



CIA Recruitment of the Three Tinnars: A Preliminary Assessment

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Few still doubt that the Tinner family of Switzerland has worked for the Central Intelligence Agency (CIA) in helping to shut down the A.Q. Khan network. Yet, many details about their cooperation are unknown or are debated.

The CIA has refused to comment on its relationship with the Tinnars. Any public revelations by the Tinnars or their lawyers are suspect because they are seen as partial, exaggerated, or embellished in order to fend off Swiss prosecutors. The Tinnars are being investigated over whether they committed criminal violations of Swiss anti-proliferation and money laundering laws. In those investigations, the more the Tinnars can portray themselves as heroes, they assume, the better their chances are of avoiding or ultimately beating charges against them.

The best evidence supports that in June 2003, Friedrich, the family patriarch, and his two sons, Marco and Urs, became informants or contractors for the CIA in its effort to expose the Khan network. For about one year, the Tinnars provided a valuable service to the CIA and received millions of dollars in compensation.

Open source information contains claims implying that Urs was a paid CIA informant beginning in about 2000. However, these claims should be treated with caution. In media reports, Urs has admitted to being approached by the CIA, although he has declined to state when it happened.¹ However, he told International Atomic Energy Agency (IAEA) officials that he started helping the CIA in 2000. Unnamed former U.S. intelligence officials have made such statements to the media, although the year given for Urs' recruitment varies from about 1999 to 2001. In the criminal investigation in Switzerland, however, evidence about an earlier recruitment is lacking and some of it contradicts such an earlier start-date by Urs. Since the source for Urs' claim is either himself or unnamed intelligence officials, who are undoubtedly trying to help him, the claim about a start-date of 2000 requires confirmation. A firm conclusion must await more objective information.

The date of Marco and Friedrich's recruitment is clearer. They have not claimed that they started doing significant work for the CIA much earlier than June 2003.

The following report on the Tinnars' recruitment and relationship with CIA is supplemental material to [*Peddling Peril: How the Secret Nuclear Trade Arms America's Enemies*](#), by David Albright and released in March 2010. It is necessarily preliminary since so much remains unknown or unconfirmed about the Tinnars' relationship with the CIA.

¹ Hansjuerg Zumstein, "Wie ein Schweizer Mechaniker die Welt Veraenderte," **SF DOK**, Swiss National Television, January 22, 2009.

Reports of Urs' Recruitment in 2000

Urs Tinner is often mentioned in books and media reports as a critical spy located in Dubai who was recruited by the CIA in about 2000. Whether he became a CIA asset at this time remains unconfirmed. There has not been evidence of an earlier recruitment uncovered by a Swiss multi-year investigation of the Tinnners.² In fact, the Swiss investigations routinely point to 2003 as the actual starting date of Urs', Friedrich's, and Marco's formal relationship with the CIA. One investigator noted that the Tinnners' version has shifted in the last year or two, and is now focused more on a June 2003 date.³

The CIA and MI-6 might have had another source inside the Khan network, although Urs may have indeed provided important information. A U.S. official who received information about the Tinnners' activities in 2000 said that a friend of Urs in Dubai was recruited at about the same time, perhaps earlier. Urs may have unknowingly or begrudgingly provided critical information about the network to this friend or to CIA agents who approached him.

Urs had moved to Dubai in 1998 where he contributed to his family's business with Khan and to fulfilling Libya's secret order for a turn-key gas centrifuge plant. He also worked there with B.S.A. Tahir, Khan's chief aide.

Urs was lonely and often frequented the same bars.⁴ He had left Switzerland depressed over his recent divorce, including what he called "drama" over his children and visitation rights.⁵ He also had disagreements with local Swiss tax authorities over money they claimed he owed.

In the version where Urs was recruited by the CIA in 2000, a CIA agent reportedly approached him in Dubai. This agent, the story goes, relied on a simple, well-tested method. Based on the statements of "Mad Dog," a former CIA employee involved in the case, the CIA agent reportedly threatened Urs with possible legal trouble in France for a crime he had allegedly committed earlier.⁶ This threat was evidently enough to convince Urs to become at least a reluctant, perhaps uncooperative, source. Urs likely believed that the CIA agent could turn incriminating evidence over to authorities, compounding his troubles. Urs' exact status with the CIA in this version is difficult to determine, although no reports claim it was fulsome.

Swiss investigators did not find any confirmatory evidence about the earlier approach to Urs in documentation assembled as part of their effort to determine whether to charge the Tinnners with violating Swiss anti-proliferation laws. This information included encrypted electronic communications between the Tinnners and the CIA found by Swiss investigators in the large electronic collection that investigators seized from the Tinnners. After much effort, Swiss authorities managed to decrypt these e-mail communications between the CIA and the Tinnners, but none of the emails showed an earlier recruitment.

That a CIA agent could approach Urs and obtain information from him is supported by more recent revelations. Based on Urs' interactions with the media and Swiss investigators, a picture has emerged of someone who is willing and eager to talk about himself and his activities. One knowledgeable source with experience interviewing Urs said that Tinner could easily be tricked and might reveal information without meaning to do

² Interviews with Swiss officials with detailed knowledge of the Tinner case, August 2010.

³ Interview with Swiss officials with detailed knowledge of the Tinner case, August 2010.

⁴ Confidential source knowledgeable about the Tinner case, August 20, 2008.

⁵ **SF DOK**, op. cit.

⁶ Douglas Frantz and Catherine Collins, *The Nuclear Jihadist* (New York: Twelve Hachette Book Group, 2007). According to Doug Frantz in the January 22, 2009 Swiss television program *Temps Present*, Urs Tinner was not very cooperative. He did not throw himself into the arms of the CIA agent, but rather it was a courtship, and operations such as these take time to become successful. It is necessary to establish a level of trust to be able to manipulate the person a CIA agent is trying to recruit. (translated from French).

so. While questioning both Urs and Marco, a witness to these conversations reported that Urs talked over and down to his quieter brother Marco. Thus, there is little doubt that the CIA could have used Urs as an unwitting source.

If Urs did start working with CIA in 2000, he is unlikely to have told his family about it. The Tinner businesses involved Urs' mother, father, brother, sister, and brother-in-law. The businesses were deeply involved in supplying Pakistan's and Libya's nuclear weapons programs. Urs would have likely feared his powerful father, who had a long, productive relationship with Khan. If he helped the CIA too much, he risked hurting his own family. The cooperation could result in prosecutions or retribution by Khan or the Libyan ruler Muammar Qaddafi against himself or his family.

Urs' early involvement as a paid CIA agent would also suggest that the CIA and MI-6 were running a sting operation to trap Khan while Urs and his close-knit family continued illegal activities and became rich off of Libyan payments. Some have said that Libyan payments to the Khan network amounted to \$100-200 million in total.⁷ The Tinnings' companies received large cash infusions from Khan's money man Tahir from 1997 to 2003—up to 20 million Swiss francs, or \$12.5 million.⁸ However, a sting operation appears unlikely. A former U.S. intelligence official familiar with the operation said it was not a sting operation, adding support to the view that Urs' role was not as important as portrayed in the media or by him.

Whether Urs was a key spy for the CIA in Dubai or merely an uncooperative source, the CIA could place him under surveillance wherever he went. They could learn more about the network or approach him later either directly or via others for information.

Whatever the facts of the situation, the CIA now had more of an inside view of the network. Washington and London had begun to receive details about the Dubai operations and about the Tinnings. The picture that took shape was alarming – a rogue Pakistani scientist and his agents were selling Libya the capability to make nuclear weapons. Many holes existed in the picture. Who else was buying? How much were they buying? Who else was involved? At the time, many details about the Khan network's organization and activities remained unknown.

Watching the Khan Network

The United States faced a quandary. It now had enough information to bust several members of the network, but it also knew that many of the network's activities remained unknown. A top secret meeting was convened in the Clinton White House in 2000 to debate the next course of action.⁹ The session was attended by a select group of officials responsible for stopping the spread of nuclear weapons and senior members of the CIA's clandestine operations division. The CIA argued patience—the insider sources could reveal the whole picture if given time—and the others agreed.

The CIA and MI-6 continued to collect information about the network. By early 2002, they knew that Khan had moved his base outside Pakistan to Dubai and was now controlling operations through his associates there. They knew about centrifuge production facilities in Malaysia.¹⁰

They also learned more about the network's deals with Iran. Khan's assistance might have given Iran's centrifuge program even more of a head start than had previously been known.¹¹ They worried that the

⁷ George Tenet, *At the Center of the Storm*, (New York: HarperCollins Publishers, 2007), p. 296.

⁸ Interview with Swiss official with detailed knowledge of the Tinner case, June 2006 and April 2009. In 2001 and 2002, about 1.6 Swiss francs equaled one dollar.

⁹ Interview of a former senior U.S. official, November 16, 2007.

