

RESEARCH REPORT

GERMANY'S HEAVY WATER LAUNDRY

by Gary Milhollin

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In early May of this year, Norway confirmed that a German company had diverted 15 tons of its "heavy water" from international controls in 1983. Heavy water, or deuterium oxide, is tightly controlled because it can be used in reactors to make plutonium, a nuclear weapon material. In 1985, the same German company diverted a shipment of 6.8 tons of Soviet heavy water, putting it on a series of air flights destined for India. Also in 1983, the company apparently diverted to India about 5.5 more tons of heavy water that the company had imported previously and accumulated.

After the diversions were discovered, Norway and Switzerland publicly asked Germany to investigate. However, Germany refused --it even refused to ask the company where the heavy water went. Because the company operates under German law, and used German import certificates as part of its illegal scheme, Germany's refusal to investigate is quite serious. It raises the question

whether Germany is fulfilling its obligations under the Nuclear Non-Proliferation Treaty.

The diversions happened as follows: From 1976 to 1986, the German firm Rohstoff Einfuhr bought about 27 tons of heavy water from Norway. Rohstoff Einfuhr is owned by Alfred Hempel, a man whom U.S. intelligence says has made scores of secret nuclear deals over the years, and about whom the U.S. State Department has complained to Germany since 1980. The Norwegian press has reported that Hempel is a former Nazi. It has published a picture of him--in full Wehrmacht Uniform--that he apparently sent to his friends on Christmas cards until 1985.

In 1983, the Hempel company's purchase from Norway was unusually large--15.18 tons. Previously, it had bought only one or two tons per year. To get the water out of Norway, it supplied two documents. The first was an "end user statement" in which it promised to use the water for "peaceful research projects" and not to re-export the water to any country that did not belong to the Non-Proliferation Treaty. The second was an import certificate, which it received by applying to the German Ministry of Economics. The certificate said that the heavy water would be imported into Germany and would not leave Germany without Germany's consent. Norway required the certificate to prove that the firm was government-sponsored, and that Germany would be responsible for placing the heavy water under international controls. Hempel's company presented the two documents to Norsk Hydro, the manufacturer of the water, which then signed a sales contract to send the water to Frankfurt. On the strength of the import certificate, the sales contract, and the end user statement, the Norwegian Foreign Ministry granted an export license specifying Frankfurt. Because it was December, the water was sent by air so it would not freeze, as Norsk Hydro feared it might

if it went by boat to Hamburg, as the company's other purchases had done.

Norsk Hydro planned to send the water by Scandinavian Airways, but Hempel's company insisted upon a different carrier to save money. This was West African Airlines, registered in Liberia. As the loaded plane sat in Oslo on the tarmac, the pilot suddenly filed a new flight plan. It showed Basel, Switzerland instead of Frankfurt. The Norwegian control tower, for some reason, approved the change despite the fact that Frankfurt was specified in the transport documents. The plane took off and Norsk Hydro, whose representatives loaded the water, swears that it never discovered the diversion until April 1988, when it was revealed by the press. Norsk Hydro also says that it is not plausible to think that it would have so flagrantly broken its own government's export laws.

The Boeing 707 landed in Basel with 18.1 tons of cargo, took on 6.6 tons more, and departed the same day for Bombay. The 6.6 tons were from the Soviet Union.

On November 23, 1983 two Soviet trucks arrived in Helmsted, West Germany, a town east of Hamburg on the East German border. They carried two crates of heavy water weighing 6.6 tons. Techsnab, Moscow's export agency, had shipped the water from Kiev. the trucks crossed west Germany and arrived in Switzerland a couple of days later. Hempel's company Rohstoff Einfuhr bought the water; Transservice arranged the shipment; Hempel's ORDA AG took it over in Switzerland. The water was held in transit in both Germany and Switzerland until ORDA put it on the plane for Bombay. A certian Mr. Pick, who worked for Cargo Charter Service, a company hired

to load and unload the plane, rode the flight from Luxembourg, where the empty plane took off, to Oslo where it took on the Norwegian water, to Basel where it took on the Soviet water, to Dubai where it stopped temporarily, and on to Bombay where it delivered the water. The water's Soviet markings were removed in Switzerland.

