

## Resources

### **Illicit Radiological and Nuclear Trafficking, Smuggling and Security Incidents in the Black Sea Region since the Fall of the Iron Curtain – an Open Source Inventory**

by Alex P. Schmid & Charlotte Spencer-Smith

#### *Introduction*

On March 26-27, 2012, leaders of 53 countries met for a summit in Seoul, Korea, in the framework of the American initiative to reduce and secure scattered nuclear materials which could offer terrorists an opportunity to acquire uranium or plutonium for exploding a nuclear weapon. It takes less than 25 kilograms of highly enriched uranium (HEU) and less than eight kilograms of plutonium (Pu) for constructing a viable atomic bomb. There are still between 1.300 and nearly 1.600 tons of highly enriched uranium and nearly 500 tons of plutonium stored in Russia and the United States and, to a lesser extent, in some 30 more countries. While the more than 100 military storage sites which contain some 19,000 assembled nuclear weapons (all but about 1.000 in the USA and Russia) are generally well-protected, some of the ca. 500 civilian nuclear power stations and some of the ca. 120 academic HEU-powered research reactors are in a number of cases much less well protected. Some of the latter are badly in need of better security than a chain-lock at the gates and a single night watchman on duty. There have been some twenty known cases of theft of plutonium and highly enriched uranium since 1990 and many more of other radioactive materials.

Documented illegal nuclear material seizures were especially frequent between 1992-1995 when more than 15 kg were intercepted. Yet seizures of significant smaller quantities of HEU and Pu were also made in the years 2000, 2003 and 2005. [2]As recent seizures of highly enriched uranium in Georgia (2010) and Moldova (2011) illustrate, the problem continues to be most acute in the regions of the former Soviet Union and, in particular, in the greater Black Sea region.

Based solely on open sources, the authors of this inventory have made an attempt to document the extent of leakage of nuclear (Uranium, Plutonium) but also of other radioactive materials (isotopes like C0-60, Am-241, Cs-137, Ir-192, Sr-90, Cf-252, Ra-226) which could be used for the construction of an atomic fission bomb or, in the case of the latter, a radioactive dispersal device (RDD) or so-called 'dirty' bomb. No attempt is made here to look at the intentions and capabilities of possible terrorist end users.[3] Instead, we would like to discuss here briefly some issues of selection bias in radiological and nuclear smuggling and trafficking data.

#### *Data Problems*

The principal problem with open source data on radiological and nuclear smuggling and trafficking incidents are inherent selection biases. Such data therefore should not be used for

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inferential statistics on *all* incidents of a radiological and nuclear nature. Open source data draw from a pool of incidents that have been intercepted by the authorities. Therefore, incidents of smuggling and trafficking that have not been intercepted will not appear in our data. There is another limitation to open source data: not only have there to be intercepts of one sort or another, the incidents also have to have been reported in the media. A government may choose not to make an incident public for security or political reasons. More rarely, an incident may not receive sufficient interest from the media because the context of discovery is unspectacular, e.g. when uranium is found on a metal scrap yard by accident. Both the number of non-intercepted incidents and the number of unreported incidents is unknown to the open source researcher. It is therefore not possible to calculate statistical standard deviation. This makes open source data on radiological and nuclear trafficking incidents a poor source for inferential statistics on incidents that have not been intercepted.

It is also unknown how different intercepted incidents are from non-intercepted incidents. It is plausible that successful trafficking of materials is inherently different from unsuccessful, intercepted trafficking: some traffickers may be familiar with routes and methods of trafficking that authorities are not aware of. They may be using weaknesses in nuclear security and customs control that have remained undetected. For these reasons, open source data of this nature should only be used for descriptive and not for inferential statistics. This is unfortunate as it is the successful cases of trafficking that are the most worrying from the perspective of terrorism prevention.

### ***Open Source Data as a Descriptive Snapshot***

Given these limitations, open source data can best be considered as snapshots on how nuclear and radiological materials can escape regulatory control regimes that protect them from malicious intent or pure negligence. Our data provide some insights how people attempt to smuggle and traffic nuclear and other radioactive materials and how they fail. The story that our data are not able to tell is the story of how materials are successfully trafficked and how they arrive in the hands of end users. Our data should be seen as illustrative examples of what might be considered ‘archetypes’ of nuclear and radiological smuggling and trafficking in the wider Black Sea region. Archetypes, or the multiple recurrence of similar incidents, are also closely connected with the political and economic history and present security situation of the region as described in the article co-authored by one of the present compilers and mentioned in not 1.

The amount of nuclear and radiological material that fell out of regulatory control after the end of former Soviet Union and remains so is unspecified but is believed to be significant. We must assume that in a number of cases, perhaps even in many cases, the intercepted quantities of materials were mere demonstration samples to convince potential buyers that the seller or his middleman had genuine access to nuclear and radioactive materials.

### ***Other Limitations of Our Data***

A further, practical consideration is that the data is not uniform. Details about the incidents have been gathered from newspaper and online articles about incidents. News reports vary in the

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depth of information they give, and often, multiple news reports on one incident will contain almost identical information because different media outlets have acquired the story from the same news agency. This also means that the place of seizure of the material, the nature and amount of material, the method of interception and details about the trafficker, as well as the source of the material and its intended destination and use may or may not be known. The quality of information provided across different incidents is not uniform across the data.

A minor but noteworthy consideration is that some materials that are intercepted at customs checkpoints are not the subject of criminal trafficking at all, but have fallen victim to the failure of exporters and importers to acquire the correct transport permits. In the context of terrorism research, it might be better to disaggregate these incidents from the rest of the data: failure to acquire the appropriate permit does not indicate intent to traffic and to sell; the material may have been destined for a legitimate buyer. Which data to retain and which data to discard in an inventory like ours may often be a question of subjective judgment, because the information given about incidents only occasionally states whether or not there was malicious intent behind it.

The ghost of the 1986 Chernobyl nuclear accident still haunts Eastern Europe. This history is reflected in the reports of discoveries of radioactive scrap metal and orphan source Caesium-137 and trafficking of radioactive materials from within the Chernobyl exclusion zone. Economic difficulties and the presence of organized crime are also part of the subtext of the data. These are illustrated in reports of thefts of ice detectors and quantities of nuclear material from commercial facilities, power plants and even submarines.

With these caveats, we release part of the fruit of our efforts to gather open source data to fellow researchers for their cautious consideration and their feedback in the form of corrections, qualifications and additions.

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**Nuclear and radiological smuggling and trafficking incidents, events, and threats from the wider Black Sea area, 1990 – 2011**

*An Open Source Compilation prepared by Alex P. Schmid & Charlotte Spencer-Smith*

**1990, February / Azerbaijan / N:** Azerbaijani rebels unsuccessfully attacked a Soviet military depot near Baku where nuclear weapons are stored; Soviet troops were sent to secure the base (<http://www.johnstonarchive.net/nuclear/wrjp1855.html>).

**1991 / Kazakhstan / Iran / N:** According to unconfirmed reports, Kazakhstan sold Iran three tactical nuclear warheads for between \$130 million and \$150million (Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998, p. 124).

**1991 / Russian Federation / N:** Islamic Jihad purportedly approached one of Russian Federation's closed cities, Arzamas-16, offering to buy a nuclear weapon.

**1992 / USA / N:** Last US explosive test. Former Russian test site Semipalatinsk is closed by newly independent Kazakhstan.

**1992, January / Iran / N:** An Egyptian newspaper claimed Iran had bought three Soviet nuclear warheads from Kazakhstan for \$150 million; Kazakhstan denied the report. In April, Russian intelligence reported Iran had obtained at least two warheads from Kazakhstan; in July a Kazakh official said the 3 reportedly missing warheads were in test shafts at the Kazakh test site; in September a U.S. congressional task force alleged Iran had obtained 4 Soviet warheads (including two operational): two 40 kt SRBM warheads, one 50 kt NGB, and one 0.1 kt AFAP. By 1994, Russia said the warheads were accounted for; Israeli officials suggest the warheads were borrowed for disassembly and reverse engineering (<http://www.johnstonsarchive.net/nuclear/wrjp1855.html>).

**1992, March / Commonwealth of Independent States / R:** Reportedly, a box of radioactive material stolen from Pridniestrovye, Transdnestr; thieves threatened to blow up the material if fighting in Moldova was not stopped (<http://www.johnstonsarchive.net/nuclear/wrjp1855.html>).

**1992, May–October / Russian Federation, Luch Scientific Production Association / N:** This incident involved a chemical engineer, Yuri Smirnov and long-time employee of the State Research Institute, Scientific Production Association (also known as Luch) which is located 22 miles from Moscow. Beginning in May 1992, over a 5-month period, the individual smuggled out of the institute small quantities of 90% HEU, totalling 1.5 kg. In October 1992, the engineer was arrested because police suspected him of stealing equipment from the Luch faculty. Once in custody, the police discovered the nuclear material that he had stolen. The individual did not have a specific buyer in mind, but was trying to determine whether there was a market for the stolen nuclear material. He was tried before a Russian court and received 3 years' probation. The material had been seized in October, 1994, in Podolsk, Russian Federation (Frank Barnaby: 'Instruments of Terror', 1996, p.154; and Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998, p. 110).

**1992 / Kazakhstan/Iran / R/N:** Iranian agents allegedly contacted officials at nuclear facilities in Kazakhstan on several occasions, attempting to acquire nuclear-related materials. In the same year,

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Iran had allegedly unsuccessfully approached the Ulba Metallurgical Plant to obtain enriched Uranium.

**1992, May–October / Ukraine / R/N:** Apparently 100 kg of Uranium was stolen from the Chepetsk Mechanical Factory (Ukraine?); 80 kg could be recovered later. The material was apparently destined for the Middle East.

**1992, 30 March–6 April / Russian Federation/North Korea / N:** 56 kg of Plutonium was said to have been smuggled by train, hidden among scrap metals, to North Korea from Russian Federation in early 1992, according to *Kommsersant*.

**1992, October / Russian Federation:** Yuri Smirnov, an engineer at the Lurch Scientific Production Association in Podolsk, Russian Federation was accused of stealing 3.7 pounds of HEU (90% enriched U-235). He was caught when leaving for Moscow to find a buyer

**1992, October 28 / Bulgaria/Iraq / N:** A consignment of 44 kg of Pu-239, possibly destined for Iraq, was found in the Sheraton hotel in Sofia, according to a report of *Komosomolskaya Pravda* (11.11.1992). However, Bulgarian officials ultimately identified the perpetrator as a British journalist claiming to research the activities of a gang who had offered to deliver 80 kg of Pu to Iraq. The journalist had managed to insinuate himself as intermediaries in the transaction and passed the first box of Pu (worth \$378,000) to the Bulgarian authorities. The ‘Plutonium’ turned out to be a box of metal screws with a total content of 200 millig of Pu. (Rensselaer W. Lee: ‘Smuggling Armageddon’, New York, 1998, p. 75, 87).

