Crowson indicated to NUMEC that he would be willing to help sample grit
also to pick up tab on R&D on process to recover wheelabrator material.

No deal to recover. If we were to recover it would be at full cost.

Did agree to try to work out sampling method for grit. Shapiro claimed he
sampled a barrel, put samples in container and rolled for several hours,
took 6 samples and none agreed.

~~TOP SECRET~~

8-30-67, Jim Lovett - NUMEC

~~TOP SECRET~~

Lacy wants to leave noon (Friday). Be replaced noon Wednesday by 2 people - would lose 2-1/2 days since plan to work Sat.

On L.E. have a lot of samples @ fraction of gram. Wants to keep book in whole grams. Can this be done? TT from McAlduff reference.

9-22-67, Si Smiley, NUMEC

Spoke with Joe Barkman - want a drum of oxide made from chips . Reece quoted price of \$1.03/lb. Smiley will send letter.

10-567, Jim Lovett

Have TT from UNC saying that we have people up there. Questioned wheth we could do some inspection on NUMEC material up there. Told him that have problem covering even with added people.

10-11-67, Lovett

Advised him of what we were doing re monitoring NUMEC material being processed at UNC. We are following and will continue to do so if we g some backing from PNRO.

10-23-67, Jim Lovett

Have deal going with Bettis on PWR scrap. Shooting for 2/28/68 for othe than wheelabrator grit.

Bettis proposing to transfer wheelabrator grit to S.A. and give NUMEC one year use charge credit starting 4-25-68. Approx. 58 kgs less kg days for other material not recovered by 2/28/68.

Told him I'm not enthusiastic about doing but agreed to think about.

10-23-67, Marshall & Kenna - Re taking wheelabrator grit under S.A. at NUME

Quantity of material pretty well knowbased on sampling and analysis. samples at NBL now in conjunction with NUMEC survey. Should accept on NBL analysis if we accept.

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~~TOP SECRET~~

I see pr ^o of possible windfall to ^r under what Bettis
is proposing since there is no complusion for recovery under S.A.
Get year free time plus these only pay 4-3/4 or 6% thereafter and not
do anything to clean up.

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The approx. 58 kgs is in approx 67 tons of material. Material at
< .5% alpha scanned only.

Some of material probably should be discarded as unrecoverable (Bill an
Ed think anything <.5%).

10-25-67, Lou Hansen - Discussed NUMEC proposal on PWR wheelabrator grit.

Lou doesn't go with one year use charge credit on material. Told him
my concern is that there's no windfall to NUMEC.

Lou said NUMEC said they had a process last summer but now say they don'
I pointed out that under S.A. there's no pressure to recover and further
complicates scrap problem and safeguard aspect.

Gave Lou data developed during survey - Total U 53.4 kgs.

Total Bulk 5324 kgs.

<.5% U in 3028 kg bulk or 6.8 kg U (ave. .22% U)

<.5% U in 2296 kg bulk or 46.6 kg U (ave 2% U)

20 composite samples taken, 8 of which from <.5% material.

Told Lou I though NUMEC should pay for material in bulk of <.5% U and that
we might then permit rest of material to go under S.A. Also told him I,
personally, would not give them any use charge credits covering material.

Anything we do would be based on sample data for NBL. Noted first isotopic
data indicated possible degradation of assay which didn't surprise Lou.

Seems to me NUMEC should also pay for any degradation of material as part of
settlement with Bettis.

Hansen leaves up to us what we accept or don't accept under S.A.

~~TOP SECRET~~

10-25-67, Lovett

~~TOP SECRET~~

Re wheelabrator grit. Advised him I was considering transfer of material containing $<.5\%$ U to S.A. based on NBL data leaving them to make their peace with Bettis on $<.5\%$ material and any degradation losses.

Lovett said he was thinking of write-off of $<.1\%$ material and would reexamine in light of my $<.5\%$. Told him there may be a middle ground for agreement.

