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## **Detecting the Barrage Approach to Illicit Procurement**

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In late 2006, the export control office at a large European vacuum manufacturer noticed a suspicious pattern of enquiries from trading companies in Pakistan and Dubai, United Arab Emirates (UAE) for vacuum pumps and repair kits. The manufacturer's export control office suspected that the items were for use in Pakistan's gas centrifuge uranium enrichment program and ignored the enquiries. This office receives and analyzes suspicious enquiries from the manufacturer's many subsidiaries and sales agents. It functions as a hub of a network aimed at detecting and stopping potential illicit procurement attempts. In short, we call it a "detection hub."

Pakistan's uranium enrichment program needs to regularly repair and replace broken centrifuge equipment, including vacuum equipment that is vital to the operation of gas centrifuges. Pakistani government procurement agents enlist trading companies to probe the global market in efforts to buy these goods illicitly. The Dubai and Pakistani trading companies in this case study have continued in 2007 and 2008 to seek items suspected to be for Pakistan's unsafeguarded nuclear program.

The global market in dual-use goods is enormous; the market in vacuum items is an important subset of this international market. Almost all of this business in dual-use items is legitimate. Illicit procurement enquiries from smuggling networks are estimated to make up less than a tenth of one percent of the total number of enquiries received by this supplier. The small fraction of suspicious enquiries makes detecting these enquiries challenging. To overcome this obstacle, the manufacturer has empowered its export control office to review enquiries and train company personnel to spot suspicious procurement patterns. The company's export control office then relays advice based on its analysis to its sales agents.

This case study shows that trading companies engaged in illicit procurement are aware that their enquiries will often be met with skepticism and that many will be ignored and unfulfilled. As a result, the trading companies might send out enquiries for the same items to as many manufacturers and their sales agents as possible. The illicit trading companies also try to exploit any lack of communication among a single manufacturer's sales agents by sending a barrage of enquiries to many of its sales agents within a short period of time, or all at once. Without a centralized export control office, the individual sales offices of a manufacturer would be unaware of the identical enquiries sent by the same trading company to other sales offices.

Further complicating the situation for the manufacturer, the items listed in the enquiries are often not explicitly controlled; therefore simply examining the items requested does not reveal the illicit procurement attempt. In this case, instead of looking only at the items in the enquiry, this manufacturer's export control office focused on the specific trading companies and declared end users or lack thereof, and where the trading companies were sending their requests and how often they repeated these enquiries to other sales offices.

## Illicit Enquiry #1

On October 14<sup>th</sup>, 2006, Trading Company A, a suspected Pakistani procurement agent for the country's secret nuclear program, sent identical enquiries for vacuum pumps and repair kits to four of the manufacturer's sales agents in Germany, the Netherlands, and France. Five days later, Trading Company A sent the same enquiry to another European sales agent for the manufacturer (see Figures 1 and 2).

**URGENT:**

Dear Sir,

We are a trading company engaged in various trade activities with Govt./Industrial sector of Pakistan. We are indenters/importers and also local agent to our foreign principals on permanent basis and on project-to-project basis.

2. Presently we have an inquiry at hand received from one of our customer for the subject item whose detailed specifications are as under: -

S.NO	Cat./Part No	Description	A/U	Qty.
1		Spares for EDW Machine		
		Single Stage Rotary vacuum pump Model: [REDACTED]	No.	1
2		Repair Kit for [REDACTED]	No.	4
3		Repair Kit for [REDACTED]	No.	4
4		Vacuum Pump [REDACTED]	No.	1
5		Repair Kit For [REDACTED] Vacuum Pump	No.	4
6		High Vacuum Pump [REDACTED] Volume flow rate 16m <sup>3</sup> /h Pressure <math>\leq 10^{-4}</math>	No.	1
7		Repair Kit for High Vacuum Pump Type: [REDACTED]	No.	4

3. You are requested to please give us your best FOB prices alongwith separate approx. air/sea freight charges upto Islamabad/Karachi, Pakistan respectively

4. An early reply will be highly appreciated.

With Best Regards

Figure 1. Enquiry #1 for vacuum pumps and repair kits.