¹⁰ Lord Butler, *Review of Intelligence on Weapons of Mass Destruction*, Report of a Committee of Privy Counselors, July 14, 2004, referred to as the "Butler Report."

network could help Iran leapfrog from use of P1 to P2 centrifuges. To prevent that from happening, the CIA, or more likely Israel, targeted Gotthard Lerch, a German national living in Switzerland with deep connections to the Khan network. Secret agents left a warning letter at Lerch's house in eastern Switzerland, a copy of which ISIS has seen. It is undated, but believed to have been written in about February 2002, and begins "Herr Lerch," in a neat handwriting. The letter warned him not to sell the P2 centrifuge design to Iran in cooperation with Urs and Marco Tinner, and other German and Arabic accomplices of the Khan network. The letter threatened "grave consequences" if Lerch proceeded. It was signed "your sincere friends." It continued, "We will come to talk to you to work out a deal for both parties' interest." Lerch is not believed to have taken up any offer, but P2 assistance is not believed to have materialized either.

By late 2002, the Libyan jigsaw puzzle was finally becoming clearer, and officials in Washington and London were alarmed. They pieced together the network's suppliers, financing, front companies, key scientists, agents, shipping companies, and manufacturing plants. London was increasingly worried that Khan could enable his customers to build nuclear warheads for missiles.¹² Libya seemed close to having all it needed to build a centrifuge plant. By early 2003, London concluded that the network's activities had reached a point where it would be dangerous for them to continue.¹³ It was finally time to act.

At a summit meeting between President George W. Bush and Prime Minister Tony Blair in early 2003, most of which was devoted to planning the looming war in Iraq, the two leaders quickly agreed that the network had to be stopped,¹⁴ but it was not clear immediately how to do this. One former senior State Department official likened the Khan network to bamboo, which re-grows rapidly unless removed completely.¹⁵

One approach would be to funnel evidence to national authorities, and they could take action against the individuals and sites where the Khan network was active. Essentially, this would involve national police actions that would be supported by Britain and the United States. Under certain circumstances, such an approach is the preferred one. However, this strategy worried those who had watched the Khan network smugglers escape prosecution time after time, and it was rejected. The CIA did not have confidence that other governments would prosecute the smugglers. Some key countries, such as the United Arab Emirates and Malaysia, did not have export control laws; prosecution was not even possible there. Furthermore, no one had succeeded in convincing the Pakistani government to stop Khan. U.S. officials worried that such an approach would only set back Khan's operations and perhaps not even stop Libya from finishing its centrifuge plant.¹⁶

Recruiting the Tinnners

In mid-2003, the CIA decided to try a different strategy. George Tenet, then director of the CIA said, "We came up with a bold solution that involved a series of carefully orchestrated approaches to the network."¹⁷ Planning for the operation was top secret, restricted to only a few officials in the U.S. government. Key to their strategy was recruiting the Tinner family as paid CIA contractors or informants.

Official explanations of the CIA's recruitment of the Tinnners remain largely non-existent. The Swiss criminal investigation of the Tinnners and resulting available documents have resulted in a clearer version of their recruitment and their work for the CIA that started in June 2003.

¹¹ Interview of a former senior U.S. official, November 16, 2007.

¹² *Butler Report*, op. cit.

¹³ *Butler Report*, op. cit.

¹⁴ Interview of former senior U.S. official, Washington D.C., April 5, 2005

¹⁵ Interview with former senior U.S. official, April 3, 2006.

¹⁶ *At the Center of the Storm*, op. cit. p. 284.

¹⁷ *At the Center of the Storm*, op. cit., p. 284.

A former intelligence official said that one element in recruiting the Tinnners was luck, but the official declined to provide any details. Luck was also mentioned by British intelligence officials as a key factor in uncovering and dismantling the Khan network, again without any explanation.¹⁸

Earlier publicly reported versions of that recruitment, floated by the Tinnners themselves, now appear to be untrue. Public accounts based on Tinnners' statements have emphasized that they approached the United States. One of Urs' versions of the story is that in the summer of 2002, he thought that his activities might be supplying a nuclear weapons program, and he contacted his brother and father to discuss the matter.¹⁹ They all met and decided that what they were doing was not illegal. But Urs was not consoled for long, according to this version, and brought up the issue again in the fall. At that point, they decided to contact the IAEA, but could not reach anyone and decided to phone the CIA station in Vienna. Another version, published in Switzerland by the reporter Martin Stoll, who has had access to the family, has the father Friedrich taking the lead in contacting the U.S. government in Vienna in December 2002 because of concerns that a large order that he and his two sons had been processing might have something to do with a nuclear weapons program.²⁰ According to this version, the CIA then contacted them a few weeks later, leading to a series of meetings and their eventual recruitment.

George Tenet implied the contacts went the other way around – the CIA reached out to the Tinnners, and they agreed to work for the CIA.²¹ The evidence uncovered during the Swiss criminal investigation lends support to Tenet's statement.

Undoubtedly, part of the CIA's recruitment strategy depended on making the Tinnners realize that they were caught and that incriminating information could end up in the hands of the authorities. A former intelligence official explained that "a letter could be sent" to the authorities. At some point, the three Tinnners must have realized that their long career in illicit nuclear trade was over and that cooperating with the CIA would keep them out of jail and perhaps earn them more cash. They were certainly correct on the latter point but wrong about the former (see a companion ISIS report: [The Tinner Case: Time for a Frank, Open Evaluation](#)).

The value of the Tinnners to the CIA was enormous. Their insider status in the network is almost unrivaled. Khan himself testifies indirectly to their importance and his disbelief about Urs recruitment, let alone Friedrich's. Khan had been a frequent visitor to the Tinner household in Switzerland over the years and had come to know the entire family. In 2008, Khan told the Italian journalist Stefania Maurizi that the "claims that Urs Tinner had become a CIA agent do not ring true." He added that the Tinnners were a "proud, educated family, and Urs would never have betrayed his father, brother, and other friends." He could not conceive of Friedrich ever betraying him. Since then, though, Khan's defense of the Tinner family has waned. He later appeared to throw them, along with Tahir and many other Khan network members, under the proverbial bus, stating that "Libya had purchased the equipment from the same suppliers,"²² who had sold equipment to Pakistan or Iran, while denying any responsibility for the sales. One such supplier to both Pakistan and Libya would have been the Tinnners.

The Tinnners were like mafia informants, which are absolutely necessary to bust mafia leaders. The CIA was well aware that the Tinnners were participating in nuclear proliferation; they had watched them for years. Unfortunately, working with questionable people is often the price of penetrating criminal networks. However, the CIA rarely benefits from public revelations of that cooperation, particularly in this case when it involved violating Swiss laws and perhaps other countries' laws as well. Unlike many U.S. federal prosecutions involved with mafia informants, the CIA would not have acquired both a complete confession of all the

¹⁸ *Butler Report*, op. cit.

¹⁹ Interview with Swiss official with detailed knowledge of the Tinner case, August 18, 2005.

²⁰ Martin Stoll, "Very Close to the Spider," *FACTS*, 49/06: translated from German into English.

²¹ *At the Center of the Storm*, op. cit., p. 284.

²² Television interview with Dr. Abdul Qadeer Khan, *Islamabad Tonight*, Aaj News Television: August 31, 2009.

Tinners' past crimes and their commitment not to break any laws in the future, except under the supervision and requirements of a federal prosecution.

June 2003 Agreement

The date when the Tinners started to cooperate officially with the CIA appears to be June 18, 2003, according to a knowledgeable Swiss official. The CIA had originally approached Friedrich and Marco, who then ordered Urs to return to Switzerland, the official added. The cooperation was formalized in contracts and invoices between Marco's companies and CIA front companies. A payment of one million dollars was soon transferred to a Swiss bank account, according to the official.

On June 21, 2003, six U.S. intelligence agents visited Marco at the Tinner home in Jenins, a mountain village in eastern Switzerland, with the intention of conducting a search of the house.²³ The Americans persuaded Marco to cooperate fully with them, and they took the opportunity to copy all documents and electronic information they could find in the house, including private records. What they found must have amazed them—they discovered digitized blueprints and manufacturing manuals for P1 and P2 centrifuges and nuclear weapon drawings and instructions. Finally, they had the proof they needed. They had their mafia insiders.

The Swiss reporter Stoll obtained a copy of a one million dollar agreement signed June 21, 2003 by Marco and two CIA agents at his family home using the false names W. James Kinsman and Sean D. Mahaffey.²⁴ Figure 1 is a screenshot of part of the agreement, and figure 2 reportedly shows the signatures on this agreement. The invoice was worded carefully to disguise the true nature of the cooperation; it included wording on the commercial transfer of valve and vacuum technology. It looked like a legitimate commercial transaction between Marco's company, Traco Group International Inc., and a U.S. company, Big Black River Technologies.²⁵ However, the latter was a CIA front company.