**1992, December / Kazakhstan/Iran / N:** a phone conversation between two Iranian officials, intercepted by a European security service, allegedly recorded a discussion on the purchase of four nuclear warheads from Kazakhstan. Apparently the warheads had already been paid for but there was a ‘transportation problem’.

**1993 / Russian Federation / R/N:** 165 kg of Uranium were reportedly confiscated in Izjezk, 900 km from Moscow.

**1993 / Turkey/Iran / R/N:** Three Iranians believed to have had connections to Iran’s intelligence service, were arrested in Turkey while seeking to acquire nuclear material from smugglers from the former Soviet Union.

**1993 / Ukraine / Palestine / N:** According to unconfirmed reports, Ukrainians sold the Palestine Liberation Organisation two nuclear warheads for \$10 million (Rensselaer W. Lee: ‘Smuggling Armageddon’, New York, 1998, p. 125).

**1993 / Russian Federation / N:** The director of the nuclear research centre in Arzamas-16 was, according to his own testimony, offered \$ 2 billion for a warhead by Iraqi representatives (Rensselaer Lee, as quoted in CSIS, *The Nuclear Black Market*, op. Cit., p. 15).

**1993 / Russian Federation / R/N:** A Volgograd businessman offered 2.5 kg of HEU to a criminal gang based in the Central Volge region to pay off a debt he owed to them. The gang refused the material as payment for the debt because it could not find any buyers (Gavin Cameron: ‘Nuclear Terrorism’, 1998, p. 9).

**1993, January / Russian Federation / R/N:** Several persons were arrested in the ‘closed’ city of Arzamas-16 in the Russian Federation after 10 kg of Uranium were found in their possession

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**1993, March / Chechnya / R/N:** Chechens were reported to have obtained enriched Uranium from Kazakhstan and from Russian Army depots.

**1993, March / Turkey / R/N:** Turkish intelligence sources reported that six kg of enriched Uranium was smuggled into Turkey through the Aralik border gate in Kars province in eastern Turkey. The material was reportedly brought in from Tashkent, Uzbekistan, to Grozny, Chechnya, and via Georgia to Nachichevan, before it was intercepted in Istanbul.

**1993, April / Ukraine / R:** 80 tons of nuclear fuel were discovered by the Ukrainian customs service on its way from Russian Federation to Varna, Bulgaria, where it was thought to be shipped to Libya.

**1993, April / Lithuania / R/N:** Uranium and Strontium were reported to have disappeared from a nuclear power plant in north-east Lithuania

**1993, April / Russian Federation / R/N:** 75 g of Plutonium were seized in Orel, Russian Federation, in April, 1993. The material was reportedly stolen from the Orel Branch of the Moscow Instrumentation Research and Development Institute (Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998, p. 107).

**1993, May / Glazov, Russian Federation / N:** Reported trafficking of 11 kg Natural Uranium (*Comprehensive List*).

**1993, May 24 / Vilnius, Lithuania / R/N:** In May 1993, Lithuanian authorities recovered 4.4 tons of Beryllium in a smuggling investigation. Beryllium is a metal that is used in the production of, among other things, x-ray tubes, lasers, computers, aircraft parts, nuclear reactors, and nuclear weapons. When Lithuanian authorities seized the material, they discovered that some of the Beryllium (141 kg) was contaminated with approximately 0.1 kg of HEU (50% enriched U-235). There was no evidence that the individuals involved were aware that the Beryllium contained the enriched Uranium. Some reports indicated that the Beryllium originated in the Institute of Physics and Power Engineering in the Russian Federation. This institute was involved in the research and development of nuclear power reactors and employed about 5,000 people. It was said to possess several tons of weapons-usable materials.

**1993, June / Orenburg region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1993, June / Electrostal company, Russian Federation / N:** Reported trafficking of 2.5 kg natural Uranium (*Comprehensive List*).

**1993, July / Andreeva Guba, Murmansk, Russian Federation / R/N:** In July 1993, two Russian naval enlisted personnel stole two fresh fuel rods from a storage facility in Murmansk, Russian Federation. These rods were for Russian naval propulsion reactors that power submarines and contained 36% enriched Uranium. The amount of materials totalled about 1.8 kg of HEU. Russian security officers discovered the missing materials and apprehended the individuals before the material left the Murmansk area. One of the individuals arrested was a guard at the facility and was suspected by authorities after the material was missing. The two enlisted personnel who were caught implicated two Russian naval officers in the plant. However, at the ensuing trial only the two enlisted personnel were convicted and sentenced to prison terms of four and five years. (F Steinhäussler and L Zaitseva. *Illicit Trafficking in Nuclear and other Radioactive Materials*, with a

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focus on nuclear and radiological terrorism. Paper prepared for Courmayeur, ISPAC Conference, 6-8 December 2002, p. 5).

**1993, August / Murmansk region, Russian Federation / R:** reported trafficking of Cs-137 (*Comprehensive List*).

**1993, September / Novgorod region, Russian Federation / R:** reported trafficking of Cs-137 (*Comprehensive List*).

**1993, September / Sarov, Russian Federation / N:** Reported trafficking of 9.1 kg Natural Uranium (*Comprehensive List*).

**1993, September / Grodno, Belarus / N:** Reported trafficking of depleted U-238 (*Comprehensive List*).

**1993, October / Primorsk region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1993, October 5 / Turkey / R/N:** Istanbul police seized 2.49 kg of natural Uranium and arrested four Turkish businessmen and four suspected agents of Iran's secret service. The material was of Russian origin and allegedly transported to Istanbul from the Hartenholm airfield (allegedly a privately owned airfield used by Iranian arms dealers) near Hamburg by a private Cessna aircraft. The purchasing price was said to be \$ 825 million.

1993, November / Moscow, Russian Federation / N: Reported trafficking of 3.5 kg Depleted Uranium (*Comprehensive List*).

**1993, November / Russian Federation / N:** Workers allegedly removed two nuclear warheads from the Zlatoust-36 Instrument-Building Plant facility near Chelyabinsk, Russian Federation. The warheads were recovered from a garage in a nearby residential site (Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998, p. 124).

**1993, November / Russian Federation / N/R:** In November 1993, approximately 4.5 kg of 20% enriched Uranium, intended for use in submarine propulsion reactor, was stolen from a fuel storage facility in the Sevmorput shipyard near Murmansk, Russian Federation. Three individuals were arrested in connection with the theft, including two naval officers. The group stored the fuel rods in a garage for several months while they were looking for a prospective buyer. The three individuals were arrested and two of the men received 3-1/2-year sentences; the third person was acquitted. (F Steinhäusler and L Zaitseva. *Illicit Trafficking in Nuclear and other Radioactive Materials*, with a focus on nuclear and radiological terrorism. Paper prepared for Courmayeur, ISPAC Conference, 6-8 December 2002).

**1993, November / Russian Federation / R :** In a case stemming from an incident in November 1993 in which a Russian naval officer stole 4 kg of 20 percent enriched U-235 nuclear fuel rods from a poorly guarded area at Severomorsk, a Russian court found the officer guilty but gave him a suspended sentence because he admitted the act. Two accomplices were sentenced to three years at a labor camp ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1993, November / Italy / Russian Federation / R/N:** It was reported that in the previous two years 234.42 kg of Uranium-235 'pills' had been stolen by Moldovans, Romanians, Hungarians and a

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Syrian from the Nuclear Reactors Institute in Pitesti. Another 208 kg, stolen from a plant in Braslov, could be recovered.

**1993, Border Poland-Ukraine, Poland / R:** Reported trafficking of Strontium-90 (7 mCi) (*Comprehensive List*).

**1993, November 27 / Turkey / N/R:** Three Georgian nationals arrested at Bursa, Turkey, were found in possession of 4.5 kg of Uranium

**1993, November 29 / Russian Federation / N/R:** Lt-Col. Tikhomirov of the Russian Navy, and Alyak Beranov, deputy administrator of the Polyarnyy submarine base, entered a naval fuel store at the Sevmorput shipyard near Murmansk, Russian Federation, through a hole in the perimeter fence and stole three fuel rods of Uranium, containing 4.34 kg of HEU (20% enriched U-235). They intended to sell the Uranium for \$ 50,000. The fuel was kept in Beranov's garage for seven months, until Tikhomirov got drunk and boasted of the theft to fellow officers. Both were arrested (Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998, p. 117).

**1993, December / Kazan, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994 / Russian Federation / Chechnya / N:** Chechen leader Dzhokhar Dudayev reportedly warned the US government in the summer of 1994 that it had two tactical nuclear weapons and that he would transfer them to Libya if the United States did not recognise Chechnya's independence. The USA allegedly sent, with Russian Federation acquiescence, a team to inspect the weapons, which, however, did not exist (Andrew Cockburn and Leslie Cockburn. *One Point Safe*. Washington, D.C. Doubleday, 1997, pp. 101-103; cit. Scott Parrish, op. cit, p.10).

**1994 / Russian Federation / R/N:** The Russian Federation Newspaper *Moskovskiy Komsomolets* reported in mid-1994, that the Russian Federation Federal Counterintelligence Service (FSK) allegedly arrested one of its own captains and a former FSK warrant officer for possession of about 2 kg of Uranium. The FSK denied the incident (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998).

**1994, January / Electrostal company, Russian Federation / N:** Reported trafficking of 3 kg LEU (3.6% enriched) fuel pellets (*Comprehensive List*).

**1994, February / Ekatarinburg, Russian Federation / N:** Reported trafficking of 30 kg depleted Uranium in a protective container (*Comprehensive List*).

**1994, March / Russian Federation / N:** 11 out of 60 nuclear warheads and their missiles, en route from the Ukraine to the Russian Federation to be scrapped, reportedly disappeared, according to the German BND (This was not confirmed by the CIA. John M. Deutch, in testimony of 20 March 1996: "We have received well over a hundred reports alleging the division of nuclear warhead or component during the last few years. The Intelligence Community checks out all reporting of warhead theft and will continue to do so. But to date much of the reporting has been sporadic, unsubstantiated, and unreliable"). It was suspected that Iran was an interested potential buyer.

**1994, March / Krasnoyarsk region, Russian Federation / R:** reported trafficking of Cs-137 (*Comprehensive List*).

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**1994, March / Sarov, Russian Federation / N:** Reported trafficking of 3.71 kg Natural Uranium (*Comprehensive List*).

**1994, March / Sneginsk, Russian Federation / N:** Reported trafficking of 5.5 kg Natural Uranium (*Comprehensive List*).

**1994, March-April / Russian Federation / R/N:** A worker at 'Elektrostal' and his cousin stole 1.76 kg of Uranium from the plant. They were arrested, together with two other persons, when they tried to sell the material to an agent of the Russian Federal Security Service (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998).