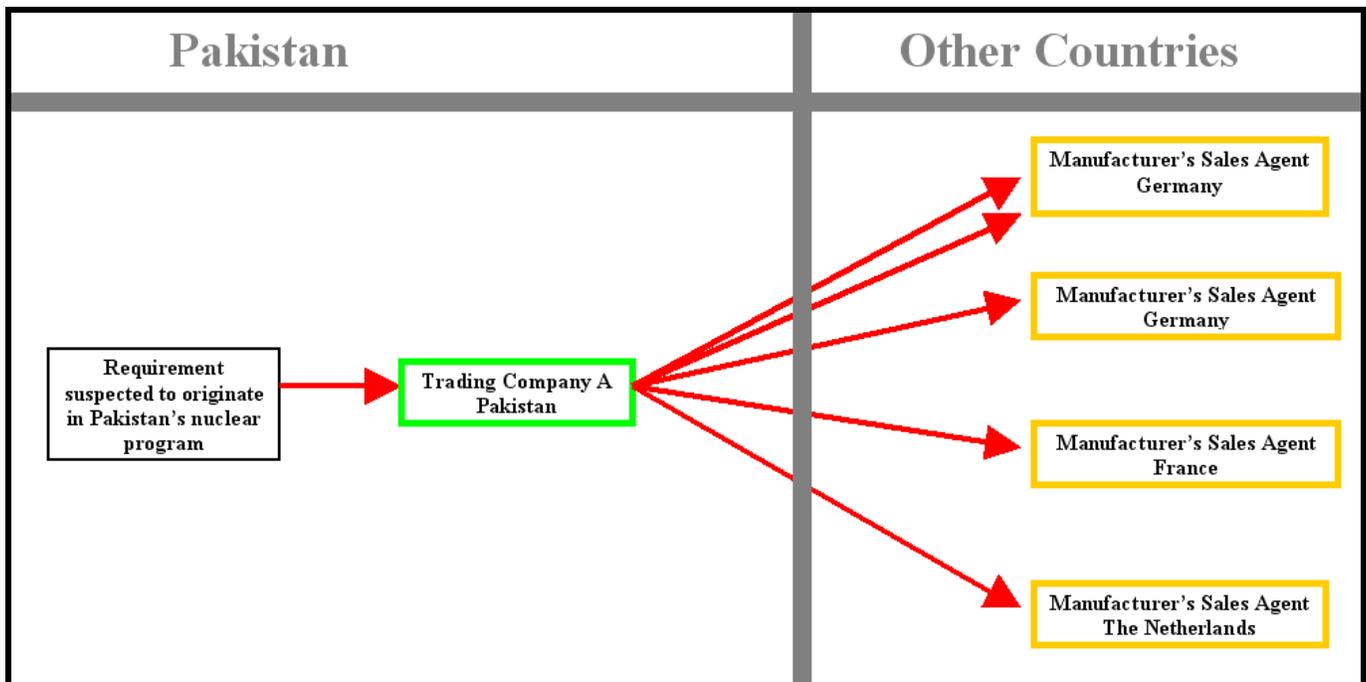


Figure 2. Diagram of Trading Company A sending an identical Inquiry #1 for vacuum pumps and repair kits to four different manufacturer sales agents between October 14, 2006 and October 19, 2006.

## Illicit Enquiry #2

Also on October 14, 2006, Trading Company A sent a separate enquiry for a different set of vacuum pumps and repair kits to the manufacturer's office in Germany. Two days later, another trading company (Trading Company B) based in Dubai, sent this same enquiry to the manufacturer's sales office in Germany and another in Singapore. A little over two weeks later, Trading Company A yet again sent this same enquiry to the manufacturer's sales office in Germany (see Figures 3 and 4).

**URGENT:**

Dear Sir,

We are a trading company engaged in various trade activities with Govt./Industrial sector of Pakistan. We are indenters/importers and also local agent to our foreign principals on permanent basis and on project-to-project basis.

2. Presently we have an inquiry at hand received from one of our customer for the subject items whose detailed specifications are as under: -

SNO	Qty./Part No	Description	Unit	Qty.
1		High Vacuum Pump Type: [REDACTED] Volume flowrate: 275m <sup>3</sup> /h Ultimate pressure volume flowrate: 275m <sup>3</sup> /h Ultimate pressure <math> < 3 \times 10^{-2}</math>	No.	1
2		Repair kit for High Vacuum Pump Type: [REDACTED]	No.	4
3		High Vacuum Pump Type: [REDACTED] Volume flowrate: 2050 m <sup>3</sup> /h Max. Differential Pressure: 50mbar	No.	1
4		Repair kit for High Vacuum Pump Type: [REDACTED]	No.	4
5		High Vacuum Pump Type: [REDACTED]	No.	1
6		Repair kit for High Vacuum Pump Type: [REDACTED]	No.	4
7		Turbo Molecular Pump Type: [REDACTED]	No.	1
8		Repair kit for Turbo Molecular Pump Type: [REDACTED]	No.	4

3. You are requested to please give us your best FOB prices alongwith separate approx. air/sea freight charges upto Islamabad/Karachi, Pakistan respectively

4. An early reply will be highly appreciated.

With Best Regards

Figure 3. Enquiry #2 for vacuum pumps and repair kits.