Big Black River Technologies was a shadow company. The contract listed Big Black River's address as an office building at 1825 I. Street, N.W., Suite 400, Washington, D.C., although any physical presence that this company may have had disappeared by 2006 when Stoll learned about the company. Yet it is hard to eliminate one's presence on the web even after a company disappears.²⁶ A site that collects and archives web sites contains pages of Big Black River's web site that lists this street address (see figure 3, a screenshot of the web site of Big Black River Technologies, Inc. found on the web site of the Internet Archive at archive.org). These archived pages state that the company supplied technology for the aircraft and armaments industry and employed experienced engineers and scientists. Interestingly, Big Black River did not necessarily need to maintain a physical presence in this building. The Washington, D.C. office building at 1825 I. Street offers "virtual offices," where individuals or organizations can pay a fee in exchange for mail-forwarding and call-forwarding services as well as the ability to list the building's address as their own.²⁷

²³ *Fall Tinner: Rechtmässigkeit der Beschlüsse des Bundesrats und Zweckmässigkeit seiner Führung*, Geschäftsprüfungsdelegation der Eidgenössischen Räte, January 19, 2009.

²⁴ Martin Stoll, *Millionen für Atom-Kundschafter*, FACTS, April 4, 2007: <http://classic.facts.ch/dyn/magazin/schweiz/737789.html> (see also video: *Temps Present*, January 22, 2009 citing *Sonntagszeitung*)

²⁵ "Very Close to the Spider," op. cit. (for a view of a portion of the contract see video: *Temps Present*, January 22, 2009 citing *Sonntagszeitung*). In his article, Stoll called the company Little White River Technologies to protect his sources. The actual name was provided by a knowledgeable Swiss official, August 2006.

²⁶ Paul Brannan to Albright, memo dated February 2, 2009 on Big Black River Technologies.

²⁷ A second building with a physical address for Big Black River Technologies LLC in Bethesda, Maryland is owned by the same company that owns the 1825 I. Street building, and companies can rent "virtual offices" there too. Whether this is the same Big Black River Technologies company as the one in Washington is unknown. This company no longer exists. The Maryland company forfeited its status in 2005, which by definition means that the state has ended the entity's existence for some reason, usually for some delinquency.

Another part of the CIA's harvest from the Tinnars is specified in a declassified document that ISIS obtained abroad in 2005. According to this document, obtained by the Swiss police investigation, the Tinnars appear to have sold to the CIA the centrifuge parts that they had made in Switzerland but had not yet shipped to Libya. Undoubtedly, the CIA believed that getting these parts out of circulation was a priority. The parts are listed on a proforma invoice dated January 19, 2004 from another of Marco's companies, Traco Schweiz AG, to Deramo Systems Design, where the address is given as a Chicago post office box (see figure 4). Unlike Big Black River, Deramo has no detectable former web presence that ISIS could find. The invoice appears to be the type that accompanies a shipment; it lists a freight forwarder, a Zurich-based sea freight company. The parts were evidently exported from Switzerland to the United States. The value of the invoice is 1,462,901.95 Swiss francs, or about \$1.2 million at the time. The invoice lists tens of thousands of centrifuge components, with part numbers ranging from 9001 to 9084. The Tinnars ordered these parts in lots of 10,000, the number of centrifuges ordered by Libya from the Khan network. Another document which Marco produced for Swiss police investigators contained schematics of these parts, showing that they are centrifuge parts labeled with numbers assigned by the Tinnars. The statement also gives the fate of all these components.

Both the Deramo invoice and Marco's statement list the total number of parts delivered to the United States. For the motor housing, which is part number 9003, a total of 1,522 were delivered to the United States (see figures 5 and 6). Another 8,118 of these parts went to an Istanbul, Turkey company, Tekno Elektrik Sanayi ve Ticaret Ltd., a company closely linked to the Khan network. In total, the CIA bought tens of thousands of components, or in terms of monetary value, about half of the original 2001 order the Tinnars received from the Khan network. Being shrewd businessmen, the Tinnars billed the same amount of money to the CIA that it charged the network for making the parts. Figure 7 shows the original order for these parts, valued at about 3 million francs, with the same Tinner internal reference number of 0103-011.

The Tinnars were not reticent about selling items to the CIA. According to two knowledgeable Swiss officials, Urs even tried to drive up the price on some of the items by insisting that retrieving them involved personal risk. According to a senior official close to the IAEA who had detailed knowledge of the Tinner case, Urs charged the CIA \$500,000 for two P2 rotor assemblies, which he obtained in Dubai for nothing and at no personal risk. These rotor assemblies were samples located in Dubai and used by the network in their dealings with customers. Libya had also received two of these rotor assemblies.²⁸ Figure 8 shows similar rotor assemblies acquired by Libya and later shipped to the United States after Libya dismantled its nuclear weapons program.

The Tinnars also sold the CIA about 1,500 specialized valves that they had produced or acquired for the Libyan centrifuge plant, according to a knowledgeable Swiss official. The Tinnars should have sent these valves to South Africa, where a Khan network affiliate would install them in the piping and feed and withdrawal systems being produced for the Libyan plant. However, Tahir was behind in his payments to the Tinnars, and they refused to send the valves. The South African agent was forced to use surrogate pieces in place of the valves. The Tinnars were expected to ship the valves directly to Libya once they resolved their financial dispute with Tahir.

The Swiss television program *Temps Present*, citing *Sonntagszeitung*, presented an invoice from Traco Group International to Big Black River Technologies, dated May 20, 2004 for \$2 million for a "license fee" (see figure 9).²⁹ The date of the original contract is given as June 18, 2003, the day the cooperation between the Tinnars and the CIA is believed to have started. The column listing the price per unit is \$20 million, divided by 10, raising the possibility that the total contract with the Tinnars would have ultimately amounted to \$20 million.

²⁸ *Peddling Peril*, op. cit.

²⁹ "Les espions qui venaient d'Hélvétie," *Temps Present*, Swiss television, January 22, 2009.

An email between the Tinnars and the CIA puts the total figure at five payments of two million dollars, for a total of \$10 million. However, it does not appear that the Tinnars ever earned that amount of money.

Combined with the payments received for supplying Libya, the Tinnars were paid handsomely. The Tinnars, already beneficiaries of millions of dollars in profits from selling Libya gas centrifuge components, are known to have received about \$3 million for working for the CIA during 2003 and 2004. They could have received even more from the CIA. But Swiss investigators did not find any other contracts or invoices that could corroborate the total payments to the Tinnars.

The CIA wanted more from the Tinnars than centrifuge parts and equipment. One of the CIA's most important assignments went to Urs, who was in Malaysia at the SCOPE factory overseeing the manufacture of centrifuge parts for Libya. SCOPE had already made three shipments of centrifuge parts to Libya via Dubai.

With Urs' help the CIA could intercept the next and largest shipment of centrifuge parts. It needed to know when and how this shipment would go to Dubai. Urs learned that a shipment was slated for August 2003. Seizing the shipment would remove the items from circulation and provide concrete evidence of Khan's proliferation and Libya's secret nuclear weapons effort.

Urs had the nerve-racking task of obtaining a copy of the shipping information. When a shipment was ready, SCOPE employees would normally send a fax to the shipping company and the receiver. Urs made sure he himself faxed this information about the upcoming shipment. Instead of hitting the send button, he hit the copy button. He swore and announced he had made a mistake.³⁰ He balled up the copy and threw it in a trash basket. Playing the idiot, he asked the secretary to send the fax. Later, after everyone had left, he returned and retrieved the copy.

Urs did not like playing the spy. He was often frightened of being discovered by Tahir. He hated that his phones were tapped by the CIA and he feared others were listening too. He lived in constant fear at home, locking all the doors, including his bedroom door. On one occasion in Malaysia, he stayed in a hotel for three or four days to relax because he feared that something could happen to him at his home.³¹

Urs got the information the CIA needed without arousing Tahir's suspicion. With Urs' information, CIA operatives could watch the actual containers being loaded onto a ship bound for Dubai. The CIA would soon seal the fate of the Khan network and corner Libya into fully revealing its nuclear weapons program.

Urs' Alleged Sabotage of Centrifuge Components for Libya

Urs, and to a lesser extent Marco, have claimed that they sabotaged centrifuge components destined for Libya. The Tinnars do not date these claims, although Urs has implied that the sabotaging happened well before June 2003. The problem, however, is that no evidence to support this sabotaging has emerged in the Swiss criminal investigation. Whether the Tinnars even tried to sabotage parts bound for Libya is subject to reasonable doubt.

The Tinnars are known to have changed the specifications of certain parts, but these changes were made for cost or manufacturing reasons and done in collaboration with A.Q. Khan. The changes would not cause the parts to fail.

³⁰ SF DOK, January 22, 2009, op. cit.

³¹ SF DOK, January 22, 2009, op. cit.

The modifications aimed at sabotaging the centrifuges were in addition to these changes. According to a senior official close to the IAEA, Urs has stated that he made changes in about five parts. Each of these modifications would have jeopardized the operation of the centrifuges in Libya, according to Urs.

