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January 21, 1988

MEMORANDUM FOR: Victor Stello, Jr., Executive Director for Operations

FROM: Hugh L. Thompson, Jr., Director, Office of Nuclear Material Safety and Safeguards

SUBJECT: PRESS REPORTS ON FRG SUSPENSION OF NUKEM AND TRANSNUKLEAR LICENSES

Recent press articles have reported on the Federal Republic of Germany (FRG) suspension of licenses for NUKEM's fuel production facility in Hanau and Transnuklear's license to transport nuclear materials. NMSS staff have been in contact with IP, Department of State and IAEA staff to obtain official clarification on these press reports. To date, there has been limited official communications on these matters (Enclosure 1 is a cable sent by State at our request to obtain clarification on these issues). NMSS and IP are pursuing these matters as these reports may impact NRC export licensing actions and international safeguards. Based on information currently available (some of which is based on FRG press and radio reports), the Transnuklear license is suspended for all transportation based on the alleged violations of FRG regulations involving possession and transport of waste materials. The NUKEM facility is temporarily shutdown and new management is to be assigned. See Enclosure 2 for background on shutdown of NUKEM. The Washington Post report of January 15, 1988 on alleged diversion of material to Libya and Pakistan does not appear to be substantiated.

I have enclosed a summary of cables received to date on these matters (Enclosure 2) and a list of questions that I have directed the staff to pursue. I will keep you informed.

ORIGINAL SIGNED BY
ROBERT BERNERO

Hugh L. Thompson, Jr., Director
Office of Nuclear Material
Safety and Safeguards

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ENCLOSURE: 3

QUESTIONS ON TRANSNUKLEAR/NUKEM ISSUES

1. If Transnuklear is guilty of violating FRG laws, what assurances do we have that internationally the Transnuklear subsidiaries are operating in conformance to applicable requirements?

   Preliminary information: IP, OE and NMSS staff are reviewing the legal basis for any NRC actions, such as a Show Cause Order for Transnuclear, (USA), based on currently available information.

2. How does or would the reported waste transportation problems impact the management and transportation of SNM?

3. Are there any indications that SNM is involved in the reported transportation problems?

   Preliminary information: The waste transportation problems reportedly involve Cobalt, Cesium and less than gram quantities of plutonium.

4. Is Transnuklear involved in any cask development certification programs?

D/2

Der Spi gel, 18 January 1988

"Somebody could have built the bomb"

A confidential report shows the failures of the IAEA

"Every single facility in the FR Germany is under our supervision", claimed the IAEA spokesman, Hans-Friedrich Meyer, last Thursday evening, when suspicions arose that fisssionable material had been transported from Hanau to Pakistan. "Our inspectors would have noticed if material disappeared"

That would be nice. In reality, the 250 IAEA officials, so-called safeguards inspectors, check nuclear facilities all over the world since the signing of the NPT. Quoting IAEA Director General Dr. Hans Blix: "They are to verify that countries which have agreed to not produce nuclear weapons really do so."

In the meantime, 96 countries have concluded safeguards agreements with the IAEA which has been founded by the UN in 1956. To demonstrate their good will almost all nuclear weapon states agreed to be safeguarded. Among those countries which do not officially possess the atomic bomb only Pakistan, Israel, Argentina and Brazil refused to open their nuclear facilities to the IAEA inspectors.

Presently, some 910 nuclear installations are inspected by the IAEA by means of book inventories, special cameras, highly sophisticated measurement devices and sample-taking. During the last years, however, there were repeated doubts about the efficiency of these controls. For the first time, there is now detailed evidence that the IAEA failed in fullfilling its "most important task" (Director General Blix).

In a 66-page report on its activities which came out in 1987 and has been kept confidential up to now, the IAEA listed a number of serious problems it has to deal with.

In March 1986, the IAEA did not have information on the whereabouts of 188 significant quantities of fissionable material which had been shipped in different countries from one nuclear facility to the other in 1985 . According to the definition, each of these SQ's could be sufficient to build the atomic bomb.

Only at the end of 1986 was it possible to reconstruct all the transport movements. Says physicist Helmut Hirsch of the Gruppe Okologie, Hannover, "during that period of time it would have been possible to build the bomb without anybody noticing it." Up to now it was assumed that the IAEA would know about the disappearance of a SQ within ten days.

In March 1987, there were again 70 atomic bomb-equivalents missing in the IAEA records - this time in 1986. In particular, the IAEA report points to "dubious export notifications from two nuclear weapon states."

D/3

Actually the IAEA does not inspect as comprehensively as it was assumed up to now. Six large facilities - each of them works with the equivalent of at least one atomic bomb per year - are not open to safeguards since there are no Subsidiary Agreements even though the safeguards agreements as such have long been concluded. The IAEA report, however, does not give the names of these installations.