As a rule of thumb, about 15% of a heavy water cargo consists of drums and pallets. The 6.6 tons of Soviet cargo would thus have contained about 5.6 tons of heavy water.

The next transaction was in mid-July of 1985, when 6.8 tons of Soviet heavy water arrived in Zurich on an Aeroflot flight from Moscow. It had been imported by Rohstoff Einfuhr for "various countries of the European Community." Roland Timerbaev, a Soviet U.N. official, later said that a group of companies had ordered quantities of 900, 950, and 700 kilograms, just under the one ton limit that triggered Soviet and international controls. The several companies then retransferred all the heavy water to a single company that consolidated the amounts. After that, according to Timerbaev, "we were told ... that in fact the whole thing went to Country X, which needed heavy water."

After the Soviet water reached Zurich there was--as in the Norwegian case--a change of destination. In Zurich's bonded warehouse, the consignment papers were switched from Europe to Sharja, in the United Arab Emirates. The water then went to the Basel airport where Transmediterranean Airways, based in Beirut, was scheduled to fly it out. According to Transmediterranean's director, the water was to be held in transit in Sharja until a chartered Air India

flight could take it to Bombay.

For some reason, Transmediterranean decided not to handle the shipment. From late July until early August the water remained in Basel. Then West African Airlines flew it to Dubai.

When the Swiss government discovered the shipment, it asked Germany for information about Rohstoff Einfuhr. Bonn's reply was almost indignant:

"the transaction does not constitute a breach of any German foreign trade regulations which would require or permit German authorities to intervene. More specifically, it will not be possible, given the current situation, to compel the ROHSTOFF-EINFUHR company to give information on the heavy water's final destination."

After this reaction in 1985, Norway should have expected the German reply in 1988. When the 1983 diversion was discovered this past May, Norway launched a criminal investigation and asked Germany to do the same. The first German response came from Hempel. Rohstoff Einfuhr told Reuter that "we bought the goods in transit and sold them on in Switzerland." It also produced a letter and telex--from itself--telling Norsk Hydro that the water was going to Switzerland. Norsk Hydro says it has no record of either document. Despite this factual dispute, the German government immediately closed the case. It said that it "had no evidence to contradict the company's statements," which was hardly a convincing reply to a request to develop evidence. Germany also said that its laws only applied if the heavy water actually entered Germany, and the German spokesman in Washington even said that the "most important factor was that Norsk Hydro knew of

the change" from Frankfurt to Basel.

The letter and telex--even if authentic--are irrelevant to Hempel's legal obligations. The Norwegian government, not the manufacturer Norsk Hydro, controls Norwegian exports. The Norwegian Foreign Ministry issues export licenses and only it can change them. Hempel knew this perfectly well--he had exported heavy water from Norway every year since 1976. To send the goods to Switzerland legally, Norwegian law required the company to get a new export license. To grant it, Norway would have required an import certificate from Switzerland, and Switzerland instead of Germany would have been responsible for the goods. Hempel's claim that he could legally export something to Switzerland under a license to Germany is obviously ridiculous.

The goods were delivered "FOB Oslo." This is a legal term transferring ownership to the buyer when the goods are put on the carrier at the place mentioned. Norway therefore lost ownership--and control--of the heavy water at the airport, where Hempel's company, sponsored by the German government, assumed it. The water was still under German control when Hempel's company illegally sent it to a third country instead of Frankfurt. Germany's refusal to do anything to prevent this violates the Nuclear Non-Proliferation Treaty.