**1994, March 4 / St. Petersburg, Russian Federation / N:** Trafficking of 2.972 kg HEU Dioxide (90% enriched) that was likely to be from the Elektrostal company. Three people attempting to sell the HEU were arrested by Russian agents in St. Petersburg (*Comprehensive List* and the *Christian Science Monitor*).

**1994, April / Sochi, Russian Federation / N:** Reported trafficking of 3 kg Natural Uranium (*Comprehensive List*).

**1994, April / Yackutiya region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, April / Lenengrad region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, May / Leningrad region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, May 10 / Tengen-Wiechs (Baden-Wuerttemberg) Germany / R/N:** In the small town of Tengen-Wiechs, Germany, a 5.6 g of very pure (99.75% enriched) Plutonium-239 was found in the garage of businessman Adolf Jaekle, mixed with Red Mercury. The most likely origin of the material was a Russian weapons laboratory, possibly the Arzamas-16 laboratory near Moscow (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 93).

**1994, June / Nignegorod region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, June / Sevmorput shipyard, Russia / N:** A naval office at the Sevmorput Shipyard notified authorities after a fellow officer asked about potential customers for nuclear material. The tip leads to the piecing together of a case involving two other officers and 4.5 kg HEU that had been stolen from the shipyard in 1993 (Compilation by *The Christian Science Monitor*, 2001).

**1994, June / Russian Federation / R/N:** 3.05 kg of HEU (50-90% enriched U-235) were seized in St. Petersburg in June, 1994. The material was reportedly stolen from the 'Elektrostal' Machine Building plant in February, 1994 (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 107).

**1994, June 13 / Landshut (Bavaria), Germany / R/N:** Gustav Illich, a Slovak national, was arrested by German police in Landshut after he had offered HEU to an undercover agent and after he had delivered an Uranium sample containing 800 millig of HEU. Illich had reportedly obtained the material from Jaroslav Vagner, a Czech national, and had told the police agent that several kg of HEU were secretly stored in Prague. The Uranium shipment reportedly consisted of about 3-6 kg

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and was smuggled from the Russian Federation to Prague in May or June 1994. The origin of the HEU sample was the Institute of Physics and Power Engineering in Obninsk, Russian Federation. Chemical identical HEU was found in Prague on December 14, 1994, and in June, 1995 (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 79, 98-101).

**1994, July / Turkey / R/N:** Turkish police confiscated 12 kg of possible weapons-grade Uranium coming from Azerbaijan to Istanbul; they arrested seven Turks.

**1994, July / Romania / R:** According to a 2 November press report, police in Timisoara, Romania, had arrested five Romanians trying to sell 2.6 kg of Russian Uranium ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, July / Russian Federation / R/N:** Four businessmen from Severodvinsk, Russian Federation, were reportedly arrested in July, 1994, for stealing 3.5 kg of Uranium dioxide (20-40% enriched U-235) from the Severodvinsk Sevmash nuclear submarine construction plant. They allegedly had links to Sevmash plant workers (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 119).

**1994, July / Russian Federation / R:** According to 6 July press reporting, Russian authorities in Shezninks discovered 5.5 kg of U-238 previously stolen from the Chelyabinsk-65 nuclear facility ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, July 19 / Istanbul, Turkey / N:** Reported trafficking of 12.38 kg Depleted Uranium (*Comprehensive List*).

**1994, August / Kaliningrad, Russian Federation / N:** Reported trafficking of 30 kg natural Uranium in a protective container (*Comprehensive List*).

**1994, August / Sarov, Russian Federation / N:** Reported trafficking of 8.94 kg Natural Uranium (*Comprehensive List*).

**1994, August / Vladimir region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, August 3 / Brest, Belarus / R:** Reported trafficking of Cs-137 (2Ci) (*Comprehensive List*).

**1994, August 4 / Timis, Romania / N:** Reported trafficking of 2.6 kg LEU (*Comprehensive List*).

**1994, August 10 / Munich, Germany / R/N:** One Colombian and two Spaniards were arrested at Munich airport, arriving by Lufthansa from Moscow. In their possession were 560 g LEU and 363.4 g of Pu-239 (pu-240 10.78% enriched). German BND agents offering them \$ 276 million to procure 4 kg of Russian plutonium and convey it to Munich had lured them into this sting operation (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 93). The smugglers displayed all characteristics of amateurs. However, the German magazine *Focus* reported that the planned sale was a private deal by high-ranking officers of the Illegals Directorate of the Russian Foreign Intelligence Agency (*Focus report* Feb. 1997, quoted in: Rensselaer W. Lee, p. 75).

**1994, August 12 / Russian Federation / N:** Press reports indicated that St. Petersburg police arrested three men trying to sell 60 kg of unidentified nuclear material ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.htm](http://www.fas.org/irp/cia/product/go_appendixa_032796.htm)<sup>1</sup>).

**1994, August 20 or 24 / Russian Federation / R/N:** Three unemployed youth entered through a hole in the fence the All-Russia Research Institute in the 'closed' city of Arzamas-16 and walked away with 9.5 kg of Uranium-238. ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, August 30 / Hungary / R:** Hungarian police seized two kg (4.4 pounds) of what they believed were Uranium rods coming from Russian Federation. (<http://www.infomanage.com/nonproliferation/smuggling/timeline.htm>).

**1994, August 31 / Russian Federation / R:** “Unidentified thieves stole radioactive Caesium from a chemical plant in southern Russian Federation. They stole the capsule containing the metal by breaking through a wall of the plant’s storehouse, said Karl Smolikov, a spokesman for the Russian Ministry for Emergency Situation. The theft occurred at the Ivarov chemical plant in the city of Tambov, about 250 miles south of Moscow. The Caesium capsule apparently was part of some industrial equipment, Smolikov said. According to the police, the device could emit lethal radiation if handled improperly, the ITAR-Tass news agency reported. The agency also quoted nuclear experts as saying the Caesium-137 was widely used in measuring devices applied in many fields of industry and medicine ([www.infomanage.com/nonproliferation/smuggling/timeline.html](http://www.infomanage.com/nonproliferation/smuggling/timeline.html)).

**1994, September / Sofia, Bulgaria / R:** Trafficking of a Pu-239 source, one Natural Uranium source, Cs-137, Sr-90, Tl-204, one Neutron source Pu/Be (low activity calibration sources) (*Comprehensive List*).

**1994, September / Nignegorod, Russian Federation / R:** Trafficking of Cs-137 (*Comprehensive List*).

**1994, September / Italy / R/N:** A sample of Plutonium-239 (1 g) was found in the Turin home of former Bulgarian fencing champion Assen Djakovski. An Italian prosecutor indicted him and four others for trying to import 62 kg of Plutonium-239 and resell it to the Middle East.

**1994, September 5 / Bulgaria / R:** Press reports indicated Bulgarian authorities arrested six Bulgarians in connection and seized 19 containers of radioactive material ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, September 7 / Russian Federation / R:** Press reports indicated Russian police arrested three people in Glazov trying to sell 100 kg of U-238 ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.htm](http://www.fas.org/irp/cia/product/go_appendixa_032796.htm)).

**1994, September 28 / Snagov, Romania / N:** Reported trafficking of 4.6 kg Natural Uranium (*Comprehensive List*).

**1994, September 28 / Tallinn, Estonia / R:** Trafficking of Cs-137 (66 GBq) (*Comprehensive List*). Press reporting indicates that a container with radioactive substances was found on a street in Tallinn ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, October / Russian Federation / R/N:** Fuel rods for nuclear submarines were allegedly stolen from the Sevsmash nuclear submarine construction plant in Severodvinsk, Russian Federation, in October, 1994 (Rensselaer W. Lee, ‘Smuggling Armageddon’, New York, 1998, p. 119).

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**1994, October / Russian Federation/ R:** Press reporting dated 26 October indicates Russian authorities arrested three men trying to pass 67 kg of U-238 to unidentified individuals in the city of Pskov ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, October / Mordoviya region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, October / Bulgaria / R:** Bulgarian authorities seized four lead capsules suspected of containing radioactive material on a bus en route to Turkey.

**1994, October 1 /Romania/N:** Press reporting indicates Romanian police arrested four people trying to sell over 4 kg of U-235 and U-238 ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1994, October 10 / Moldova, Romania / R:** Reported trafficking of Sr-90 (1 mCi) (*Comprehensive List*).

**1994, October 10 / Romania / N:** Press reporting indicates Romanian authorities arrested seven people and seized 7 kg of Uranium and an unidentified quantity of Sr or Cs ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).[4]

**1994, October 19 / Istanbul, Turkey / R/N:** 650 g LEU (U-238) were seized in Istanbul. The origin of the material, which was found in the possession of an Azerbaijani national, was Baku/ Azerbaijan.

**1994, November / Nignegorod, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1994, December / Orenburg region, Russian Federation / R:** Reported trafficking of Ir-192 (*Comprehensive List*).

**1994, December 14 / Prague, Czech Republic / R/N:** 2.7 kg of 87.7 percent HEU (U-235 87.7% enriched) were seized in Prague by the Czech Security and Intelligence Service, and one Czech nuclear scientist, Jaroslav Vagner, and two former Soviet citizens were arrested. The market value of the radioactive material, which was professionally stored in two metal cylinders, complete with a Russian factory certificate, was many tens of millions of dollars. The seized Uranium was chemically identical to the HEU seized in Landshut, Germany, on June 13, 1994, and was apparently extracted from the same cache. The source of the material was the Institute of Physics and Power Engineering in Obninsk, Russian Federation. Vagner had already been involved in the Landshut incident (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 98-101).

**1994, December 15 / Kaunas, Lithuania / N:** Reported trafficking of 8 kg LEU fuel pellets (2% enriched U-235) (*Comprehensive List*).

**1995 / USA / Ukraine / R/N:** Federal authorities arrested three employees of the New York company 'Interglobal Manufacturing Enterprise' for trying to sell some tons of Zirconium to undercover custom agents posing as arms buyers from Iran. The Zirconium was smuggled to the U.S. from the Ukraine (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 120).

**1995, January / St. Petersburg, Russian Federation / N:** Reported trafficking of 1.5 kg LEU (3.6% enriched) fuel pellets (*Comprehensive List*).

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**1995, February / Kaliningrad region, Russian Federation / R:** Reported trafficking of Sr-90 and Y-90 (*Comprehensive List*).

**1995, March 8 / Italy / N:** Italian police arrested one Nicola Todesco for murder in a Plutonium smuggling case gone awry when the murder victim did not have the money to pay for a quantity of Plutonium smuggled out of Bulgaria. Todesco claimed he threw 5g of plutonium into the Adige river, but no trace of it was found after an extensive search. (Comment: Although an official Italian spokesman believed the Plutonium was "enriched for military use," it had not been analyzed. This may have been another scam involving 'plutonium screws' from smoke detectors ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.htm](http://www.fas.org/irp/cia/product/go_appendixa_032796.htm)!)).