In most of the 147 nuclear installations which are under surveillance by means of photo- and video cameras the IAEA cannot verify whether or not fissionable material has been diverted. Often the light condition in the storage pond areas is insufficient or temporarily not available. Says physicist Hirsch: "This is an open door for manipulations". It would be easy to exchange a drum with fissionable material in the darkness. The IAEA report states that "at present it cannot be foreseen when this problem might be settled."

In addition, the IAEA also has difficulties with the accreditation of new safeguards inspectors. The countries in which these inspectors are to work have to agree on their accreditation. Twelve Member States did not respond at all to respective requests over a period of more than a year. In 1986, the lack of an adequate number of safeguards inspectors hampered safeguards implementation in seven countries. According to the IAEA report "this is one of the most important problems as to the efficiency and credibility of the safeguards system."

Even if the 250 inspectors were able to carry out their inspections according to the regulations, on the average the inspection reports will not be available until 85 days afterwards. If samples are taken in the installations, the verification will take even longer due to the laboratories' heavy workloads. A country experienced in nuclear technology could easily construct a nuclear explosive device - unnoticed - in a reprocessing plant in that time span.

The IAEA bureaucracy has many difficulties as well: Even though safeguards inspections have been carried out for almost 20 years now the IAEA inspectors do not follow a unified inspection scheme.

However, their workload is constantly increasing. In the meantime, even in the area of the peaceful uses of nuclear energy a tremendous potential for nuclear weapons has been accumulated: The spent fuel under IAEA inspections alone contains nearly 160 t of plutonium. In the various nuclear facilities there are 8.4 t of separated Pu, in addition 13.2 t of HEU and 22 201 t of LEU 235 as well as 32 802 t of other fissionable material - theoretically, this would be sufficient for 31 710 atomic bombs.

How helpless the IAEA stands against the ever-increasing workload shows in the following numbers: Of the 306 large nuclear facilities the Agency did not reach its inspection goals in 1986. Only 19 percent of the nuclear installations under safeguards which worked with significant amounts of fissionable material could be satisfactorily inspected by the IAEA. The alarming trend: The bigger the nuclear programme of a country, the more the IAEA inspectors work in the dark.

The stubborn nuclear policy of the FRG is one reason for the safeguards system not working more successfully: When the NPT was negotiated, the delegates from Bonn made sure that the safeguards against misuse of nuclear installations were not too rigorous - because their own nuclear programme should be developed without too much outside interference.

Therefore, not nuclear facilities as a whole, as originally foreseen, but only the inspection of uranium and plutonium falls within the jurisdiction of the IAEA. The political analyst Matthias Küntzel, Hamburg, found out that the NPT can be easily circumvented by a series of loopholes.

Those facilities which the government claims have been shut down or contain no fissionable material cannot be inspected. Nuclear material that is claimed to be used for non-nuclear purposes is also not subject to inspection. In addition, there are special circumstances which allow fissionable material to be used for non-explosive military purposes, e.g. nuclear powered ships.

Since the NPT would not have been of value without the FRG's participation, the Germans were able to include a further condition: In FRGermany, the EURATOM Organization of the EC countries, which was founded for other purposes, takes the lead in the inspections, and not the IAEA. In the EURATOM's statutes, however, the military use of nuclear facilities is expressly allowed because of France's membership.

Until 1973, a verification agreement has been worked out between EURATOM and the IAEA. David Fisher, a former high-ranking IAEA staff member, remembers that EURATOM concentrated the main part of its efforts on reducing the IAEA's role to a minimum.

NUCLEAR SAFETY QUESTIONS

IN VIEW OF THE INCREASING NUMBER OF STORIES IN THE PRESS CONCERNING THE ALLEGED SHIPMENT OF RADIOACTIVE MATERIALS OUTSIDE THE COMMUNITY WITHOUT AUTHORISATION WE PROVIDED SOME BACKGROUND AT THE NOON BRIEFING TODAY.

IT IS IMPORTANT TO DISTINGUISH BETWEEN THE TWO ASPECTS OF EURATOM RESPONSIBILITY WHICH ARE RELEVANT TO THE CURRENT SCANDALS CONCERNING THE BELGIAN WASTE TREATMENT PLANT AT MOL AND THE GERMAN FIRM TRANSNUKLEAR:

1. THE FIRST RELATES TO NUCLEAR SAFETY AND RESPECT FOR THE COMMUNITY'S BASIC STANDARDS FOR RADIOACTIVITY IN THE ENVIRONMENT, AT PLACE OF WORK ETC. THE TASK LAID DOWN FOR THE COMMISSION IN ARTICLE 35 OF THE EURATOM TREATY IS TO MAKE CERTAIN THAT MEMBER STATES HAVE PROPER MONITORING FACILITIES FOR ENSURING THAT THE BASIC STANDARDS ARE RESPECTED. A SMALL TEAM OF COMMISSION OFFICIALS WILL VISIT THE MOL PLANT ON TUESDAY JANUARY 19. THEIR VISIT IS WITHIN THE CONTEXT OF ARTICLE 35 AND WILL HELP THE COMMISSION TO ASSESS WHAT LESSONS THE COMMUNITY CAN LEARN FROM RECENT EVENTS AT MOL AND IN GERMANY ON THE TRANSPORT AND HANDLING OF NUCLEAR WASTE. THE TEAM IS ALSO EXPECTED TO VISIT GERMANY SHORTLY.

2. THE SECOND CONCERNS OPERATION OF THE SAFEGUARDS ARTICLES OF THD EURATOM TREATY. THE COMMISSION HAS RESPONSIBILITY FOR IMPLEMENTING CONTROLS ON THE MOVEMENT OF FISSILE MATERIALS BETWEEN THE MEMBER COUNTRIES AND BETWEEN THE COMMUNITY AND THIRD COUNTRIES. A TEAM OF ABOUT 200 COMMISSION INSPECTORS IS INVOLVED IN THIS TASK, WORKING IN TANDEM WITH THE INSPECTORS OF THE INTERNATIONAL ATOMIC ENERGY AGENCY AT VIENNA. THE COMMISSION BELIEVES THAT OUR INSPECTION PROCEDURES PROVIDE AN EFFECTIVE CONTROL OF THE MOVEMENT OF FISSILE MATERIALS. WE HAVE NO EVIDENCE TO SUGGEST THAT USABLE QUANTITIES OF PLUTONIUM HAVE GONE MISSING IN THE WAY REPORTED IN CERTAIN MEDIA. HOWEVER, THE COMMISSION IS KEEPING IN CLOSE TOUCH WITH INVESTIGATIONS IN MEMBER STATES TO ENSURE THAT ALL THE FACTS ARE KNOWN.

AS FAR AS NUCLEAR WASTE IS CONCERNED, NUCLEAR INSTALLATIONS MAY NOT DECLARE ANY CONTAMINATED MATERIAL AS WASTE UNTIL THE INSPECTORS HAVE VERIFIED THAT IT CONTAINS NO FISSILE MATERIAL WHICH COULD BE RECOVERED IN ANY PRACTICAL WAY.

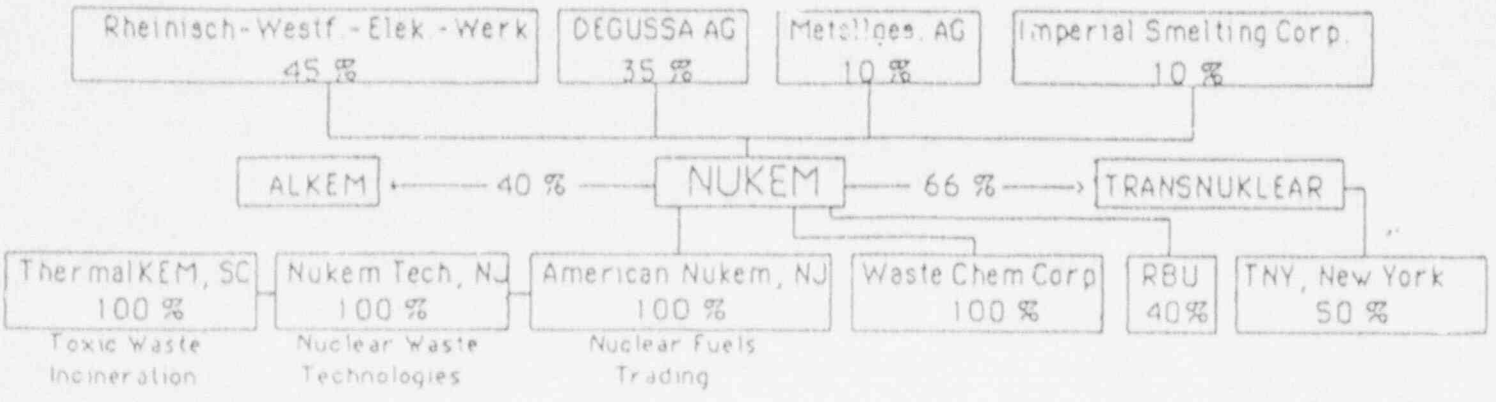
ThermalKem - Nukem

The "german" connection

The following is a chronology of events involving NUKEM and affiliated companies as reported in the german media. Sources include: dpa, Der Spiegel, taz, Report, Frankfurter Allgemeine Zeitung.