Pointed out I didn't want S.A. to become dumping ground for unrecoverable material.

10-26-67, Hansen

Re shift of scrap from PWR to S.A.

Is sending me memo received from Bettis on what they propose doing and wants our comments.

11-15-67, Les Weber, NUMEC

Re PWR material to transfer to S. A.

Pointed out to him that I would consider transferring material that we can measure based on analytical data including $.2\%$ U wheelabrator grit with the provision that there be a deadline date for processing low grade material. I pointed out I do not wish S.A. to become a dumping ground for residues that aren't going to be processed promptly.

Agreed that we could probably work out something on transfer of unprocessed material that might be at UNC as of 4-25-68 based on data available from processing up to that time.

1-4-68, Lovett

Re Les Weber's letter of end of November on wheelabrator grit - told him we were inclined to go along with proposal and I would look into why let

not yet answered.

A pollo inventory March or April. Do we want to send some one to observe.

~~TOP SECRET~~

Raised question of analytical costs being charged on 12" cyls of depleted U.

1-15-68, Les Weber, NUMEC

*UNITED NUCLEAR
CORP - WOODRIVER CON*

Re Nov. 30 letter. Checking on answer. Advised him that we go along with what is proposed and should get out letter soon.

Advised him that we will pull out of UNC-WR end of this week for a week or 10 days and then be back for a couple of weeks.

1-29-68, Jim Lovett

Re looking at Wood River job. Don Cox doesn't want to help since only be there this week. Lovett has 2 men and would like help for 3rd shift. Told him we'd look at.

1-30-68, Lou Hansen

Had call from Lovett re scrap reprocessing at UNC and felt he had problem on covering. Advised Lou of my discussions with Lovett yesterday.

2-8-68, Zal Shapiro

Edgewood Arsenal out for proposal to run a plant at Niagara Falls. Zal asked if we would be amenable to an arrangement where they would propose splitting some of the overhead activities, security, payroll, etc. if NUMEC got operating contract. Told him if it would cut our costs I'm interested.

Advised him we are holding action on Pep for added data from him. Inquired about B¹⁰ plant operations. Told him they were going reasonably well and I know of no serious problem. I referred to their personnel problem (loss of people) he feels this may change since others are laying off people.

~~TOP SECRET~~

4-9-68, Jim Lovell

Model contracts on TE and Sales would like 3 or 4 copies sent to him. Wheelbrator grit - Bettis scrap. We plan to buy. ~~TOP SECRET~~ buying, or getting some way.

Pointed out our problem of sale to them related to fact we might be buying back at high price.

Thinking about semi-annual inventory in May or possibly June - in case we are interested in witnessing.

4-16-68, John Carey (Purchasing) (NUMEC)

Harry Coffman called re Grit we have on hand. Thinking of \$4000-\$5000 for the lot. Said \$5000 would be offered.

6-3-68, Whitaker - NUMEC

Wheelabrator grit. How is the material packaged. Are they licensed containers - no. of containers/shipment, rail or truck. If by Co. truck are two drivers required. The license no. of cont.

6-4-68, Si Smiley - NUMEC

Would like to visit. Discuss Y-12 work on crystalline Boron. Dykstra on setting up small F₂ plant - 1 or 2 cells size. With AEC - Discussion of responsive reply on grit. Would like 6/11, 6/12 6/13. Suggested possibility of 6/12, 6/13 & 6/14. Simley, Al Witt and Ted Tripp. Looking for someone to handle licensing work - nuclear safety.

6-12-68, Doug George

Weber has asked for some info re MUF @ Y-12 in early May - April info came in yesterday.

Crowson wants to know what should be done. Interested in any info on May and what we'll do in June if no pick up in May. ~~TOP SECRET~~

Re NUMEC info on survey on 7-12. Crowson advised that no plan to cover. Crowson wants some one to cover. Question whether NUMEC will go

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to Regulatory at this time.

Doug plans to check on just what coverage Crowson wants. May want man from OR, one from Safeguards II and one from Headquarters.