**1995, April / Czech Republic / R/N:** Czech authorities arrested nine people and confiscated more than 50 kg of Uranium which was found in a car travelling from the Ukraine to Slovakia (Frank Barnaby, "Instruments of Terror", 1996, p.157).

**1995, April 4 / Ukraine / N/R:** Press reports that 6 kg of U-235, U-238, Radium, and Palladium were found in a Kiev apartment. Occupants were ex-army, a lieutenant colonel and a warrant officer, and material reportedly came from Russia ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1995, April 13/Slovakia/N:** Slovak police culminated a long investigation with the discovery of 18.39 kg of nuclear materials, 17.5 kg of which apparently was U-238, in a car stopped near Poprad in eastern Slovakia. Altogether, three Hungarians, four Slovaks, and two Ukrainians were arrested. This gang was said to be connected to three other nuclear material smuggling incidents ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1995, April 29 / R:** A container with 763 kg of Cs-137, Am-241 and Be, shipped in December 1993 from Amsterdam by a French company, was discovered at Baku airport.

**1995, May / Electrostal company, Russian Federation / N:** Reported trafficking of 11 kg LEU (3.6% enriched) fuel pellets (*Comprehensive List*).

**1995, May-September / Russian Federation / N/R:** An engineer removed 1.5 kg of weapons-grade Uranium from the Luch' Scientific-Production Association in Podolsk in several separate diversions between May and September 1995. The man was later arrested in Moscow carrying the Uranium in search for a buyer (Rensselaer W. Lee: 'Smuggling Armageddon', New York, 1998).

**1995, June / Electrostal company, Russian Federation:** 1.7 kg of 21% enriched HEU U3O8 (F Steinhaeusler and L Zaitseva. Illicit Trafficking in Nuclear and other Radioactive Materials, with a focus on nuclear and radiological terrorism. Paper prepared for Courmayeur, ISPAC Conference, 6-8 December 2002).

**1995, June 15 / Romania / N:** Press reports indicated that so far in 1995 Romanian authorities had seized 24 kg of Uranium powder and tablets. In 1994 they had arrested 24 people for involvement in nuclear smuggling and seized 10.35 kg of Uranium powder and tablets. From 1989 to 1993, the Romanians reportedly broke up five gangs, arrested 50 people, and seized 230 kg of nuclear materials ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1995, July / St. Petersburg, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

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**1995, July / Irkutsk region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1995, September / Nignegorod region, Russian Federation / N:** Reported trafficking of 2 kg Natural Uranium (*Comprehensive List*).

**1995, September/Bulgaria/R/N:** According to press reports, Bulgarian police had broken an international nuclear smuggling ring composed of Russians and Ukrainians. A police spokesman declining to disclose details, saying only that the materials seized were of strategic value and included rare metals. The arrests were the culmination of a year-long undercover operation. Senior police officials commented that they were still investigating the final destination of the materials, some of which were radioactive ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.htm](http://www.fas.org/irp/cia/product/go_appendixa_032796.htm)!).

**1995, October 25/Russian Federation/R:** The cleaning staff at Moscow's Sheremetyevo 2 airport found a small lead container packed with radioactive substances in the men's restrooms, according to press reports. Experts reportedly were attempting to determine the exact composition of the three sources of ionizing radiation found in the container. The speculation in the Russian press was that a nuclear smuggler lost his nerve and abandoned the material during an aborted smuggling attempt ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1995, November / Tchelyabinsk region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1995, November 8 / Prudnik, Poland / R:** Reported trafficking of Sr-90 of “very low activity” (*Comprehensive List*).

**1995, November 23 / Russian Federation / Chechnya / R:** Chechen separatists were reported to have placed a 30-pound container of radioactive Cs-137 near the entrance of Moscow's Izmailov Park as a demonstration of their capabilities. Shamil Basayev tipped off NTV television reporters as to where to find the radioactive package under the snow. It allegedly emitted 300 times the normal background radiation. The idea behind this incident was apparently to show the Chechen's ability to strike at the heart of Russian Federation. The material has possibly been stolen from the Budyonnovsk hospital, which Chechens had temporarily occupied in the spring of 1995. Shamil Basayev and other Chechen commanders also threatened to attack Russian nuclear power plants. Earlier S. Basayev had explicitly denied having nuclear weapons in a July 1995 interview with the Moscow daily *Segodnya*. The Izmailov incident remains contested (Rensselaer W. Lee, ‘Smuggling Armageddon’, New York, 1998, p. 135/136).

**1995, November 29/ Russian Federation/R:** Russian security officials recovered four containers with radioactive Caesium, stolen from an industrial plant in the Urals and arrested the thieves, according to press reports. Federal Security Service (FSB) officers found the 90 Kg containers in a shaft of an old mine, ITAR-Tass news agency reported. One of the alleged thieves, a Bakal mining plant's electrical engineer, had initially kept them at his vegetable garden but moved them to a safer place after the theft had been discovered, according to claims by security officials. Two officials of a local penitentiary were said to be his accomplices. Each container held a capsule with Caesium-137, a radioactive isotope used in geological research, as well as in medicine. The

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containers were similar to the one allegedly planted by Chechen rebels in a Moscow park ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1995, December / St. Petersburg region, Russian Federation / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1995, December / Kazakhstan / R/N:** Police found 4.5 kg of Uranium in the back of a car they had stopped ( Frank Barnaby, “Instruments of Terror”, 1996, p.157).

**1995, December 7 / Ust-Kamenogorsk, Kazakhstan / N:** Reported trafficking of 149.8 kg LEU (2.4% enriched) (*Comprehensive List*).

**1995, December 28/ Novosibirsk, Russian Federation / N:** Reported trafficking of 10 kg LEU (2.4% enriched) fuel pellets – According to press reports, the Russian Federal Security Service (FSB) arrested 9 members of a criminal organization in Novosibirsk and seized a quantity of radioactive material. The material was identified in press reports as “enriched” Uranium-235. The material had been transported to Novosibirsk by middlemen, possibly from Kazakhstan. The ultimate destination may have been South Korea, according to press reports. ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.htm](http://www.fas.org/irp/cia/product/go_appendixa_032796.htm)<sup>1</sup> and *Comprehensive List*).

**1995-1996 / Chechnya:** Chechens had reportedly developed a detailed plan to hijack a Russian nuclear submarine from the Navy’s Pacific Fleet with the help of a former commander on Russian submarines (M. Bunn, Anthony Wier, John P. Holdren, op. cit., pp 219-219).

**1996, January / Russian Federation / R/N:** Three workers reportedly stole fuel rods containing at least 7 kg of HEU, reportedly from a Pacific Fleet base at Sovietskaya Gavan. Some of the material (2.5 kg) was later found at a facility of a metal trading firm in the Baltic city of Kaliningrad and 5 kg were seized at the Sovietskaya Gavan facility (Rensselaer W. Lee, ‘Smuggling Armageddon’, New York, 1998, p. 119).

**1996, 17 January/ Dubai, UAE:** A Palestinian in Dubai, UAE offered to sell 3 kg of reportedly Russian-origin red mercury to a Lebanese-American businessman, according to US diplomatic reporting ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1996, January 26 / Yalova, Turkey / n:** Reported trafficking of 1121.2 g LEU (*Comprehensive List*).

**1996, February / Switzerland / R/N:** A Turkish citizen with dual Swiss citizenship was arrested in Switzerland for attempting to sell a sample of HEU. The suspect claimed that the sample belonged to a larger cache in Turkey. Turkish police, using information from their Swiss counterparts, subsequently arrested eight people and seized 1.128 kg of similar material, which is usually used in nuclear power plant fuel rods. Its origin was unclear. ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

**1996, February 23/Belarus/R:** According to press reports, the Belarus Committee for State Security (KGB) seized five kg of Caesium-133. The radioactive metal was reportedly sealed in glass containers. Belarus authorities were investigating the incident, according to press reports. ([http://www.fas.org/irp/cia/product/go\\_appendixa\\_032796.html](http://www.fas.org/irp/cia/product/go_appendixa_032796.html)).

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**1996, March / Turkey / N/R:** 20kg Uranium in the possession of five Turkish nationals were seized in Antalya, Turkey.

**1996, March / Ukraine / R/N:** 6 kg of Uranium (about 20% enriched U-235) were seized in Kiev, Ukraine, in March, 1996. The material was probably stolen from a Russian naval fuel storage facility (Rensselaer W. Lee, 'Smuggling Armageddon', New York, 1998, p. 107).

**1996, March 6 / Timis, Romania / N:** Reported trafficking of 82 kg natural Uranium (*Comprehensive List*).

**1996, May 21 / Kocaeli, Turkey / N:** Reported trafficking of 15 g LEU (*Comprehensive List*).

**1996, June / Tatarstan region, Russian Federation / N:** Reported trafficking of 50 g Natural Uranium (*Comprehensive List*).

**1996, September 12 / Kocaeli, Turkey / N:** Reported trafficking of 15.4 g LEU (*Comprehensive List*).

**1996, December 14 / Bucuresti, Romania / N:** Reported trafficking of 50 g Natural Uranium (*Comprehensive List*).

**1997, February 14 / Edirne, Turkey / N:** Reported trafficking of 15.4 g LEU (*Comprehensive List*).

**1997, February 28 / Edirne, Turkey / N:** Reported trafficking of 508.3 g LEU (*Comprehensive List*).

**1997, March / Sofia, Bulgaria / R/N:** Reported trafficking of Pu, Be, 23 mg (*Comprehensive List*).

**1997, March / Turkey / R:** Turkish police arrested three Turkish nationals, who offered them 2.5 g of Osmium, valued at US \$ 3 million, for \$ 500,000 (Osmium is extremely rigid and heat-resistant and is used with plutonium as coating for nuclear missile warheads).

**1997, May 26 / Bursa, Turkey / N:** Reported trafficking of 841 g LEU (*Comprehensive List*).

**1997, June 17 / Brest, Belarus / N:** Reported trafficking of 1.7 kg depleted Uranium in three cylindrical shaped pieces (*Comprehensive List*).

**1997, September 11 / Sofia, Injproekt, Bulgaria / R:** Reported trafficking of Am-241 (50 mCi activity) and Cs-137 (10 mCi activity) (*Comprehensive List*).

**1997, September 13 / Kirovograd, Ukraine / R:** Reported trafficking of Co-60 in four pieces of medical applications (*Comprehensive List*).