Article III of the Treaty prohibits its members from providing heavy water except under international inspection (called safeguards). Each member country has a duty to enact and enforce laws to prevent its companies from breaking this rule. If Norsk Hydro knew that the heavy water was going to Switzerland--where there was no authority to send it--Norsk Hydro acted illegally and

broke Norway's obligation under the Treaty. Did Hempel's company also break Germany's obligation under the Treaty? It took control of the water under a German import certificate--which it held as a German company--and then deliberately transferred the water beyond international inspection. It seems, therefore, that it did.

Hempel's company was under no obligation to use the certificate--it could have thrown it away, just as one who gets a building permit is not obliged to erect a building. But once it did use the certificate it was obliged to respect its terms. One cannot build a skyscraper with a permit for a house, or kill an eagle with a permit for rabbits. After using the German certificate to get the water out of Norway, Hempel's company was obliged to do what the certificate required.

The certificate (number 718438, of September 8, 1983) has some interesting terms. It says: "It is hereby certified that the importer has undertaken to import into the Bundesrepublik Deutschland the above-mentioned goods, or, if they are not imported, not to divert them to another destination except with the authorization of the competent German authority."

It also says--for direct imports--that the importer "shall inform the Bundesamt für gewerbliche Wirtschaft (BAW) at once of the import of goods into the economic area of [the Federal Republic]." For transit trades, it says that "the (BAW) shall be informed immediately of the import of the goods into the purchaser's or consumer's country."

The certificate has a special place for stating the destination of goods. If the goods are not

to be imported, the importer must state on the certificate where he intends to send them. And then he must notify the authorities when the goods arrive.

Thus, the importer is bound to do what he says he will do in the certificate. The certificate itself makes this clear:

"The International Import Certificate may only be used for the transit trade operation as indicated in the application; it must be returned at once if the operation was not carried out or was carried out in a different manner."

In addition to all the above, the certificate says that "if the import identified in the application for the International Import Certificate is converted into a transit trade operation...[the importer or transit trader] will transfer the goods to non-residents only with the consent of the (BAW).

Therefore, Hempel's company violated several obligations. It knew from the beginning that the water was not going to Germany. It therefore made a false statement to German authorities when it applied for the certificate. Making false statements to governments violates the law in most countries--and probably does in Germany. Second, the company failed to report where the goods were finally delivered, another violation. Indeed, the company is still violating that obligation today, because it still refuses to tell anyone where the goods went. Third, the company used the certificate for a different purpose than the certificate stated, and thus violated the certificate's additional obligation.

The German government contends that because the water never reached German soil, Germany was not responsible for what happened to it. This ignores the difference between physical location and legal control. German control and ownership began legally and physically in Oslo. It continued until the time of diversion. It is axiomatic that a country's laws can cover its citizens' acts outside its boundaries. The governments that adhere to the Nuclear Non-Proliferation Treaty are mutually obliged to protect the nuclear materials within their control. Germany controlled the heavy water exported from Norway at the time it was diverted and was obliged to protect it--that is, to prevent it from leaving international inspection. Germany's failure to do that, or take any action when the diversion became known, is a violation of the Treaty.

If Germany believes that physical location is essential, it has Mr. Hempel's other purchases to investigate. Norway sold German companies the following additional quantities of heavy water: 2 tons in 1977-78, 1.55 in 1978-79, 4.47 in 1979-80, 1 in 1981, 1.16 in 1984, .712 in 1985 and .141 tons in 1986. Norsk Hydro says that Hempel's company got 80-90% of these shipments--all sent to Hamburg by freighter in small amounts. For each shipment, Hempel's company gave Norway a separate German international import certificate. Norsk Hydro has a stack of them. What happened to the heavy water in Hamburg? The German ministries refuse to say. Did Hempel's company import it into the Federal Republic, as the certificates required? Or did it hold the water in transit contrary to the certificates and send it elsewhere without reporting its arrival?

These transfers violate German law, Norwegian law, and probably Swiss law.