However, expert analyses of these modifications contradict Urs' claims. If Urs actually did make the changes, the actual impact on the centrifuges would have been small or non-existent. Analysis of purported modifications assessed that the parts would not have failed as the Tinnens claimed. One Western expert who examined alleged sabotaged parts said that if all the parts of the centrifuge were assembled, the centrifuge would work.

Media reports about Urs sabotaging centrifuge parts go back several years, but these reports appeared to all have originated from him, his family, or his lawyer. One public report that provides some details is found in an interview of Urs by a Swiss Television show in January 2009.³² Urs described the part he sabotaged—he made a part out of a small steel tube and an aluminum tube, with the steel one inside the aluminum one. The parts fit snugly and would function initially. However, when the parts heated up during operation, the aluminum part would expand more than the steel one, at which point the parts would fall apart. In the televised interview, Urs was not challenged about his claim. It was unclear to which centrifuge part he refers.

Marco's statement to the Swiss police contains a similar story, and perhaps this is the part Urs meant to discuss. In his statement to Swiss investigators, Marco wrote that part numbers 9001 and 9062, which appear to be centrifuge scoops, involve a special assembly procedure (see figure 10). The instructions, partially given on the drawing, required that a narrow aluminum tube be inserted into another part. At a designated place, the parts were crimped, and they were glued together with araladite, a specialized glue that can withstand uranium hexafluoride. Marco said that this procedure was not followed; instead, the two tubes were connected loosely by a press connection. He said that they would come apart when subjected to vibration or forces. He further stated that all 10,000 pieces of number 9001 and 10,000 pieces of number 9062 were delivered to the United States, making verification difficult. Only ten pieces of part 9062 went to SCOPE in Malaysia for testing, and Marco said that these parts were subsequently destroyed.

If his intention was to sabotage parts, the modification was not sophisticated. A Libyan centrifuge quality assurance program would have likely quickly detected the flaws and either remade the parts or repaired them. In the process, the Libyans would have likely exposed the Tinnens' sabotage. Moreover, a Western centrifuge expert who examined Marco's claim said that heating during the centrifuge's operation could cause the narrow tube to expand, resulting in a tighter fit. According to this expert, the part would not have fallen apart, as predicted by Marco.

Urs also claims he took specific steps to sabotage the aluminum outer casing and its contained molecular pump, thousands of which were made at SCOPE in Malaysia and sent to Libya (see figure 11). The sabotage evidently involved not properly cleaning the parts and putting them together in a way that would supposedly make disassembly for proper cleaning impossible. But upon technical examination of these parts from the cache found in Libya, European centrifuge experts found that Urs' claim was not true. They could disassemble them and clean them. In addition, one expert said that improper cleaning of the outer casing and molecular pump would have little, if any effect, on centrifuge operation.

In sum, centrifuge experts have discounted the sabotaging claims put forth by the Tinnens. When they could examine the parts, they established the parts were not sabotaged. Urs has reportedly responded that the ones he actually sabotaged are the ones that are now unavailable to investigators. But even in such cases, such as the scoops mentioned by Marco, the experts did not believe that the purported sabotaging would have had its intended effect. In addition, not one claim of sabotage has been substantiated by the Tinnens, the U.S.

³² **SF DOK**, January 22, 2009, op. cit.

government, or the Swiss criminal investigation. Given the view of centrifuge experts and the Tinnings' inability to provide any supporting evidence for their claims of sabotage, it is not possible to confirm Urs' claims of sabotaging of centrifuge components, and there is good reason to doubt them.

April 2004 Proforma Invoice

One perplexing piece of information in the available Tinner documentation is a delivery of 2,970 P2 centrifuge motor housings (part no. 9003) to Kursad Cire at Tekno Elektrik in April 2004 from Traco Schweiz, Marco Tinner's company (see figure 12 which shows one of the three available proforma invoices). This relatively large transfer occurred after the delivery of centrifuge parts to the United States (see figure 4, which shows the date of the proforma invoice as January 2004). Marco explained in his statement to Swiss police that they had no other option than making the delivery of these parts to Turkey. Otherwise, he wrote, "We would have had a problem with the buyer" (see text in figure 5). Perhaps, Kirag simply finished making the parts after January 2004, and the Tinnings wanted to fulfill their contractual obligations to Cire. But is this the true explanation?

By the time of this shipment or soon afterwards, the Turkish authorities were investigating both Kursad and his father about their work for the Khan network and the Libyan deal. The investigation was harsh; the father died during interrogation. Thus, any shipment from the Tinnings would have been unusable by the Cires, at least in terms of fulfilling the Libyan deal. Perhaps, the Tinnings did not care.

An anomaly in the proforma invoice is that, unlike in other similar invoices from the Tinnings to Turkey, the name of the freight forwarder is not given. So, who sent these parts to Turkey?

Could the Tinnings have been actually delivering these parts to the United States, but hiding that fact by listing Kursad as the recipient? Lending some weight to the possibility of additional parts being delivered to the United States, the Tinnings sent an invoice to the CIA in May 2004 (see figure 8). The Tinnings could have included the charge for these 9003 parts in that invoice; their worth was about 260,000 Swiss francs. But if the United States received these parts, why did Marco not include them in his tally of the number of part 9003 delivered to the United States that he provided subsequently to the Swiss police? (See figure 5)

There could be other reasons Marco may have wanted to disguise the actual recipient. Perhaps, these parts were destined to be used in a U.S. or British effort to produce modified or sabotaged centrifuge parts and then to attempt to place them somehow in the Iranian or North Korean centrifuge programs. For example, the part itself could have been modified during manufacturing after June 2003, or the motor could have been targeted. Could the CIA have convinced the younger Kursad to cooperate in making specially modified motors? Despite the Turkish investigation, he was never charged.

Finding answers to these questions remains difficult. But the Tinnings' worth to the CIA greatly diminished after the April 2004 delivery. The Swiss and other national police investigations of the Tinnings accelerated in the summer and fall of 2004. After Urs's arrest in October 2004 in Germany, they were in no position to aid the CIA. They started to need the CIA to intervene on their behalf with German and then Swiss officials. Their fate helps explain why the total amount of money they received is less than originally expected. It also leads to the question of what else did the CIA have planned for the Tinnings?

Conclusion

No one doubts that the three Tinnings worked for the CIA and received millions of dollars in return. The evidence available to the Swiss judicial system indicates that their start date was June 2003, and they continued their cooperation into 2004.

Urs' claim of an earlier start date remains unconfirmed and increasingly subject to doubt. The CIA may have obtained important information from Urs around 2000 or 2001, but he may have been a reluctant, possibly unwitting, CIA source. Urs' claims about sabotaging parts bound for Libya are unsupported and are challenged by highly experienced centrifuge experts.

The Tinnings did a valuable service for the CIA in the busting of the Khan network. However, the CIA had evidence about their illicit nuclear activities, and the Tinnings must have realized that they were caught and were inclined to cooperate. In the end, their service does not make them above Swiss law, and the United States should have expected that the Tinnings' past misdeeds would still leave them vulnerable to prosecution.

What neither the CIA nor the Tinnings anticipated was that any CIA promise to protect them from arrest or prosecution was hollow. Currently, indications are that the Tinnings will be prosecuted for violating Swiss anti-proliferation and money laundering laws. At a trial of the Tinnings, their lawyers may reveal more CIA involvement in an attempt to convince the court that their clients are not guilty.

If Urs can prove he started working as a paid agent for the CIA in 2000, he could reasonably claim that he deserves greater leniency from the Swiss judicial system. If the United States has evidence of an earlier collaboration or of sabotage of parts bound for Libya, it should provide it to the Swiss judicial authorities.