**1997, October 31 / Russian Federation / N:** Aleksey Yablokov, former advisor to President Jeltsin, threatened to release the technical details of the nuclear suitcase bombs if President Jeltsin does not reply to a letter Yablokov sent him on October 27. According to Yablokov, the letter warns that the Russian Federation had a whole class of nuclear weapons, which are not immediately controlled by the president (*Interfax*, 31 Oct. 1991. In: FBIS-TAC-97-304; cit. Scott Parrish, op. cit.12).

**1997, November / Russian Federation / N:** General Lebed claimed in an interview that of 132 Russian nuclear "suitcase bombs" (RA-115, 2 kilotons) only 48 had been accounted for (Jessica Stern: "The Ultimate Terrorists", 1999, p. 90).[ This claim was distrusted by insiders].

**1997, November 16 / Bucharest, Romania / N:** Reported trafficking of Sr-90, Y-90 (*Comprehensive List*).

**1997, November 20 / Bucharest, Romania / N:** Reported trafficking of 13.3 ounces of Uranium (*Comprehensive List*).

**1997, November 24 / Hunedoara, Romania / N:** Reported trafficking of 17,35 g Natural Uranium fuel pellet scrap (*Comprehensive List*).

**1997, November 24 / Bucharest, Romania / N:** Reported trafficking of 16,83 g Natural Uranium fuel pellet scrap (*Comprehensive List*).

**1997, December 16 / Istanbul-Esenler / R:** Reported trafficking of mixed alpha sources (*Comprehensive List*).

**1998 / Chechnya :** A radioactive container attached to an explosive device was discovered near a rail line in Chechnya – apparently a foiled act of sabotage by Chechen militants. (ITAR-TASS, 29 Dec. 1998. (Cit. F Steinhaeussler and L Zaitseva. Illicit Trafficking in Nuclear and other Radioactive Materials, with a focus on nuclear and radiological terrorism. Paper prepared for Courmayeur, ISPAC Conference, 6-8 December 2002, p.8).

**1998, March 18 / Dnipropetrovsk, Ukraine / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1998, March 31 / Smila, Cherkasy region, Ukraine / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1998, April 22 / Georgia / R/N:** A plan to airlift enriched Uranium from a mothballed experimental nuclear reactor near Tbilisi, Georgia, to the British nuclear complex at Dounreay became public. It was part of a deal between President Bill Clinton and Prime Minister Tony Blair to take the fuel to the UK after France, Russian Federation and the US had declined to accept it.

**1998, May 7 / Volgograd, Russian Federation / R:** Reported trafficking of Cs-137 (200 R/h) (*Comprehensive List*).

**1998, May 12 / Republic of Tuva, Russian Federation / R:** Reported trafficking of Cs-137 (70 mR/h) (*Comprehensive List*).

**1998, June / Turkey / R:** Three Turkish nationals were arrested and unspecified amounts of Antimony, Bismuth and Scandium obtained from Azerbaijan were seized in Bursa, near Istanbul

**1998, June / Bulgaria / N/R:** Bulgarian custom officials seized equipment of the kind commonly used in nuclear reactors in a Bulgarian truck at a border post on the Turco-Bulgarian frontier. The truck had reportedly picked up its consignment in France and was destined for Armenia. However, its log indicated that it was loaded in Austria and its destination was Iran.

**1998, July 1 / Turkey / N/R:** Turkish police arrested six suspects, one of them an Iranian national, the rest Turks, in Van, eastern Turkey, for smuggling 13 glass tubes suspected of containing nuclear material from Iran into Turkey (Caesium, Tantalum, Copper, Zinc, Lead, Iron, Radium, Zirconium, Manganese and Sr (stable) isotopes). They had 13 cylinders, all marked UPAT UKA3 M8 and carrying stamps with three stars, containing an unidentified substance. The suspects claimed the

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cylinders contained only snake venom, but police suspected it might be nuclear material. The suspects confessed that they were going to deliver the tubes to Istanbul for a fee of \$1,000 per tube.'

**1998, 3 September / Turkey / N/R:** Acting on information from the Turkish National Intelligence Organisation (MIT), more than 4.5 kg of unprocessed Uranium and six gramms of Plutonium were seized in Istanbul. Nine suspects were arrested from possession of this material coming out of Russian Federation. The suspects had earlier asked an undercover officer for US \$ 1 million for the contraband material, which was reportedly worth more than \$ 3 million. The suspects were charged with felony smuggling, punishable by ten years in prison.

**1998, October 16 / Kiev airport, Ukraine / R:** Reported trafficking of Cs-137, Am-241, Eu-155, Cs-134, Sb-125 (with a total activity of 4.3 plus/minus 0.3 kBq) (*Comprehensive List*).

**1998, December 4 / Moldova / N/R:** Customs officials and border guards detained two individuals attempting to smuggle a lead container with nuclear fuel materials into Moldova.

**1998, December 17 / Chelyabinsk Oblast region, Russia / N:** A Russian agency reports that it thwarted an attempt by workers at a nuclear facility to steal 18.5 kg of Uranium (Compilation by *The Christian Science Monitor*, 2001).

**1998, December 19 / Russian Federation / N/R:** The Russian Federal Security Service reports the termination of an attempt to embezzle 18.5 kg of radioactive materials, that 'might have been used for production of components for nuclear weapons' (*PPNN Newsbrief*, fourth quarter, 1998), from an enterprise in the Chelyabinsk department (Russian Story, *Defence & Security*, Jan 15, 1998, original source: *Chelyabinsk Rabochy*, Dec. 19, 1998).

**1998, December 29 / Chechnya / N/R:** A container emitting strong radioactivity was found near the Chechen town of Argun, east of Grozny. It was reportedly rigged with landmines (*Le Temps*, Dec. 30, 1998).

**1999, January 7 / Edirne, Turkey / N:** Reported trafficking of 0.1 g Natural Uranium (*Comprehensive List*).

**1999, February 2 / Turkey / N/R:** Turkish police seized 5 g of Uranium and arrested four people in the province of Istanbul. The Uranium was brought to Turkey from Azerbaijan (BBC, Feb. 3, 1999).

**1999, February 5 / Turkey / R:** A heavy block of lead and steel containing Cobalt-60 disappeared from a company in Ikitelli and was thought to be stolen. On January 13, 1999, 16 people in Ikitelli were injured when two scrap-iron dealers had found a similar block. The condition of the two men was critical (*IAEA Daily Press Review*, Feb. 5 1999, *Turkish Daily News*, Jan. 13/16, 1999).

**1999, March 1 / Georgia / R:** In Tbilisi, Georgian security officials arrested five persons for stealing from the premises of a firm which works closely with the Georgian Defence Ministry two containers with radioactive Caesium capsules valued at between \$ 80,000 and \$ 120,000. (BBC, March 2, 1999)

**1999, March 25 / Liepaja port, Latvia / R:** Reported trafficking of Cs-137 (*Comprehensive List*).

**1999, May 3 / Victoria (Brasov), Romania / N:** Reported trafficking of 14.7 kg Depleted Uranium and Ir-192 (2.5 microCi) (*Comprehensive List*).

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**1999, May 14 / Kyrgyzstan / N/R:** An Uzbek national was arrested at Bishkek airport in Kyrgyzstan while trying to smuggle Plutonium on a flight to the United Arab Emirates. The surface of the rubber container he was carrying showed a deadly level of radiation. The arrested man said he had received the Plutonium at the airport from a person he did not know, and that he was to take it to the United Arab Emirates for a fee of \$16,000 (IAEA Daily Press Review, May 17, 1999, ITAR-TASS May 15, 1999).

**1999, May 22 / Ukraine / N/R:** Two Armenians trying to sell 20 kg enriched LEU U-235 ore and a buyer were arrested by Ukrainian law enforcement officials in the town of Berehovo. The two Armenians demanded \$35,000 per kg for the Uranium. They received heavy radiation doses because they had handled the material with their bare hands and carried it in rubber bags. (BBC Monitoring, source: 'Fakty i Kommentarii', Kiev, May 22, 1999, IAEA Daily Press Review, May 25, 1999) According to one source, the material was enriched Uranium in white powder form stolen from a radioactive-materials recycling facility in Krasnoyarsk. Other sources said it was LEU metal suitable for making fuel for RBMK reactors (IAEA Daily Press Review, May 28, 1999).

**1999, May 28 / Bulgaria / N/R:** Bulgarian custom officers arrested a Turkish citizen smuggling a container with 10 g of Uranium-235 across Bulgaria's checkpoint at Rousse (IAEA Daily Press Review, May 30, 1999). Bulgarian scientists concluded that the material was HEU. Although the source of the material is not certain, it is likely that it came from the Mayak Production Association in the Russian Federation.

**1999, May 29 / Dunav Most, Bulgaria / N:** Bulgarian customs officers discover 10 g of HEU hidden in a car crossing into Turkey. The driver said he obtained the material in Moldova although authorities have not determined the source (Compilation by *The Christian Science Monitor*, 2001).

**1999, June 28 / Chechnya / N/R:** A British journalist reported that a Chechen mafia salesman offered him Plutonium (*The Express*, London, June 28, 1999, IAEA Daily Press Review, June 29, 1999).

**1999, July 1 / St. Petersburg (Murmansk), Russian Federation / R:** Reported trafficking of Cf-252 (*Comprehensive List*).

**1999, July 8 / Cherikov (Mogilev), Belarus / R:** Reported trafficking of Ir-192 (1.85 x E 10 Bq) (*Comprehensive List*).

**1999, July 22 / Kazakhstan / N/R:** Kazakh custom officers detained a Russian officer trying to smuggle 'radioactive substances' into Uzbekistan (ITAR TASS, July 22, 1999; IAEA Daily Press Review, July 23, 1999).

**1999, July 30 / Plant 'Granit', Mikashevichi (Brest), Belarus / R:** Reported trafficking of Cs-137 (2.8 x 10 E Bq or 0.0765 Ci) (*Comprehensive List*).

**1999, August 5 / Istanbul, Turkey / R:** Reported trafficking of Cs-137 (1739 MBq) and Cs-137 (44 MBq) (*Comprehensive List*).

**1999, August 6 / Almaty, Kazakhstan / R:** 5 KG of LEU (3.5-4%) was intercepted through an intelligence operation. The material possibly originated from Ulba, Kazakhstan (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

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**1999, August 17 / Turkey / R:** Turkish police arrested five people, among them foreign citizens, trying to sell 49 g of Caesium-137 in Istanbul after having smuggled it into Turkey from abroad (*BBC Monitoring Service*, Aug. 17, 1999, *IAEA Daily Press Review*, Aug. 18, 1999).

**1999, August 25 / Hamburg, seaport, Germany / R:** Reported trafficking of Ra-226 (approximately 36 MBq) (*Comprehensive List*).