Germany's failure to investigate is therefore incredible. Hempel's company broke German law when it made false statements to get the certificate in 1983, broke it again when it used the certificate contrary to its terms, and broke it a third time when it failed to report the destination of the goods. It also broke Norwegian law by misusing the certificate in Oslo and filing a false end use statement. The result was to cause both governments to break a treaty obligation.

So why not investigate? Hempel has been a problem for years. According to British intelligence, his companies secretly arranged the following shipments:

- o In 1981, 60 tons of low-enriched uranium to South Africa, transferred by the Dusseldorf company Transservice for Hempel's Swiss company ORDA AG, payment being made to ORDA's account at Credit Suisse in Zurich. The transfer has been confirmed by U.S. intelligence.

- o In May 1981, 45 tons of Chinese uranium ore to Argentina, again by ORDA. China flew the ore from Shanghai to Hong Kong, where a Luxembourg company called Cargolux was supposed to pick it up and fly it to Argentina. But the U.S. embassy in Luxembourg, calling the cargo "unsafeguarded U-235 and drums of heavy water," got Luxembourg to stop the charter. Argentina refused to promise to use the material for peaceful purposes. Air France, however, stepped in and made the delivery.

- o In April of 1982, 14 tons of Chinese heavy water to Argentina, arranged by Achim Heynen, ORDA's Argentine agent.

Also according to the intelligence report, Hempel appointed an Austrian, Franz Riha, as his Moscow agent. Riha was soon expelled for being a German spy. This shows an early link between Hempel and German intelligence.

In Der Spiegel's edition of October 17, 1988 the following additional transfers were reported:

- o In June, 1981, 40 tons of Chinese heavy water to Argentina on Air France, again by ORDA, over U.S. protests in May of 1981.

- o Between July and November, 1982, exports of 70.634 tons of Chinese heavy water, of which 50 went to Argentina and 20 to India. Der Spiegel said that Kristoff Haase, counsel to Martin Bangemann, then head of the West German Economics Ministry, publicly admitted the transfers.

The October 13, 1988 edition of Die Tageszeitung, a Berlin daily, reported the following:

- o Since the 1970's, numerous sales of heavy water to India and Pakistan--at the same time-- by a Geneva company called Andero Chemie. Helmut Swyen, Hempel's manager in Dusseldorf, admitted to the Bundestag that Hempel owned Andero. Die Tageszeitung reported that Andero was a front purchased by straw men, and showed heavy water sales on its books to India and Pakistan beginning in 1975. The books had side by side entries reading "Pakland [a purchasing company for the Pakistan Atomic Energy Commission]--HW--5T--awaiting your offer," and "Atomic Energy Commission India--HW--10t--awaiting your offer." Die Tageszeitung published a letter from

Pakland to Andero dated February 6, 1975 complaining that Andero had promised to send an offer for 5-10 tons of heavy water but had not done so.

- o In the 1970s, heavy water from the Soviet Union to Israel, through a connection in Luxembourg.

- o On June 4, 1981, 40 tons of Chinese heavy water to Argentina--the same transfer reported by Der Spiegel--on a chartered flight from Paris to Buenos Aires. Air France had flown the water to Paris from Hong Kong on June 3 for ORDA, supposedly for buyers in Germany and Switzerland.

- o In late January, 1986, 4 tons of Soviet heavy water to Bombay through Amsterdam. According to Swiss officials, on January 22, 1986 the U.S. Embassy alerted them to the shipment, which Hempel had planned to send through Basel, as before. But the change in Swiss law forced a last-minute detour to Amsterdam. Dutch officials say that the water left Schiphol airport on an Air India charter flight at the end of January. These officials also reported that Hempel was collecting more heavy water in Amsterdam at that time.