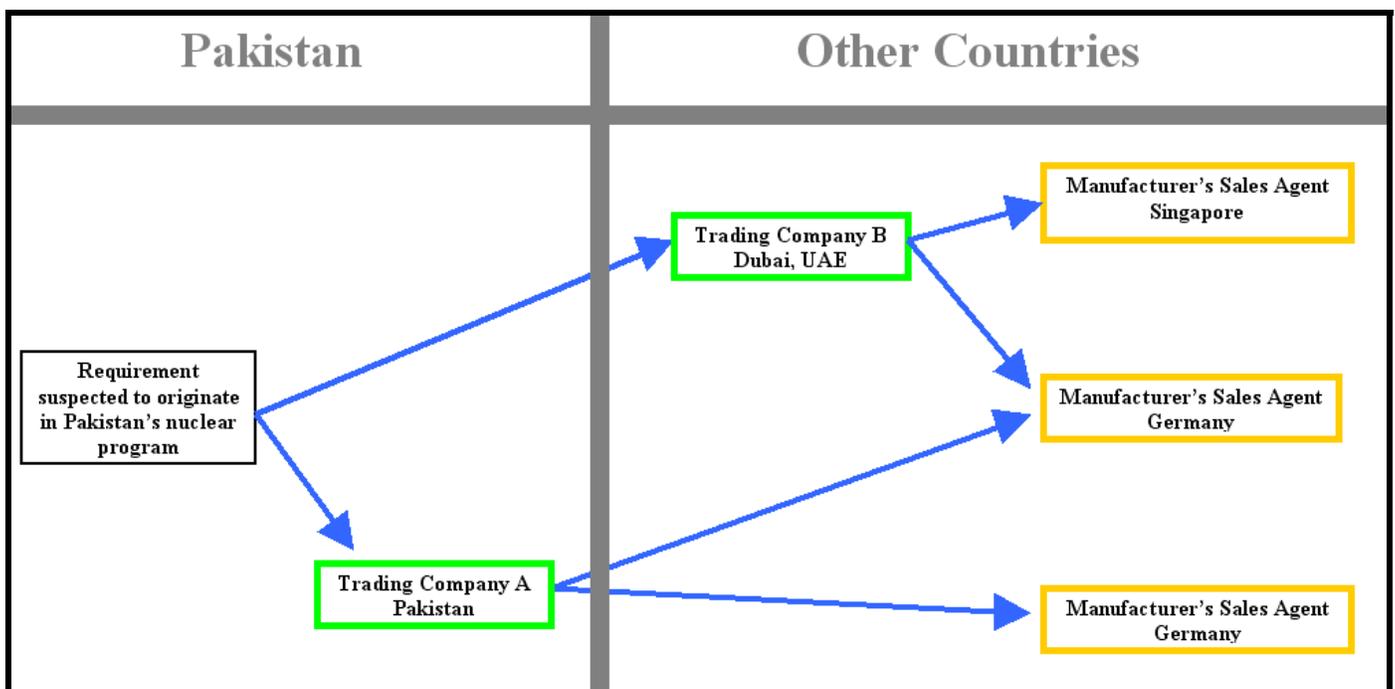


Figure 4. Diagram of Trading Company A and Trading Company B sending an identical Enquiry #2 for vacuum pumps and repair kits to three of the manufacturer's sales agents between October 14, 2006 and November 1, 2006.

## Export Control Office

Upon receiving all of the enquiries from their sales agents, the manufacturer's central export control office immediately recognized that the two trading companies were acting suspiciously. It instructed the sales offices not to fulfill the requests and notified authorities.