**1999, August 30 / Romania / R:** Shim'on, Ion Menciuc, and Ivan Busuioac were arrested as middlemen in an illegal operation to smuggle arms, explosive, and nuclear components through Romania to export-embargoed nations and possibly terrorist organizations. (CNS Monterey Institute)

**1999, September / Georgia:** 1 kg of reportedly U-235 was seized in Georgia (<http://www.defenselink.mil>).

**1999, September 20 / Batumi (Khelvachauri, Adzharia), Georgia / N:** Reported trafficking of 998.87 g LEU (UO<sub>2</sub>, 3-3.3% enriched) (*Comprehensive List*).

**1999, September 20 / Ukraine / R:** During the week of 20 September, officials in Uzhgorod, Ukraine, confiscated two lead cylinders containing radioactive Strontium (according to early report) or Strontium-90 (according to later report) from a group of Russian and Ukrainian citizens during a routine passport check (CNS Monterey Institute).

**1999, September 23 / Uzhhorod and Kiev, Ukraine / R:** Reported trafficking of Sr-90 (*Comprehensive List*).

**1999, September 23 / Mramor (Sofia region), Bulgaria / R:** Reported trafficking of Cs-137 (740 GBq) and Co-60 (74 MBq) (*Comprehensive List*).

**1999, October / Kyrgyzstan / N:** In October 1999, two persons were arrested in the act of selling a small metallic disk containing 0.0015 kg of Plutonium. The item was analyzed by the Institute of Nuclear Physics in Kazakhstan and the two individuals arrested were convicted and sentenced to prison.

**1999, October 2 / Kara-Balta, Kyrgyzstan / N:** Reported trafficking of 1,49 g Pu (*Comprehensive List*).

**1999, October 13 / Russian Federation / N:** Russian officials warned that Chechen terrorists were planning to attack Russian nuclear facilities. (*CNN*, Oct. 13, 1999) Chechen rebel leader Basayev told Agence France Press on Oct. 12, 1999, that he was prepared to launch a terrorist campaign inside Russian Federation (*Süddeutsche Zeitung*, Oct. 12, 1999).

**1999, December / I.N. Vekua Physics and Technology Institute, Sukhumi, Georgia / N:** A Russian inspection team visits the institute in Georgia which had been closed as a result of the Abkhazia-Georgia conflict. About 2 kg of HEU that have been registered in a 1992 inventory turned out to be missing. The material has not been recovered (Compilation by *The Christian Science Monitor*, 2001).

**1999, December 2 / Russian Federation (Chechnya) / C/R:** Environmental organizations in Georgia and Chechnya warned that indiscriminate Russian bombing and shelling of chemical plants, oil refineries and of a huge disposal site for radioactive waste in the Karakh mountains near Grozny could lead to an imminent environmental catastrophe. The disposal site, which was

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built for the Radon organization, had been in operation since 1965. It contains almost 1000 cubic meters of material, including Co-60, Pu, Be, Ra-226, Cs-137, Thulium-170, Ir-192, Am-241 and I-131. Environmental groups warned that powerful surface bombs could damage the burial shafts thus causing radioactive contamination of the environment. Scientists in Georgia, Chechnya and other regions in the Caucasus claimed that damage to the Radon site would have severe consequences for the whole region. Moreover various factories and enterprises in the Grozny region which were known to be storing many different forms of radiation were facing daily bombing. (*UNIS Press Review*, 12/2/99)

**1999, December 3 / Semipalatinsk, Kazakhstan / R:** 1 kg of LEU was intercepted through an intelligence operation. The material originated from Ulba, Kazakhstan (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**1999, December 12 / Otopeni airport customs, Romania / R:** Reported trafficking of Ir-192 (8.19 GBq) (*Comprehensive List*).

**1999, December 24 / Mehedinti county, Romanai / N:** Reported trafficking of 3 kg Natural Uranium (0.71% enriched U-235) (*Comprehensive List*).

**2000 / Electrostal company, Russian Federation:** Trafficking of 3.7 kg of 21% HEU (F. Steinhauser and L. Zaitseva. Illicit Trafficking in Nuclear and Other Radioactive Materials. Conference Paper, Courmayeur, ISPAC conference, 6-8 Dec. 2002).

**2000, January 10 / Almaty, Kazakhstan / N:** Reported trafficking of 530 g LEU (*Comprehensive List*).

**2000, January 14 / Bucharest, Romania / N:** Reported trafficking of 1000 g Depleted Uranium (*Comprehensive List*).

**2000, January 20 / Dupnitsa, highway, Bulgaria / N:** Reported trafficking of 15 kg Depleted Uranium (*Comprehensive List*).

**2000, February 5 / Romania / R:** four persons were arrested by the police for stealing radioactive substances. Two of them, Liubovi Dasan (45) and her boyfriend, Anatolie Cojocar (43), were said to be Moldovan nationals. The other two arrested, Ionel Bobeica (36) and Toader Ciuhan (45) were Romanians. They were arrested while found testing radioactive material in an underground laboratory in Bucharest, which they had apparently smuggled from a Russian military base in Tiraspol, Romania. They intended to sell the material, 1 kg of Uranium, for US\$ 150,000. (WIJN News 2/8/00)

**2000, February 23 / Ukraine / R:** 28 containers with ampoules of Sr-90 and Y-90 were confiscated. According to preliminary estimates, the material taken off the five illegal traders in radioactive material would cost some 1.5 Million US\$ on the black market. The material appeared to have been stolen from a military unit in the Donetsk region and was kept in a flat. In the 1990s, 81 radioactive objects had been stolen from enterprises in Donetsk, according to the Regional sanitary and epidemic station, of which only 56 had been found by early 2000 (Ukrainian Television Third Program cited by BBC, 25/2/2000).

**2000, March 30 / Kazakhstan / Uzbekistan / N/R:** Uzbek border controls stopped a truck, allegedly holding only scrap metal, at the border to Turkmenistan. The 10 lead boxes contained

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nearly a ton of highly radioactive material. The trucks journey started in Kazakhstan and headed for Pakistan via Iran. The material emitted about 1,200 milliroentgen per hour, enough to cause radiation sickness after 50 days of exposure (AP, Apr. 6, 2000). Former head of the Defence Technology Security Administration, Stephen Bryen, claimed that the material may have the markings of a “radiation bomb”, which could be used by Asian terrorists, and not a nuclear weapon. There have been signals that terrorists supported by Iran and Afghanistan, for which the weapon could be created in Pakistan, might threaten Uzbekistan. He stated that these nuclear smuggling operations are run by “well-disciplined intelligence services of Iran and Afghanistan and, “quite possibly”, Pakistan” (*The Hindu*, Apr. 12, 2000). However, Kazakhstan’s ambassador denied the allegations of a radioactive substance, but claimed that part of the scrap material had been contaminated by radioactivity (RFE/RL).

**2000, April / Georgia / R:** Georgian police arrested four persons in Batumi, Georgia, for unauthorized possession of 0.9 kg of HEU fuel pellets. According to one press report, the material may have been smuggled from Russian Federation. The pellets mass and shape, together with the reported enrichment level, suggest that the pellets were produced for use a commercial or experimental fast breeder reactor. Another report also stated that the smugglers were detected when they crossed the Russian border into Georgia, possibly by radiation monitoring equipment and were then trailed to the city of Batumi, where they were apprehended. It is believed that the individuals were trying to smuggle the material into Turkey.

**2000, June 29 / Almaty, Kazakhstan / R:** 4 Kg of LEU pellets (3.6%) were intercepted through an intelligence operation. The material originated from Ulba, Kazakhstan (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2000, September / Tbilisi, Georgia / R:** Three persons were arrested at Tbilisi airport for attempting to sell a small quantity of mixed powder containing about 0.0004 kg of Pu and 0.00008 kg of LEU. According to press reports, an official in the Georgian Ministry of State Security said that two individuals arrested were Georgians citizens, and the third was from Armenia. The individuals said they had brought the Uranium and Pu from the Russian Federation and Ukraine to sell it.

**2000, October 6 / Turkey / R:** 150g of LEU was intercepted through an intelligence operation. The material was from an unknown origin (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2001, January 29/Russian Federation/N:** Police in St. Petersburg reported on 29 January that thieves made off with 270 kg of Pu worth almost \$5 million from a research institute there, AP reported. (WJIN News, Radio Free Europe/Radio Liberty (<http://www.wjin.net/html/news/7169.htm>)).

**2001, February 16 / Russian Federation /N/R:** Kamchatka Region detectives arrested a group, headed by an army officer, that allegedly stole radioactive devices from Mi-8 helicopters in a military unit deployed on Kamchatka. Authorities believe they intended to sell the equipment to China. An expert from the radiological control service determined that the radiation level reached 25 micro-roentgen per hour one metre away from the device. The suspects could face up to 10 years in prison. (*NTV*, Moscow (*BBC*), 16/02/01)

**2001, July 20 / Batumi (Adzhariya), Georgia / R:** 1.8 kg of LEU (3.6%) was intercepted via an informant's tip. The origin of the material was unknown (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2001, October 15 / Tbilisi, Georgia / R:** 23 containers of Pu were confiscated through an intelligence operation, its origin was unknown (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2001, November 6 / Istanbul, Turkey / R:** 1.15kg of LEU were intercepted in an intelligence operation, the material probably originated in the Russian Federation (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2001, December 19 / Samtskhe-Javakheti region, Georgia / R:** 300 g of LEU were intercepted in an intelligence operation, the origin of the material was most likely Armenia (*The Nonproliferation Review*, Monterey, CA.; Fall-Winter 2002).

**2002, January / Belarus:** In January 2002, in Minsk, Belarus, the Belarus State Committee arrested six international gang members for allegedly trying to sell Uranium metal rods ("Belarus police halt attempt to sell weapons-grade Uranium" DPA, 18 January 2002; and "Belarus security services arrest 6, seize Uranium," AFP, 17 January 2002).

**2002, January 15 / Liya area, Georgia / R:** Three woodcutters were hospitalized with radiation sickness after discovering two Sr-90 sources 27 km outside the village of Liya in Tsalenjikha District, Georgia in early December 2001, according to NTV. The radiation was emitted by two cylinders, six inches long and four inches in diameter, that contained Strontium-90. They had been used in radiothermal generators installed in the area during the Soviet era and then abandoned. According to NTV and Interfax, the three men had broken through the lead, tungsten, concrete, and ferrous layers that shielded the Sr-90, while the *New York Times* reported that the men found the cylinders laying in the snow. According to the *Los Angeles Times*, the men took the cylinders to their campsite to use as heat sources and became sick within hours from the radiation exposure. (<http://www.nti.org/analysis/articles/radiothermal-generators-containing-strontium-90-discovered-liya-georgia/>).