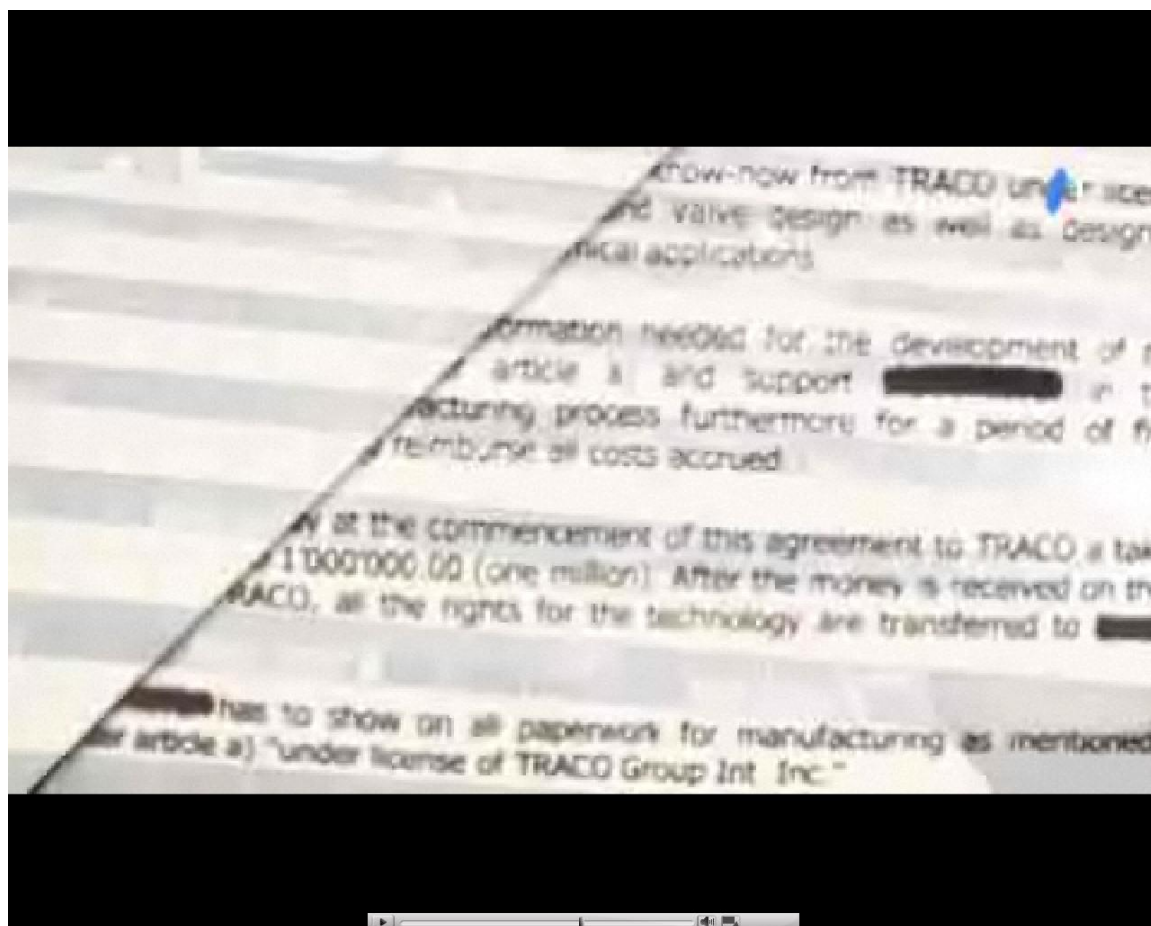


Figure 1: Screenshot of a portion of a June 21, 2003 agreement between Traco International and the CIA.
Source: *Temps Present*

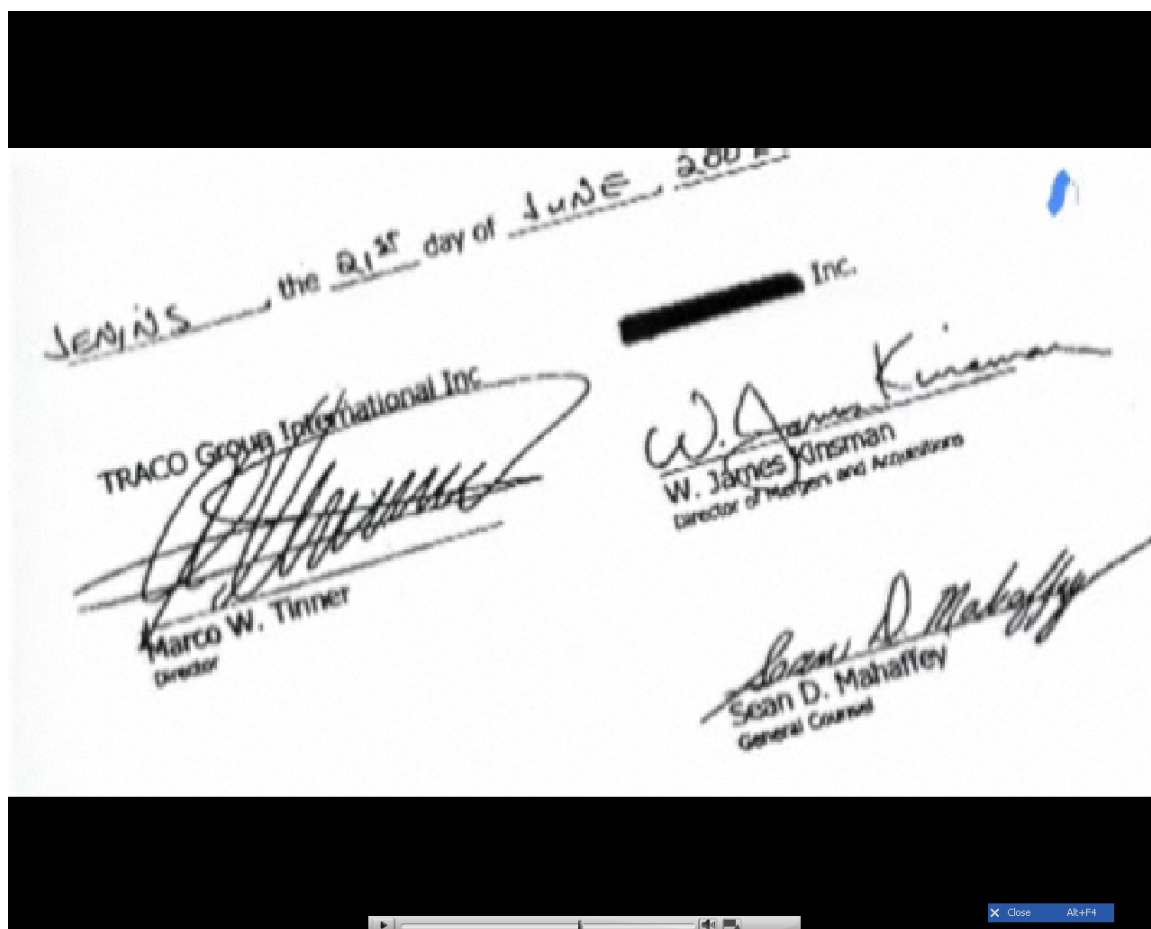


Figure 2: A screenshot of a part of a contract signed on June 21, 2003 between Traco Group International to Big Black River Technologies showing the signatures. Photo credit: *Temps Present*

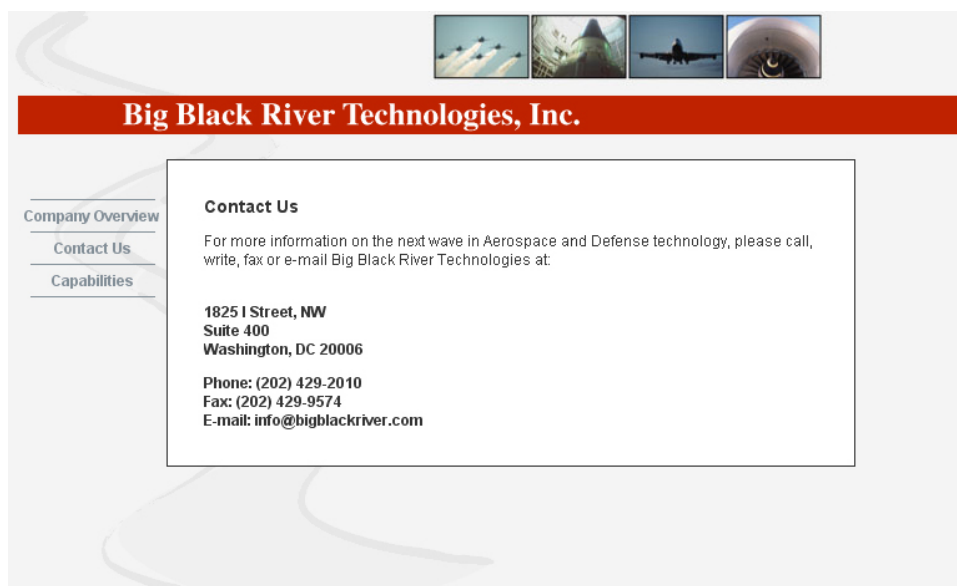
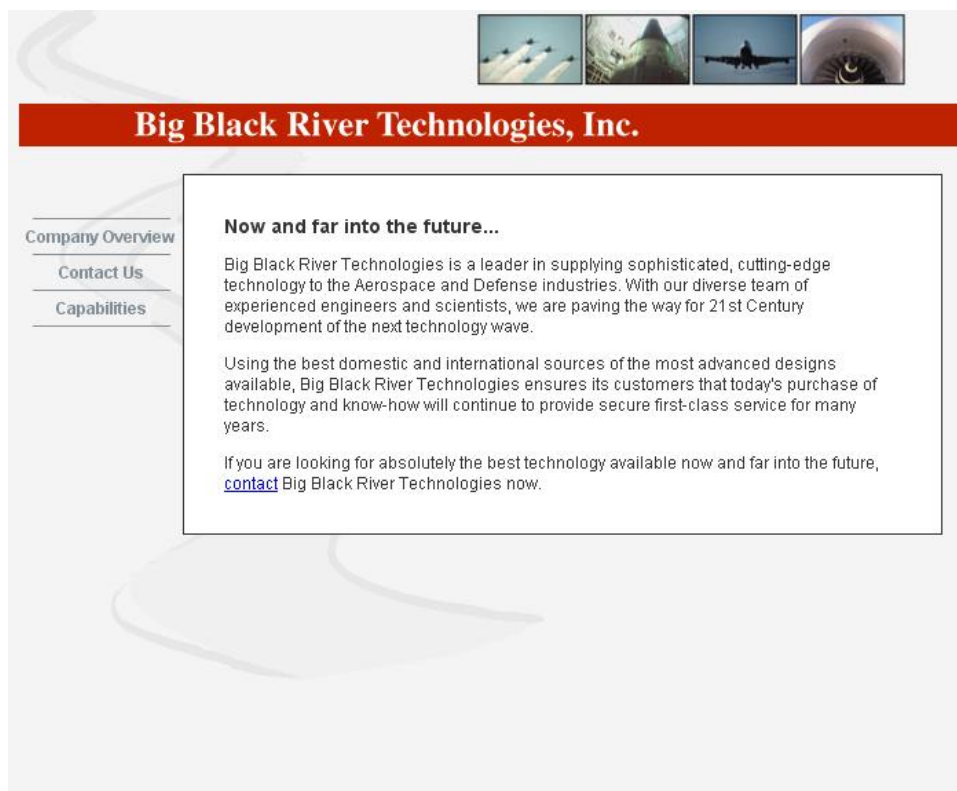