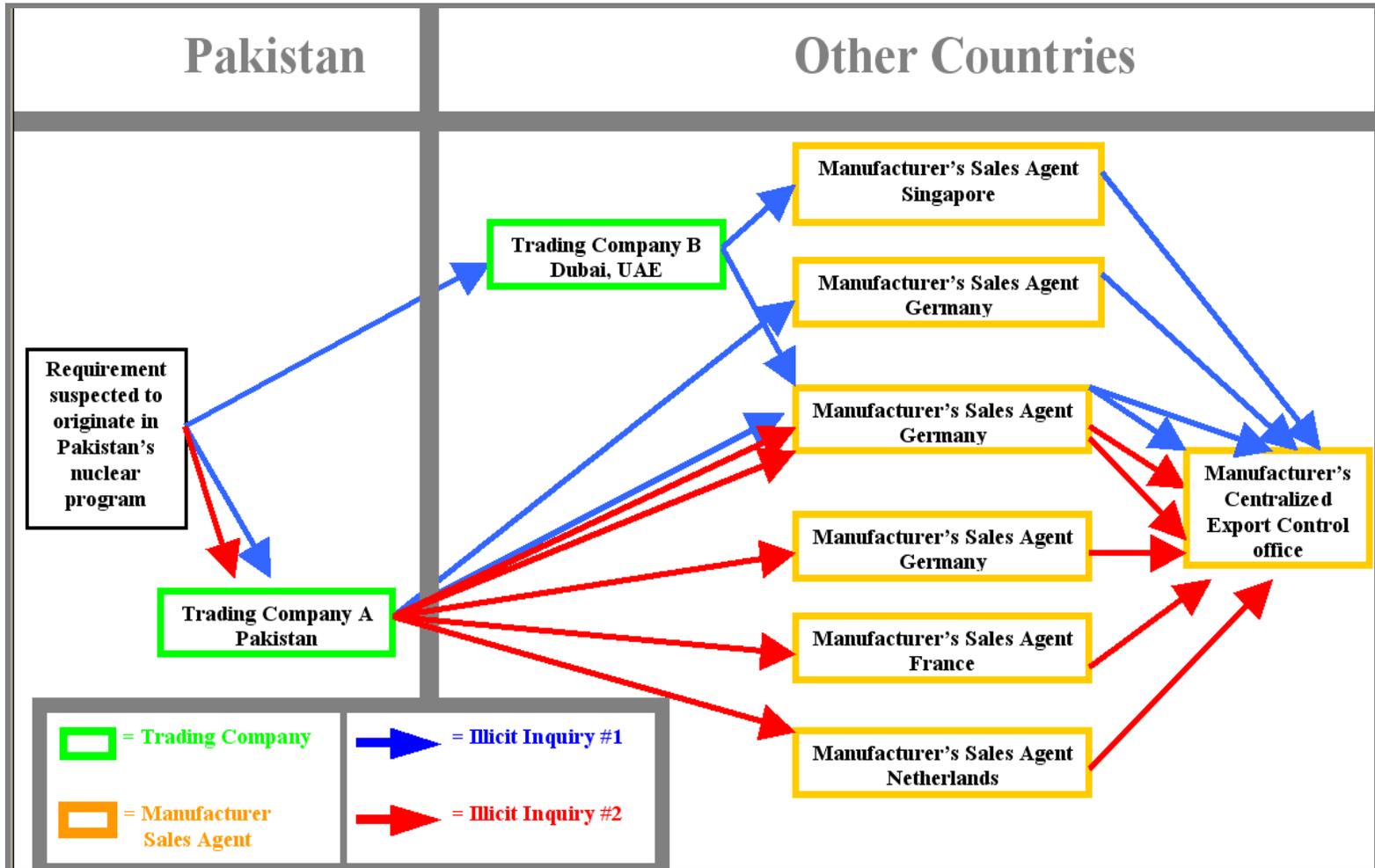


Figure 5. Diagram combining all enquiries sent

Figure 5, which combines the information in Figures 2 and 4, shows the complexity of the coordinated procurement effort. The manufacturer's internal compliance system is centralized, where all suspicious enquiries received by sales offices are forwarded to a single export control office database at the manufacturer's headquarters. The full picture of the illicit procurement attempt comes into focus once all of the data on enquiries, illicit trading companies and sales agents receiving the enquiries are collected. This central office functions as a detection hub with inputs from its sales agents, enabling detection of many potential illicit procurement attempts. Without this centralized internal compliance system, the sales agent in Singapore might not have known, for example, that Trading Company B had also sent an identical enquiry to another of the manufacturer's sales agents in Germany on the same day. The Singapore sales office might also have been unaware that Trading Company A had sent the exact same enquiry to another sales agent in Germany two days before.