**2002, January 17 / Belarus / R:** Agents of the Belarusian State Security Committee (KGB) arrested several members of an "international criminal group trying to arrange the illegal sale in Belarus of radioactive materials, *Interfax* reported on 17 January 2002. The report said that six suspects had been arrested in connection with the case, but did not provide any names or details about their citizenship, nor did it specify the date of the arrests. The KGB made the arrests as the result of a "sting" operation. The agency had been informed that some "enterprising citizens" were trying to sell Uranium. (<http://www.nti.org/analysis/articles/belarusian-police-arrest-uranium/>).

**2002, January 27 / Avcilar, Turkey / R:** Three grams of "Red Mercury" were seized from a house in Avcilar, Turkey, the Istanbul newspaper *Aksam* reported on 27 January 2002. Two suspects, Makhi Yeddincho and Irina Grische, both from Russia, were arrested by Turkish police. According to *Aksam*, the Russian mafia stole the substance from a nuclear plant in Russia. *Aksam* claimed that Red Mercury was "used in the construction of nuclear weapons," was a strategic metal, that trade "requires a special permit throughout the world," and that the three

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grams seized in Avcilar have a market value of \$300,000 (<http://www.aksam.com.tr> last visited 22/05/2003).

**2002, February 14 / Verkhnedneprovsk (Smolensk Oblast), Russian Federation / R:** Two radiation sources containing Krypton-85 gas were stolen from the Polimerplenka enterprise in Verkhnedneprovsk village, Smolensk Oblast, a spokesman for the Russian Ministry of Emergency Situations reported on 14 February 2002. Each ampoule emits 230mCi, "which is enough for a person to get a lethal dose quickly," according to the spokesman. The Smolensk Oblast prosecutor's office, assisted by specialists from the Ministry of Emergency Situations, has initiated a criminal investigation of the theft (<http://www.nti.org/analysis/articles/two-krypton-85-sources-stolen-smolensk-oblast/>).

**2002, March 6 / Belarus / R:** The Belarusian Prosecutor's Office arrested members of a gang based in the town of Kalinkavichy, Gomel Oblast. They had planned to plant radioactive materials in Internal Affairs Ministry offices in Kalinkavichy and Mazyr, Gomel Oblast, Belapan reported on 6 March 2002. Belarusian police seized four containers with radioactive material from gang members, as well as firearms, a grenade, and explosives. The report does not identify the radioactive material involved in the case. Investigation by the Prosecutor's Office has identified 20 gang members, and 17 have been arrested and charged. (<http://www.nti.org/analysis/articles/belarusian-police-seize-weapons-radioactive-materials-crime-ring/>).

**2002, March 26 / Chkalovsk, Tajikistan / N:** Authorities in Tajikistan arrested four men in the city of Chkalovsk and confiscated 2kg of stolen "non-concentrated uranium" [probably natural uranium], the Tajikistani newswire *AP-Blitz* reported on 27 March 2002. Laboratory tests determined that the Uranium was taken from the Vostochnyy Rare Metal Industrial Association (Vostokredmet) in the nearby town of Taboshar. [Vostokredmet is a Uranium processing plant.] AP-Blitz reports that the suspects, Tolib Qurbonov, Rustam Ahmadshoyev, Yusuf Nurmatov, and Musulmon Azizov, were reported to be members of an organized crime ring and were accused to have stolen radioactive materials from Vostokredmet since 1998. Law authorities have opened criminal proceedings against the suspects (BBC, <http://news.bbc.co.uk> last visited 22/05/2003).

**2002, May 16 / Bulgaria / R:** On 16 May 2002 the Bulgarian newspaper *24 Chasa* reported that a stolen radioactive instrument and 100 "plutonium sensors" were seized by police during the arrest of two suspects headed for Veliko Turnovo, Bulgaria in a taxi. The two suspects, 42-year-old Emil Spirov and Daniela Tsaneva, were arrested for possessing an American-made instrument containing Beryllium that is used to measure soil radioactivity. The instrument had been stolen from an unspecified nuclear power plant during its construction. The National Service for Combating Organized Crime (NSCOC), which conducted the operation to arrest Spirov and Tsaneva, had been looking for the stolen instrument for two years and had been monitoring the two suspects for "a long time." (<http://www.nti.org/analysis/articles/plutonium-sensors-are-caught-near-turnovo-cesium-found-kurilo/>).

**2002, May 22 / Moscow, Russian Federation / N:** On 22 May 2002 *Izvestiya* reported that Moscow police had arrested a homeless Belarusian named Nikolai Shitik who was in possession of 500 grams of what it describes as "weapons-grade uranium." An unspecified Moscow FSB official said Shitik most likely came to Moscow intending to sell the Uranium. According to

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*Izvestiya*, Interfax reported that the seized material was Uranium-238 (<http://www.nti.org/analysis/articles/native-belorussia-trying-sell-half-kilo-uranium/>).

**2002, June 18 / Izhevsk, Russian Federation:** Russian police and the Federal Security Service seized 2 kg of Uranium Izhevsk, Russian Federation from a car belonging to a private firm. (“Special services seize two kg of Uranium from a private firm car,” TASS 18 June 2002; and “Two kg of Uranium discovered in a car in central Russian Federation,” AFP 18 June 2002).

**2002, July 19 / Rostov Oblast, Russian Federation / R:** A 19 July 2002 article in *The Guardian*, citing an anonymous US official, reported that Chechen rebels stole radioactive and nuclear materials from the Volgodonsk Nuclear Power Plant (NPP) in Rostov Oblast, Russia. The official claimed that the theft occurred within the last 12 months and the list of stolen materials allegedly included Caesium, Strontium, low-enriched Uranium, and possibly Plutonium. The same US official said that the theft was reported by Russian officials to the International Atomic Energy Agency (IAEA), which in turn informed the US Department of Energy about the incident. IAEA, Russian Ministry of Atomic Energy, and Volgodonsk NPP officials denied the theft (*The Guardian*, <http://web.lexis-nexis.com/universe>).

**2002, September 22 / Pavlograd, Ukraine / R:** On 20 September 2002 ITAR-TASS reported that Ukrainian police had arrested a 26-year-old Russian man in Pavlograd who was attempting to sell a container of the radioactive isotope Sr-90. The man had brought the Strontium from Zlatoust, in Russia's Chelyabinsk Oblast and was arrested while trying to sell it to two local residents. The material was seized and an investigation to establish the identity of the buyers was opened (<http://www.nti.org/analysis/articles/russian-arrested-ukraine-attempt-sell/>).

**2002, October 10/ Belarus / N:** Sovetskaya Belorussia reported that five men were on trial for attempting to sell 1.5 kg of 2% enriched Uranium-235 to undercover officers in a sting operation. This material was in the form of Uranium dioxide fuel pellets and was alleged to have come from Chernobyl. However, there are some doubts about the veracity of the story published by the state newspaper. [http://bellona.org/english\\_import\\_area/international/russia/nuke-weapons/nonproliferation/26272](http://bellona.org/english_import_area/international/russia/nuke-weapons/nonproliferation/26272)

**2002, October 15 / Dagestani-Azeri border, Russian Federation / R:** Russian customs officers detained a resident of Chechnya who tried to transport a radiation source across the Russian-Azerbaijani border, Interfax reported on 15 October 2002. The suspect, Ilyas Dovletmurzayev, was detained at the Yarag-Kazmalyar border crossing between the Russian republic of Dagestan and Azerbaijan. An investigation into the incident, charging the suspect with violating Article 188 (contraband) of the Russian Criminal Code, was subsequently opened (<http://www.nti.org/analysis/articles/chechnya-resident-tries-take-radiation-source-out-russia/>).

**2002, December 6 / Bulgaria:** Bulgarian media reported during the first week of December 2002 on the theft of two radioactive sources from the Kremikovtsi Metallurgical Works. The sources contain Cs-137 and were reportedly mounted on level gauges, which are used to control the level of filling zapulvane. The thieves stole the devices, which emit 3 curies, without their protective covers. Khristo Botev Radio reported on 6 December 2002 that a measuring device containing Cs-137 and Am-241 had been stolen from Bobov Dol Thermoelectric Power Plant. Each of the sources was mounted in its own container and weighed 45 kilograms (<http://www.nti.org/analysis/articles/uranium-traders-punished-probation/>).

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**2003, February 14 / Belarus / R:** “Authorities have detained an unknown number of people in Belarus who attempted to sell two containers of Caesium-137 to an undercover agent, officials said yesterday.” (<http://www.nti.org/analysis/articles/cesium-peddlers-arrested-belarus/>)

**2003, February 28 / Russian Federation / R:** Russian authorities announced today that they had prevented the sale of a quantity of radioactive Osmium-137 to organized crime elements. Russian Federal Security Service officials in the city of Omsk, located in the Siberian region, have detained one person with a quantity of Osmium-137 and another with 158,000 counterfeit Iraqi Dinars, said security service spokeswoman Natalya Grutsina. The two people had attempted to sell the Osmium-137, contained in a vial disguised as a pen, for \$30,000 to organized crime members from Moscow, according to ITAR-Tass (<http://www.nti.org/analysis/articles/osmium-187-seized-omsk-russia/>)

**2003, April 4 / Akhtubinsk (Astrakhan Oblast), Russian Federation / R:** Two small cylindrical containers bearing radioactive warning labels and the inscription "harmful to life" were found in a shed in Akhtubinsk, Astrakhan Oblast, in southern Russia, *Regions.ru* reported on 4 April 2003. It is thought that there has been an underground market for radioactive materials at the military base in Akhtubinsk since Soviet times. According to *Regions.ru*, a container similar to those found last week was found in another district of the city last year. A criminal case has been opened in connection with the incident (<http://www.nti.org/analysis/articles/cesium-137-seized-akhtubinsk-russia/>).

**2003, July / Kazakhstan/ N:** Three men – two residents of Pavlodar and a Russian citizen – tried to sell Plutonium in the Pavlodar rail station. (<http://www.nti.org/analysis/articles/kazakhstani-police-seize-plutonium-239-source/>)

**2003, August 28 / Russia / N:** The deputy director of Atomflot, a company that performs repair work on nuclear icebreakers and submarines, was arrested in a sting when he tried to sell Uranium-235 to FSB agents posing as potential buyers. The material was found in his suitcase. Uranium-238 was found during a search of his garage. There are varying reports about how much material was found. <http://saint-petersburg.ru/m/57854>, [http://bellona.org/english\\_import\\_area/international/russia/icebreakers/31049](http://bellona.org/english_import_area/international/russia/icebreakers/31049),

<http://www.lenta.ru/articles/2003/10/02/uran/>,

[http://articles.sfgate.com/2003-11-23/news/17519696\\_1\\_research-reactors-radioactive-material-nuclear-facilities](http://articles.sfgate.com/2003-11-23/news/17519696_1_research-reactors-radioactive-material-nuclear-facilities)

**2003, October / Russian Federation / R:** two men were convicted for attempting to sell what they claimed was weapons-grade Plutonium stolen from a closed Russian nuclear site - a secure facility in the closed city of Sarov. Although no Plutonium had actually been stolen on this occasion, the two men posed as military officials tried to convince a third man that they had the material in their possession. The would-be client apparently planned to sell the Plutonium to a third party. (Gnosis, 13.10.2004)

**2003, December 7 / Moldova / R:** 38 Alazan (a small, thin, radioactive rocket) warheads were reported as having disappeared from a repository in Tiraspol, Moldova. (*The Washington Post*, <http://www.washingtonpost.com/wp-dyn/articles/A41921-2003Dec6.html>).