Figure 3: Recovered web pages of Big Black River Technologies, Inc. Source: Internet Archive at archive.org.

Freight forwarder
Fracht AG (Sea Freight)
Hr. K. Pfenniger
Hagenholzstrasse 81
CH-8050 Zürich

Traco Schweiz AG, Postfach, CH-9468 Sax
Deramo Systems Design
Barbara A Deramo / Trevis L. Billow
P.O.Box 408053
Chicago, Illinois 60640

CH-9468 Sax, 19. Januar 2004/adm

Proforma Invoice		# DN-03 014 <small>please note on all correspondence</small>	
Delivery info :	Your reference:	Our reference: 0103-011	Date of order: 30. Mai. 01

Item	Qty	Product Description	Box Marking :	Custom N°	Weight	Price prices in CHF	Del. Qty
1	10000 x	9001	0103-011/117			170'000.00	5000 x
1	10000 x	9001	0103-011/138			170'000.00	5000 x
2	10000 x	9003	0103-011/093			7'830.00	90 x
2	10000 x	9003	0103-011/094			7'830.00	90 x
2	10000 x	9003	0103-011/095			7'830.00	90 x
2	10000 x	9003	0103-011/096			7'830.00	90 x
2	10000 x	9003	0103-011/097			7'830.00	90 x
2	10000 x	9003	0103-011/098			7'830.00	90 x
2	10000 x	9003	0103-011/099			7'830.00	90 x
2	10000 x	9003	0103-011/100			7'830.00	90 x
2	10000 x	9003	0103-011/101			7'830.00	90 x
2	10000 x	9003	0103-011/102			7'830.00	90 x
2	10000 x	9003	0103-011/103			7'830.00	90 x
2	10000 x	9003	0103-011/155			7'830.00	90 x

TRACO SCHWEIZ AG Tel +41 (81) 7504.101 MWST 173 525 PC Konto 46-66658-5
Eschacker, Postfach Fax +41 (81) 7504.102 UBS CH-9471 Buchs, BC 220, Swift UB5WCHZH94P, Kto 204 382.01V
CH-9468 Sax (Schweiz) info@traco-schweiz.ch

Figure 4: First page of invoice from Traco AG to Deramo Systems Design in Chicago, Illinois.

2	10000 x	9003	0103-011/156			7'830.00	90 x
2	10000 x	9003	0103-011/157			7'830.00	90 x
2	10000 x	9003	0103-011/158			7'830.00	90 x
2	10000 x	9003	0103-011/159			7'830.00	90 x
3	10000 x	9003	0103-011/160			7'134.00	82 x
3	10000 x	9007	0103-011/130			17'000.00	10000 x
10	10000 x	9033	0103-011/131..132			73'830.00	10700 x
11	10000 x	9034	0103-011/133..136			14'383.95	10815 x
13	10000 x	9038	0103-011/116			21'000.00	5000 x
13	10000 x	9038	0103-011/137			11'340.00	2700 x
13	10000 x	9038	0103-011/160			9'660.00	2300 x
14	10000 x	9039	0103-011/116			21'000.00	5000 x
14	10000 x	9039	0103-011/137			21'000.00	5000 x
15	10000 x	9040	0103-011/116			1'500.00	1000 x
15	10000 x	9040	0103-011/117			6'000.00	4000 x
15	10000 x	9040	0103-011/137			3'600.00	2400 x
20	10000 x	9058	0103-011/138			3'900.00	2600 x
20	10000 x	9058	0103-011/116			20'750.00	5000 x
23	10000 x	9062	0103-011/160			20'750.00	5000 x
23	10000 x	9062	0103-011/116			19'200.00	4800 x
23	10000 x	9062	0103-011/117			800.00	200 x
25	10000 x	9069	0103-011/138			20'000.00	5000 x
25	10000 x	9069	0103-011/104..107			37'500.00	1000 x
25	10000 x	9069	0103-011/108..115			75'000.00	2000 x
25	10000 x	9069	0103-011/118..121			37'500.00	1000 x
25	10000 x	9069	0103-011/123..126			37'500.00	1000 x
27	30000 x	9074	0103-011/139			112'500.00	3000 x
27	30000 x	9074	0103-011/147			46'000.00	10000 x
28	30000 x	9075	0103-011/148			96'968.00	21080 x
28	30000 x	9075	0103-011/149			64'000.00	10000 x
31	10000 x	9084	0103-011/150			135'040.00	21100 x
31	10000 x	9084	0103-011/122			13'320.00	2220 x
31	10000 x	9084	0103-011/127			20'106.00	3351 x
31	10000 x	9084	0103-011/128			12'000.00	2000 x
			0103-011/129			17'340.00	2890 x

TRACO SCHWEIZ AG Tel +41 (81) 7504.101 MWST 173 525 PC Konto 46-66658-5
Eschacker, Postfach Fax +41 (81) 7504.102 UBS CH-9471 Buchs, BC 220, Swift UB5WCHZH94P, Kto 204 382.01V
CH-9468 Sax (Schweiz) info@traco-schweiz.ch