Mid 1980's - NUKEM supplies ultrasonic testing installations needed for NUCLEAR BOMB manufacture to SoutAfrica
November '85 - RBU employee dumps appr. 60.000 gal uranium CONTAMINATED wastewater into public sewer system
October 21, 86 - TRANSNUKLEAR truck has accident on Autobahn near Antwerp/Belgium. Radioactive fluids, NOT DECLARED on shipping papers, seep into groundwater.
August 1986 - AMERICAN NUKEM sells 2.5 million lbs of South African uranium to US company Malapai, Phoenix, AZ by SWAPPING certificate of material origin, thereby BYPASSING US trade embargo.
January 1987 - BRIBERY scandal involving TRANSNUKLEAR and nuclear power plant operators/employees unfolds. 5 Million DM, maybe 21 mill involved. Leads point to NUKEM.
February 1987 - South African uranium ends up in Soviet Union via NUKEM, even though the Soviets have issued an embargo against these materials.
March 1987 - Plutonium contaminated uranium tablet releases highly radioactive fumes, CONTAMINATING 69 NUKEM employees.
March 1987 - ALKEM employee CONTAMINATED with radioactive burns to head and arms.
April 1987 - Preussen Elektra employee Klaus Ramcke commits SUICIDE, after accepting BRIBES from TRANSNUKLEAR.
Fall 1987 - INTENTIONAL MISLABELING of nuclear waste materials. Butonium shipped by TRANSNUKLEAR to West Germany for storage, instead of low level waste.
December '87 - Hans Holtz, TRANSNUKLEAR manager, commits SUICIDE, while being interrogated.
December '87 - Environmental Minister SUSPENDS TRANSNUKLEAR license.
January 1988 - Belgian authority for radioactive waste finds 700 barrels german RADIOACTIVE WASTE MISSING at TRANSNUKLEAR subsidiary SMET JET.
January 1988 - **Manfred Stephany**, NUKEM president, RESIGNS. 2 remaining VP's, Peter Jelinek-Fink & Gerhard Hackstein are asked to resign by state of Hessen Ministerpresident. NUKEM orders FORCED RESIGNATIONS. NUKEM temporarily SHUT DOWN. All traffic entering & leaving being searched.
January 14, 88 - Search at NUKEM turns up papers dealing with irregularities in highly enriched uranium trade. Hessen Ministerpresident Wallmann announces that fissionable material may have been diverted to LIBYA and PAKISTAN via NUKEM.
January 1988 - **M. STEPHANY** knew of cash transfers to third companies, which were then used by TRANSNUKLEAR for BRIBERY, as early as 1983, yet when told about it, brushed off criticism. The 1989 Edition of Dunn & Bradstreet lists **M. STEPHANY** and P. JELINEK-FINK under NUKEM TECHNOLOGIES, Paramus, N.J., direct superiors of ThermalKEM, Rock Hill, S.C.

Prof. B. Liebmannn, DEGUSSA-CEO, confirms NUKEM's SCANDAL and says that among other things its AMERICAN TOXIC WASTE INCINERATION will play an important role in the company's future (Travemuende, West Germany, June 1988)



JULY 7, 1990

FREEDOM OF INFORMATION ACT REQUEST

FOIA-90-355
Rec'd 8-6-90
Clarification Rec'd 8-23-90

TO WHOM IT MAY CONCERN,

I am writing to request copies of all file entries that refer or pertain to one or all, of the following companies corporations and or manufacturers.

U.S.
- Thomas[illegible] South Carolina
- [illegible] Tech New Jersey
- American [illegible] New Jersey
- Waste Chemical Corporation

W.German
- [illegible] G.M.B.H.
- Degussa A.G.
- Imperial Smelting

Please mail copies to Patrick D. Waldron at Box eleven Turnersburg, North Carolina 28688
I am requesting these documents under the freedom of information act.

Patrick D. Waldron

9102050032

90-355
Rec'd 8-23-90

Dear Ms. Robinson,

Per your request for additional information regarding FOIA-90-355

I am a volunteer researcher working for Rowan-Iredell Citizens for a Clean Enviroment, R.I.C.C.E. R.I.C.C.E. is oppossing the siteing of a chemical waste incinerator that will be operated under contract with the state of North Carolina by ThermalKEM , a subsidiary of American NuKEM in New Jersey, which is in turn owned by NuKEM G.M.B.H. in West Germany.

Enclosed is a list of allegations from European press sources that we want to see investigated before ThernlKEM begins operations in North Carolina.

To that end, I am collecting information in support of my request for an investigation and review of E.P.A. licenses.

Sincerely,

Patrick D. Waldron

Patrick D. Waldron
P.O. Bx 11
Turnersburg, NC 28688