~~TK~~ X
6-12-67, Si Smiley - NUMEC

NUMEC interested in Ni powder and White powder production. Question how to proceed. Told Si I'd follow up on how to go.

Interested in amount of depleted U shipped to industry. Agreed to develop info and send to him.

NUMEC might be interested in barrier production. Discouraged Si on this due to classification problems at this time.

Discussed proposal for borrowing depleted UF_6 . Told him Hqs turned down a proposal of this type but if NUMEC wishes to pursue it might be good idea to go via Tremmel.

7-23-68, Si Smiley, NUMEC

Plan to send us letter on getting in on nickel powder business. Advised him that this will open up a long row to hoe and that initial reaction in OR has been negative.

8-20-68, Dean Crowther

Be here next week on close out on equipment Tuesday. Meet with me on Wednesday on studies of diffusion plant transfer to industry. Suggested he talk to SRS on this point.

9-5-68, Si Smiley, NUMEC

Re letter on barrier business. Raised question of whether his next place to go is Headquarters. I told him yes. He raised question of chance - advised him I thought rather slim.

10-21-68, RCA-

Crowson told SRS they have to clear the wheelabrator grit with JCAE. Meeting set up 10/28 with Shapiro to answer questions raised by JCAE.

1-24-69, Lovett

~~TOP SECRET~~

Bid .2% loss max. 35 kgs to Westinghouse. NUMEC to recover as UNH or UO_3 . Would like to return all material with the 35 kgs being credited to NUMEC privately owned.

Told him we aren't in storage business and would not wish to hold any material for NUMEC against future requirements against orders that are at this time non existent.

As I understood conversation NUMEC planned to send back material to us and any losses less than 35 kgs. they would take as gravy.

4-23-69, Si Smiley- NUMEC

Re visit 5-1. Interested in going from UF_4 to metal and metal thru rolling. 1000-2000 T/yr. Plant costs etc. Roll to bar. Also interested in 6 to 4.

Interested in Boron.

~~TOP SECRET~~

b7c/1

WFO 117-273

~~TOP SECRET~~

b7c/8
b7D/2

A review of Washington Field Office's file 117-273 reflects that

[REDACTED]

and has been previously reported.

~~TOP SECRET~~

WFO 117-273

b7c/1

[REDACTED]

~~TOP SECRET~~

b7c/2

[REDACTED]

Internal Security, Department of Energy (DOE), Germantown, Maryland, furnished information to the Washington Field Office (WFO) of the Federal Bureau of Investigation (FBI) regarding the present location of current and former members of DOE, Energy Research and Development Administration (ERDA) and the Atomic Energy Commission (AEC). However, due to the expiration of time, [REDACTED] could not provide current addresses for the following individuals:

b7c/2

b7c/16

[REDACTED]

AEC
AEC
AEC
AEC
- AEC
AEC
DOE
ERDA

b7c/2

In addition, [REDACTED] advised that the following individuals are deceased:

ANSON BARTLETT - AEC
JOHN WATERS - DOE

~~TOP SECRET~~

WFO 117-273

b7c/1

b7c/2

[redacted] Security Office, Nuclear
Regulatory Commission (NRC), Washington, D.C. (WDC),
furnished information as to the location of current and
former members of NRC. However, [redacted] could not
provide information regarding the following:

b7c/16

[redacted]

X X

b7c/2

[redacted] furnished the following addresses
as indicated.

b7c/16

CARL H. BUILDER, [redacted]

EDWARD MASON, [redacted]

X X

~~_____~~ b7c/1

~~TOP SECRET~~

The following individuals could not be located by either the Pittsburgh or New York Offices of the Federal Bureau of Investigation(FBI):

- CHARLES BELTRAM - NUMEC
- WILLIAM FONDILLER - NUMEC

In addition, the New York Office reported that PRESSLEY MC CANCE - NUMEC, is deceased.

~~TOP SECRET~~