Figure 4 (cont.): Page two of invoice

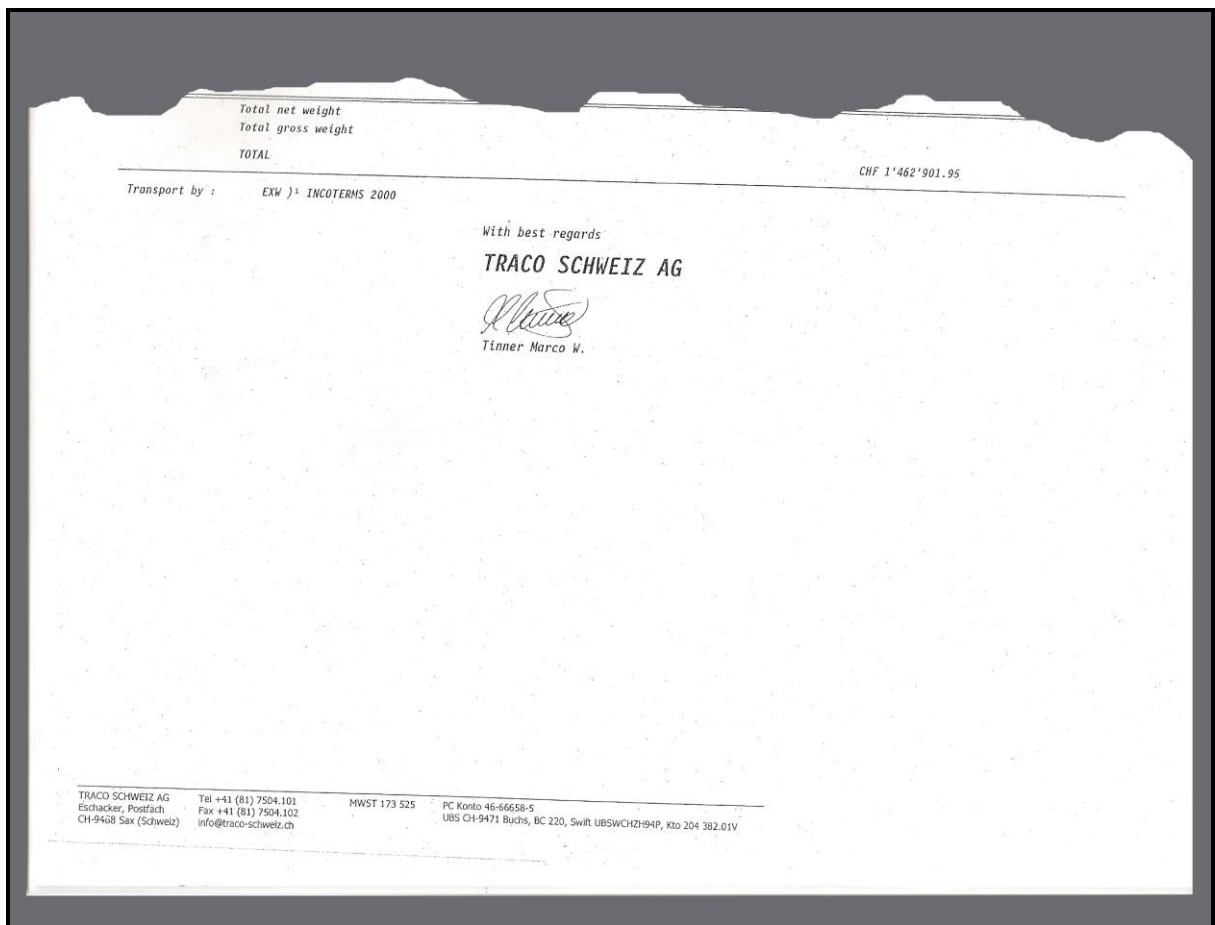
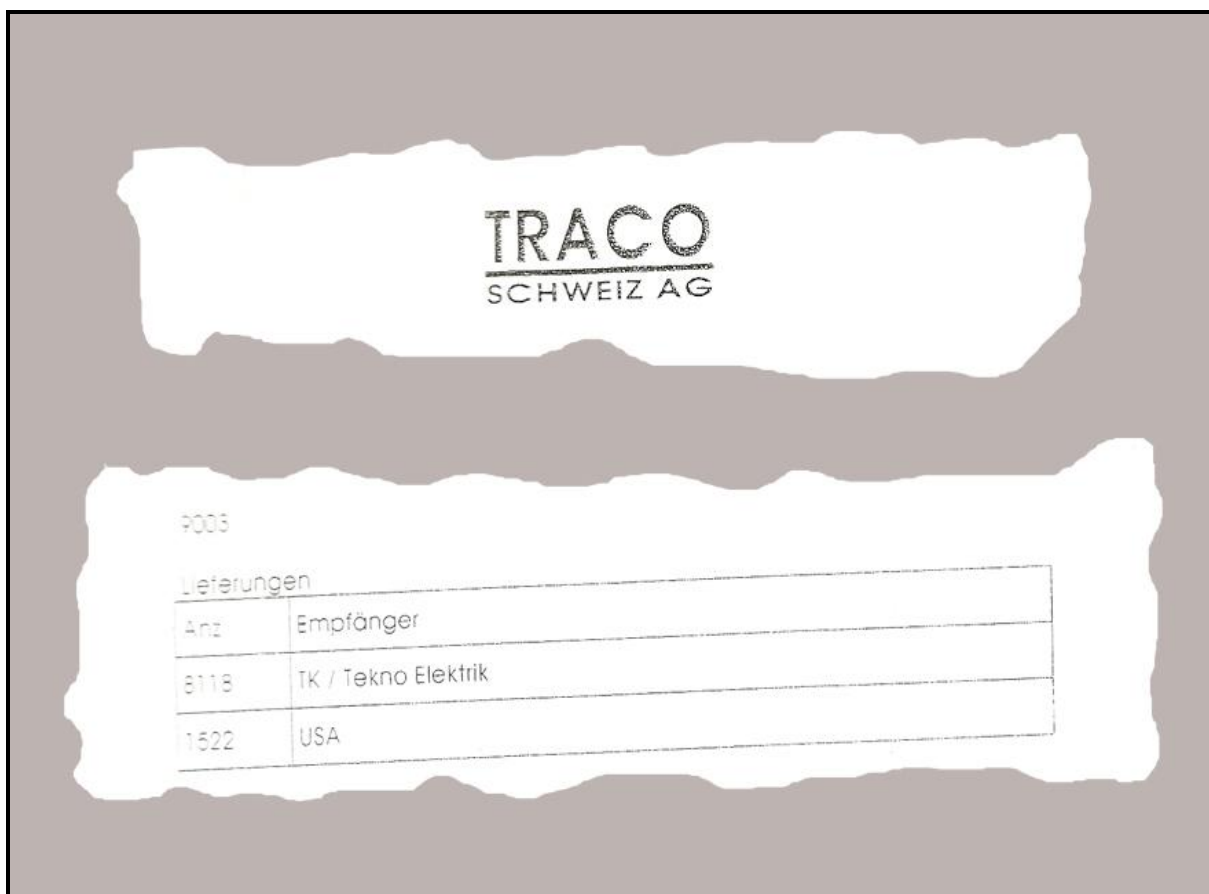


Figure 4 (cont.): Page three of invoice.



9003	
Deliveries	
Quantity	Recipient
8118	TK / Tekno Elektrik
1522	USA
Remarks	
The flanges were used by the recipient in Turkey for other processes. We had no possibility not to deliver these parts, i.e. retain them. Without delivery, production in Turkey would have fallen behind and we would have had a problem with the buyer, Gulf. We cannot say what happened to the parts after we shipped them to Turkey.	

Figure 5: A table from the original statement by Marco Tinner of Traco Schweiz AG to Swiss investigators and a translation of this table and associated text in this statement. It identifies the United States and Tekno Elektrik as the recipients of part number 9003, the motor housing of a centrifuge.

Competent official :
Tinner Marco W.

Traco Schweiz AG, Postfach, CH-9468 Sax
[REDACTED]

CH-9468 Sax, 30. Mai 2001/adm

Order confirmation		# 0103-011
Your reference:		please note on all correspondence
Date of order: 30. Mai. 01		Tel : +971 4 394 6342/333 2226 Fax : +971 4 394 6352/333 1666

Item	Qty	Product Description	price/unit	Price Del.time prices in CHF	TC
1	10000 x	9001	34.00 / pc	340'000.00	4
2	10000 x	9003	87.00 / pc	870'000.00	4
2.1	1000 x	Material for Base 9001 Material	70.00 / pc	70'000.00	4
3	10000 x	9007	1.70 / pc	17'000.00	4
4	10000 x	9010	3.50 / pc	35'000.00	4
5	10000 x	9013	35.00 / %	3'500.00	4
6	10000 x	9015	0.80 / pc	8'000.00	4
7	10000 x	9016	10.00 / pc	100'000.00	4
8	10000 x	9031	12.00 / pc	120'000.00	4
9	10000 x	9032	13.20 / pc	132'000.00	4
10	10000 x	9033	6.90 / pc	69'000.00	4
11	10000 x	9034	1.33 / pc	13'300.00	4
13	10000 x	9038	4.20 / pc	42'000.00	4
14	10000 x	9039	4.20 / pc	42'000.00	4
15	10000 x	9040	1.50 / pc	15'000.00	4
16	10000 x	9041 T=3.0mm w. Chamfer 3.2316	1.30 / pc	13'000.00	4
16.1	10000 x	9041 T=2.0mm 3.2316	1.30 / pc	13'000.00	4
16.2	10000 x	9041 T=1.0mm 3.2316	1.30 / pc	13'000.00	4
16.3	10000 x	9041 T=0.5mm 3.2316	1.30 / pc	13'000.00	4
16.4	10000 x	9041 T=0.2mm 1.4301	1.30 / pc	13'000.00	4
16.5	10000 x	9041 T=0.1mm 1.4301	1.30 / pc	13'000.00	4
17	10000 x	9043	4.00 / pc	40'000.00	4
18	10000 x	9045	50.00 / %	5'000.00	4
20	10000 x	9058	4.15 / pc	41'500.00	4
22	10000 x	9060	6.50 / pc	65'000.00	4
23	10000 x	9062	4.00 / pc	40'000.00	4
25	10000 x	9069	37.50 / pc	375'000.00	4
26	10000 x	9072	10.60 / pc	106'000.00	4
27	30000 x	9074	4.60 / pc	138'000.00	4

Figure 7: Order confirmation created by Marco Tinner acknowledging an order for about 30 centrifuge subcomponents slated for manufacture in Switzerland. Company name redacted by ISIS.

28	30000 x	9075	6.40 / pc	192'000.00	4
29	10000 x	9076	33.00 / %	3'300.00	4
31	10000 x	9084	6.00 / pc	60'000.00	4
TAX			4, foreign country of	0'020'600.00 =	0.00
TOTAL			CHF 3'020'600.00		

Delivery :

Date of delivery:

TAX type :

Conditions :

EXW)¹ INCOTERMS 2000

30. Jun. 02

foreign country

prices net, ex work, unpacked

PP Invoice 25% after order


Final payment 75% net within 30 days from delivery

NOTE:

Prices for items 9059 and 9064 are missing !

With best regards

TRACO SCHWEIZ AG



Tinner Marco W.

Managing Director

Figure 7 (cont.)