The August 25, 1988 edition of Die Tageszeitung reported these additional details:

- o In the two years 1981 and 1982, ORDA, which had just been founded, reported a taxable profit of 3.8 million Swiss francs on a shareholding capital of only one hundred thousand Swiss

francs.

o In the late 1970s, Hempel had negotiated a deal for shipping Germany's spent nuclear reactor fuel to the Soviet Union for treatment and disposal. But the deal was upset by the expulsion of Hempel's agent Franz Riha from Moscow, on the charge that he was a German spy. The Riha episode was reported by British intelligence.

Der Spiegel's October edition of October 31, 1988, p. 14, reported that:

o Helmut Swyen, in a closed session, told the Bundestag committee that Rohstoff Einfuhr gave the Norwegians the address of the Juelich institute, owned by the German government, as the destination of the 15.18 tons of heavy water diverted to Bombay. Juelich never got the water, and never had any need for 15 tons. [which raises the question whether the Norwegians really cared where their water went--they should have known that the institute didn't need it].

o During a fifteen year period, Swyen shipped India and Argentina 200-300 tons of heavy water from China, Norway and the USSR.

Other deals:

In 1987, 5 tons of Soviet heavy water to Bombay via Zurich's Kloten airport. Exported by Techsnab from Keiv on Aeroflot and picked up in Zurich by a company called I.C. Chemikalien

(possibly Israeli). No connection to Hempel yet established.

In 1977, 5 tons (probably Soviet) to Israel, sent by Hempel. Source is former employee of Hempel. Reported by Koch.

According to U.S. government sources, Hempel's companies also arranged large transfers of Chinese heavy water to India in the early and mid-1980s. The amounts were in the hundreds of tons, and went by ship to Bombay through Dubai.

Given China's presumed reluctance to help India get the bomb, Hempel must have deceived the Chinese just as he did the Soviets. The Chinese water, therefore, would not go directly to Bombay; it would have to travel first to some intermediate point chosen by Hempel. The seller would not know who bought it--or could say that he didn't--and the buyer would not know who sold it--or could say that he didn't. Hempel therefore achieved an historical first--he was the first man to launder water. The Chinese shipments were so large that they had to go by boat. U.S. sources have hinted strongly that they went to Bombay through Dubai.

Finally, Hempel is tied to Transnuklear and Nukem--the German companies being investigated for bribery and corruption in the transport of nuclear waste. Hempel and these two companies have formed a third company called "Inter-Nuklear" in which Hempel holds the largest interest. Inter-Nuklear was apparently formed for the purpose of sending Germany's spent reactor fuel to China for disposal. Hempel's role was to act as broker. Der Spiegel has accused the company's Swiss counterpart of selling heavy water to Pakistan.

Hempel's deals have broader implications than any of the other nuclear scandals Germany is investigating. Before India began getting heavy water from Hempel, the first of its new reactors at Madras sat idle. That reactor was the first in India that could operate without a guarantee of peaceful use covering its plutonium. All of India's other reactors were subject to that guarantee. The reactor had been ready for almost two years, and could have been started at any time with Soviet heavy water. But the Soviet water had been supplied under safeguards, which meant that if India used it, international inspectors would verify that the reactor's plutonium would not go into atomic bombs. India couldn't make enough heavy water itself to start the reactor, so India faced a choice: it could make electricity peacefully or let the reactor sit idle. Through Hempel, however, India was able to get enough heavy water secretly to start both of its new reactors at Madras and a third called Dhruva at Trombay. Altogether, these reactors will make almost 200 kilograms of plutonium per year, enough for 30-40 atomic bombs. For India to stockpile this much plutonium without restriction has alarmed Pakistan, and driven that country more rapidly toward nuclear weapons.

As for South Africa, it can use the low-enriched uranium from China as feedstock for its existing uranium enrichment plants. With low-enriched feed, South Africa can make three times as many atomic bombs as it could have made with an equivalent amount of natural uranium.

The Non-Proliferation Treaty requires that no member country allow its companies to defeat the Treaty's purpose. If a government fails to act when the rules are broken, the entire world safeguards system can be defeated by one unscrupulous operator--as Hempel's impact on India shows.