Figure 8: Two P2 centrifuge rotor assemblies. The one on the left shows a bellows in the middle of the tube and the pin of the bottom bearing, provided to Libya by the Khan network and subsequently sent to the United States. Photo Credit: NHK

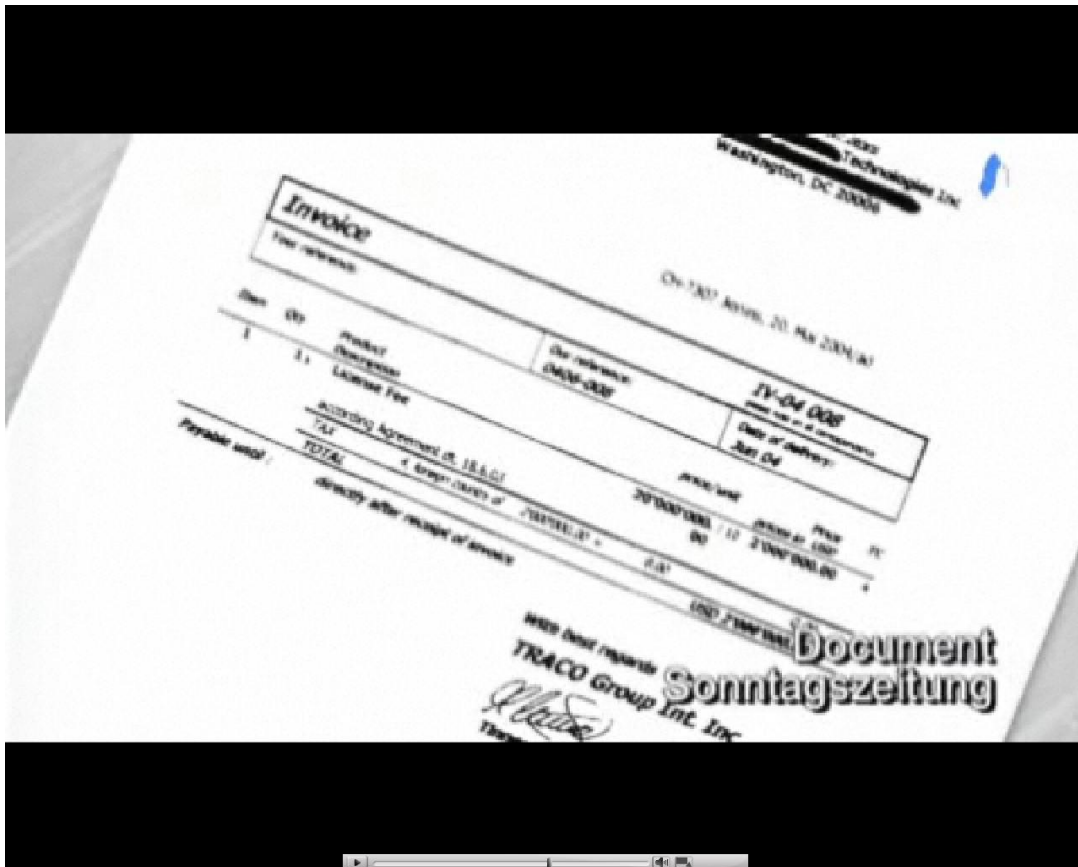
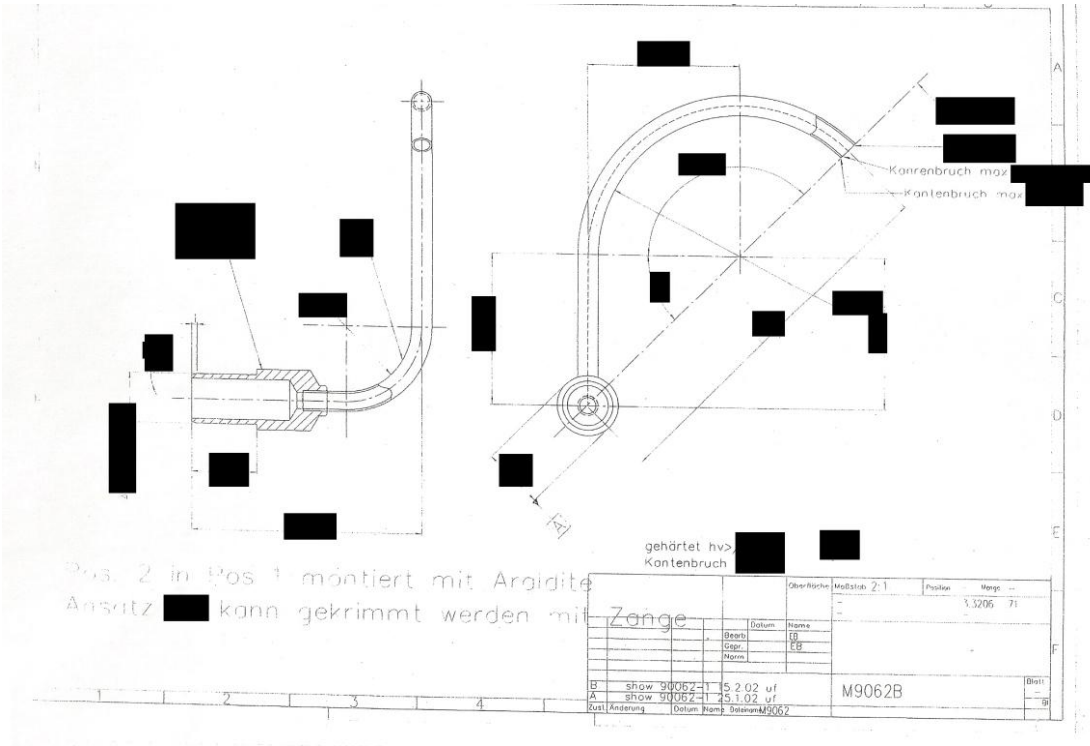


Figure 9: A May 20, 2004 invoice from Traco Group International charging \$2 million according to a June 18, 2003 agreement that was reportedly sent to Big Black River Technologies. Source *Temps Present*

[illegible]Remarks

ISIS REPORT

Figure 10 (cont.)



9062

Deliveries

Quantity	Recipient
10	MY – SCOPE
10000	USA

Remarks

=> see 9001

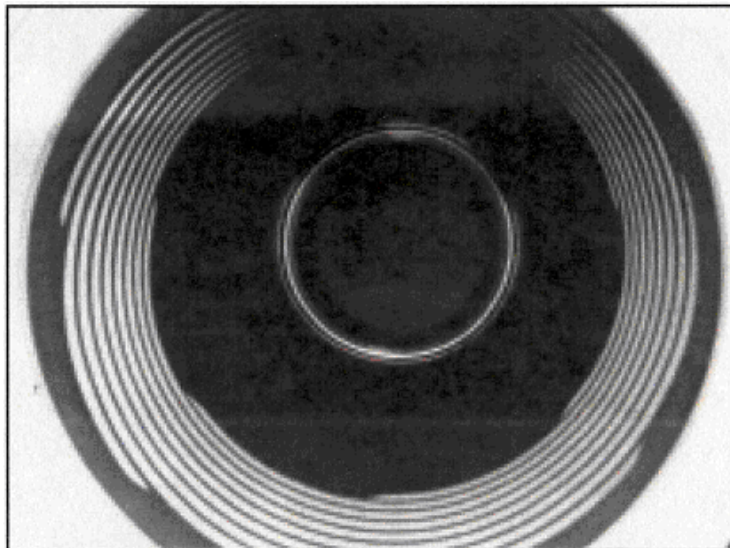


Figure 11: Bird's Eye View of the Interior of P2 Casing with molecular pump inserted. Urs Tinner claims he sabotaged this component.. However, a centrifuge expert who examined the part after alleged sabotaging concluded that Urs' claim was unfounded.

TRACO
SCHWEIZ AG

Freight Forwarder

Traco Schweiz AG, Busstrasse 46, CH-9468 Sax
Tekno Elektrik Sanayi ve Ticaret Ltd.
Kursad Cire
Perpa Ticaret Merkezi A Blok
Kat:8 No:811 Okmeydanı 00270
Sisli, Istanbul, Turkey

CH-9468 Sax, 7. April 2004/adn

Proforma Invoice

DN-02 009

please note on all correspondence

Delivery info :	Your reference:	Our reference:	Date of order:
		0103-011	30. Mar. 01

Item	Qty	Product Description	Box Marking :	Custom N°	Weight	Price prices in CHF	del. Qty
2	10000	9003	0103-011/047...057			86'130.00	990
Total net weight							
Total gross weight							
TOTAL						CHF 86'130.00	

Transport by : EXW ¹ INCOTERMS 2000

JO SCHWEIZ AG
erker, Postfach
458 Sax (Schweiz)

Tel +41 (0)1 9504.101
Fax +41 (0)1 7504.102
Info@traco-schweiz.ch

MWST 173 525

PC Konto 46-66656-5

UBS CH-9171 Buchs, BC 220, 9419 UBSWCHZ94P, Kto 201 381.01V

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