Why can't Germany see these issues or understand their importance? Other governments have repeatedly drawn them to Germany's attention. Hempel's nuclear laundry has probably given India an atomic arsenal--and is ready to do the same for others. Whom will it supply next? Its reach is boundless as long as Germany protects it. If Germany cares at all about the spread of the bomb, or the opinion of others, it must investigate Mr. Hempel.

RECOMMENDATIONS

I have made a list of recommendations that the Committee might consider in responding to the Hempel group's activities. They are as follows:

1. The German government should demand that the Hempel group report immediately the true destination of all the Norwegian heavy water covered by the group's German import certificates. The certificates clearly require this, and there is no excuse for not complying.

2. The German government should examine each international import certificate that the Hempel group has received for nuclear-related goods, and demand that the true destination of the goods be reported, as the certificates require.

3. The Bundestag Committee should also examine the certificates. It should obtain copies of them from the government and should ask the government and the Hempel group to report the true destination of all the goods that the certificates cover.

4. The penalties for violating the obligations of the certificate should be increased. A fine of 50,000DM--the penalty now in the certificate--does not deter a profit of a million DM. The Norwegian shipment in 1983 was worth nearly 4 million dollars on the legitimate market. It must have been worth far more than that to India, which received it without controls. Under U.S. law, a person who makes a false statement to obtain an international import certificate, or who misuses the certificate, can be punished by up to five years in prison. The Hempel group has made large profits by deliberately violating the certificates, and does not appear to be subject to any sanction.

5. Administration of German controls should be improved. German authorities should be able to find out what happens to sensitive nuclear material that is supposed to be imported into

Germany but does not arrive. There should be a staff adequate to track materials on a timely basis, and make inquiries when something goes wrong. The records of imports and transit trades should be open to the Bundestag.

6. To help reestablish confidence in its nuclear industry, Germany should create a special list of companies authorized to deal in, possess, or transport sensitive nuclear materials. Because such companies control materials that can make atomic bombs, the list would be confined to companies that deserve the highest confidence. Any company that had violated an international import certificate, or other important obligation, would be barred from the list.

GERMANY'S HEAVY WATER LAUNDRY:

NOTES AND SOURCES

1. Official Norwegian export records show the amounts of heavy water that Germany purchased each year through 1986. Beginning in 1977, Germany bought a total of 26.92 tons. It bought 2 tons in 1977-78, 1.55 in 1978-79, 2.17 in 1979-80, 2.3 in 1980, .994 in 1981, 15.9 in 1983, 1.16 in 1984, .712 in 1985, and .141 in 1986. Norsk Hydro states that 80 to 90% (from 21.5 to 24 tons) went to Hempel's group.

2. Attached to this report is the Norwegian newspaper story alleging Mr. Hempel's Nazi party membership and showing his picture in uniform. An English translation is included.

3. The "end use statement" is attached, together with a copy of the page of the international import certificate that Hempel's group signed. A copy of the rest of the certificate (form number 732, available at Kaiserstrasse 15, Bonn) is also attached. The Foreign Ministry of Norway has a separate German import certificate for each of the numerous sales made before and after the sale in 1983. Each sale required a separate certificate.

4. The international import certificate used by the United States is also attached. The language of the importer's promise is virtually identical to that of the German certificate. The U.S. certificate, however, says that any false statement made to obtain the certificate, or any false use of the certificate, is a federal crime punishable by up to five years in prison.

5. The Norwegian Foreign Ministry and Norsk Hydro have the 1983 sales contract designating Frankfurt, the export license designating Frankfurt, and shipping documents designating Frankfurt. The Ministry and Norsk Hydro have described all these documents to the press.

6. The flight plan of the 1983 shipment is in the computer records of the Swiss Air Ministry. Mr. Mossimann, Assistant Director for Non-Scheduled Flights, affirms that the flight from Oslo terminated in Bombay but has declined to provide a printout of the computer record. Mr. Rhinow, an official at the airport in Basel, told the press that the plane made an intermediate stop in Dubai.

7. Mr. Timerbaev's statement is attached, together with a recent Wall Street Journal report of an interview with him.

8. Mr. Egmont Koch first reported the details of the transfer of the Soviet water in 1985 in a television documentary broadcast by ARD on November 3, 1986 at 9:15 p.m. The title translates into English as "Bombs for Business."

9. Bonn's reply to Switzerland is quoted in Mr. Koch's documentary.

10. The Hempel group's comment on the 1983 transfer is contained in a dispatch from Reuter, attached.

11. The telex that Mr. Hempel claims to have sent to Norsk Hydro in 1983 is attached, together with an English translation of the Norwegian newspaper stories about it.

12. Germany's response to Norway's request for an investigation is contained in press reports, attached.

13. Section 2-319 of the Uniform Commercial Code, which is in effect in the United States, provides:

"[T]he term F.O.B. (which means free on board)...is a delivery term under which

(a) when the term is F.O.B. the place of shipment, the	seller must at
	that place ship
	the goods and
	b e a r t h e

expense and
risk of putting
them into the
possession of
the carrier...."

Section 2-401 (2) provides:

"Unless otherwise explicitly agreed title passes to the buyer at the time and place at which the seller completes his performance with reference to the physical delivery of the goods...

(a) if the contract requires or authorizes the seller to send the goods to the buyer but does not require him to deliver them at destination, title passes to the buyer at the time and place of shipment...."

Section 2-509 (1) provides:

"Where the contract requires or authorizes the seller to ship the goods by carrier

(a) if it does not require him to deliver them at a particular destination, the risk of loss passes to the buyer when the goods are duly delivered to the carrier...."

14. Germany's commitment under Article III of the Treaty not to export heavy water without safeguards is contained in INFCIRC 209, a publication of the International Atomic Energy Agency. Heavy water is covered by Paragraph 2.2.1 of Memorandum B attached to the Federal Republic's implementing letter to the Agency of August 22, 1974.

15. The German government has not replied to letters (copies attached) asking for information about the heavy water shipped to Hamburg by the Hempel group.

16. The transfer of Chinese enriched uranium to South Africa is described in the attached report attributed to British intelligence. Also attached is an article from Nuclear Fuel describing the intelligence report.

17. Transfers of large amounts of Chinese heavy water to India have been reported by U.S. intelligence in closed briefings in Washington. U.S. government sources have also reported that Mr. Hempel's group made the transfers. These same sources have reported that the United States has complained frequently to Germany about the Hempel group's activities. Some of these sources are quoted in the attached article from the Christian Science Monitor. According to article, U.S. government officials have said that "the U.S. has passed intelligence reports about the Hempel company's nuclear dealings...to West Germany since the early 1980's...and has repeatedly asked the Germans to investigate, but without results." The article quotes U.S. officials as saying that "the West German government hasn't gone out of its way to do anything," and quotes one official as saying that "I can't go into details, but Hempel did not hang up his hat in 1985." The attached article from Nuclear Fuel is similar. It quotes U.S. officials as saying that "Hempel's commerce has been discussed in bilateral meetings between U.S. and German governments, so far without success," and also quotes these officials as saying that Germany's attitude is "very legalistic." The German government should have some record of these communications.

India's need for heavy water is described in the attached article, "India's Nuclear Cover-Up,"

and in the attached news report describing an audit by the Indian government showing India's production shortages.

18. According to Nucleonics Week, October 23, 1986, pp. 11-12, Inter-Nuklear was set up to transfer high-level nuclear waste from the Federal Republic to China. The accusation concerning heavy water is made in Der Spiegel (No. 3, Jan. 18, 1988, p. 30).

Both articles are attached.