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2004, February 12/ Armenia, Iran/ R: It was reported, that on December 29, 2003, at the Megri border checkpoint on the Armenian-Iranian border, Armenian customs officials discovered a radiation source in a scrap metal shipment bound for Iran. Neither Iran nor the Armenian NPP were connected to the radioactive object, which was an empty casing from a radioactive sources, which previously contained Strontium-90, the implication being that the radiation source itself had been moved to an unknown location. (<http://www.nti.org/analysis/articles/armenian-customs-stops-radiation-source-bound-iran/>)

**2004, March / Kazakhstan / N:** Three men were convicted in Kazakhstan after attempting to sell Plutonium at Pavlodar railway station the previous July. (*Gnosis*, 13.10.2004)

**2004, March 13/ Georgian Republic/ R:** Armenian citizen with radioactive material – the report did not identify the radioactive material - was detained at the Sadakhlo border post on the Georgian-Armenian border. (<http://www.nti.org/analysis/articles/radioactive-material-seized-georgian-armenian-border/>)

**2004, March 13/ Tajikistan/ N:** Tajikistani Drug Control Agency authorities arrested an Uzbekistani citizen in Dushanbe, Tajikistan and seized a capsule containing 3g of Plutonium on 13 March 2004. ‘According to Tajik Television First Channel, the Plutonium capsule was of Russian origin, and was intact and did not pose a health risk. According to Drug Control Agency spokesman Avaz Yuldoshev, the suspect intended to sell the plutonium to individuals in Afghanistan or Pakistan for \$21,000. The Associated Press reported that the suspect was looking for Pakistani or Indian buyers.’ (<http://www.nti.org/analysis/articles/radiation-source-containing-plutonium-seized-dushanbe-tajikistan/>)

**2004, early April/ Ukraine/ R+N:** The Ukrainian Security Service seized two containers filled with Caesium-137 in Crime, and arrested members of an organized crime group involved in the trafficking of radioactive and rare-earth metals. (<http://nti.org/analysis/articles/cesium-peddlers-arrested-crimea-ukraine>)

**2004, May 18 / Ukraine / R:** “The Ukrainian secret service said Monday that it had arrested several members of a criminal gang that was trying too sell radioactive material in the Middle East. Secret service officials said in a statement that several Ukrainians and citizens of Middle Eastern countries had been detained for trying to trade in red Mercury which is allegedly used in nuclear weapons. The suspects had obtained the Mercury in Ukraine and had tried to take it out of the country in special containers, officials said.” (*International Herald Tribune* <http://iht.com/articles/520286.htm><sup>1</sup>).

**2004, July 23/ Russia/ R:** *Regions.Ru* reported on 23 July 2004 that the Belgorod customs post has conducted customs radiation control on nearly 5 million cargoes and transport vehicles since January 2004. During that same period, there were 145 incidents involving cargoes with elevated radiation levels. An investigation has been opened with reference to a radioactive item not declared by an individual who was crossing the border. In two cases radioactive cargoes entering Russia from Ukraine were detained and then sent back. The article did not specify how many of the 145 incidents involved attempted imports and how many involved exports.’ (<http://nti.org/analysis/articles/belgorod-russia-customs-post-detects-145-radioactive-cargoes-during-2004>)

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**2004, August 10 / Russia / R:** A train car transporting scrap material for processing to the Krasnyo Oktyabr plant in Volgograd, Russia, was stopped since it was identified as emitting radiation ten times higher than normal background levels. (<http://www.nti.org/db/nistraff/2004/20040400.htm>, 13.04.2005)

**2004 / August 16 / Ukraine / R:** Ukrainian police uncovered three containers with radioactive material (Strontium and Plutonium, emitted levels of radiation hundreds of times higher than normal background levels) and a cache of small arms in Kodyma, Odessa Oblast, Ukraine. One of the suspects claimed that he had bought the radioactive materials from an unknown person, in order to resell them with profit. (<http://www.nti.org/analysis/articles/radioactive-material-reportedly-seized-near-odessa-ukraine/>)

**2004, September 2/ Ukraine/ N:** Two men were arrested by Ukrainian police for the attempt to bring a container of Americium-241 into Kyiv. (<http://nti.org/analysis/articles/americium-241-seized-kyiv-ukraine>)

**2004, September 3 - 24 / Russia / R:** Roman Tsepov, the general-director of Russian private security company, Baltik-Escort, died on 24 September, having fallen ill after a business trip to Moscow 3 weeks earlier. He showed symptoms of severe radiation poisoning and tests found that he was contaminated with an unknown radioactive material with radioactivity one million times over background levels of radiation. (<http://www.johnstonsarchive.net/nuclear/radevents/2004RUS1.html>)

**2004, September/ Kyrgyzstan / N:** Two men were arrested near Bishkek while trying to sell 60 smoke detectors containing Plutonium-239. A spokesperson of the IAEA added that these smoke detectors have been produced 2 or 3 decades ago in the Soviet Union and these detectors themselves did not pose a nuclear proliferation threat, since such smoke detectors contain only a few micrograms of plutonium as an ionisation source. (<http://nti.org/analysis/articles/smoke-detectors-plutonium-seized-near-bishkek-kyrgyzstan>)

**2004, October / Russia / R:** Russian customs officers prevented an unspecified radioactive material from being brought into Russia at Sochi. The incident appeared in the press in January 2005. (<http://www.nti.org/analysis/articles/radioactive-material-denied-entry-russia-customs-post-sochi/>)

**2004, October 19/ Russia/ R:** A truck carrying radioactive materials – scrap metal removed from a military unit located in the closed city of Vilyuchinsk – was seized at the port of Petropavlovsk-Kamchatskiy. (<http://nti.org/analysis/articles/radioactive-cargo-seized-petropavlovsk-kamchatskiy-russia>)

**2004, October 28 / Russia / R:** Radioactive scrap metal was discovered in a train car near Chelyabinsk, Russia. (<http://www.nti.org/analysis/articles/radioactive-scrap-found-chelyabinsk-oblast-russia/>)

**2004, November 8 / Georgian Republic / R:** Two containers emitting radiation were uncovered by Georgian security agents in Tbilisi suburb, Georgia. The recovered containers are gamma-ray flaw detectors containing Cobalt-60. Ministry experts stressed that these containers were ‘hermitically packed and in this condition they could not pose a threat to public health’. (<http://www.nti.org/analysis/articles/radioactive-material-discovered-near-tbilisi-georgia/>)

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**2004, November 09 / Russia / R:** A former nuclear physicist voluntarily surrendered several containers containing Plutonium-238 and Cadmium to the police in the eastern Siberian town of Zmeinogorsk.” (*The St. Petersburg Times*, Issue 1019, 09.11.2004)

**2004, December 29 / Russia, Kazakhstan / N/R:** Russian customs officers detained a vehicle - bringing a group of workers to Kazakhstan – containing a container with 37kg of uranium –23, 12 kg of tungsten, and 200g of rare metals. The uranium was apparently depleted uranium used as shielding. (NTI NISTRAFF, 13.04.2005)

**2005, January 18 / Russia, Georgian Republic / R:** Russian border guards seized a minibus with radioactive cargo at the Nizhniy Zaramag border crossing on the Russian-Georgian border. The radiation level of the cargo was five times higher than the normal radiation background level. 42 sacks of Potassium Hydroxide in powder form, 35 kg each (1470 kg in total); and 11 barrels of aluminum powder, 50 kg each (550 kg in total) were found. The article did not cite the exact source of the radioactivity in the cargo. (<http://nti.org/analysis/articles/radioactive-material-seized-russian-georgian-border>)

**2005, January 22 / Ukraine / R:** ‘Ukrainian police seized six metal containers filled with Cesium-137 in the village of Ishun, Krasnoperekopskyi district, Crimea, Ukraine, the Podrobnosti (Ukraine) news agency reported on 24 January 2005, citing UNIAN. According to *Krymskaya pravda* (Simferopol), each container could hold up to 30g of Caesium-137. The radiation level of the containers exceeded the normal background by 380 times; this prompted authorities to evacuate the residents of the house and their neighbors.’ (<http://nti.org/analysis/articles/cesium-137-seized-crimea-ukraine>)

**2005, February / Kyrgyzstan / R:** Three residents of Tokmok were arrested for trying to sell 4kg of radioactive Mercury for over 1 million soms, as part of a sting operation by the National Security Service. (<http://nti.org/analysis/articles/radioactive-mercury-reported-seized-kyrgyzstan>)

**2005, February 8 / Kazakhstan / R:** Two persons tried to steal approximately 4 tons of radioactive scrap metal at the Aktau Chemical and Hydrometallurgical Combine, Kazakhstan. (<http://nti.org/analysis/articles/attempted-theft-radioactive-scrap-thwarted-aktau-kazakhstan>)

**2005, March 1 / Ukraine / N:** The Security Service reportedly seized 582 g of Uranium-238 at Boryspil International Airport near Kiev from the boot of a car and arrested the owner of the car. (<http://nti.org/analysis/articles/uranium-seized-kyiv-airport>)

2005, April 20 / Kazakhstan/Russia / R: A truck from Kazakhstan containing over 3 metric tons of radioactive metal was detained at the Karasook customs checkpoint at Novosibirsk Oblast, Russia, and returned to Kazakhstan. (<http://nti.org/analysis/articles/radioactive-scrap-metal-seized-novosibirsk-oblast-russia>)

**2005, May 5 / Moldova / R:** The Times (UK) reported that an arms dealer in Bender, Transnistria, offered to sell three Alazan rockets equipped with radioactive warheads. The existence of these rockets has not been confirmed. (<http://nti.org/analysis/articles/dirty-bomb-rocket-again-reported-sale-transnistria>)

**2005, June 23 / Ukraine / R:** A container containing Yttrium and Strontium-90 was discovered in a warehouse in Kherшон, Oblast. “The district Sanitary and Epidemiological Station (SES)

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examined the warehouse and reported that background radiation near the device (0.1 to 0.5 meters) ranged from 313 to 50 microroentgens per hour.” (<http://www.nti.org/analysis/articles/strontium-90-seized-kherson-oblast-ukraine/>)

**2005, June 23 / Russia / R:** Strontium emitting 300 microroentgen per hour was detected in scrap metal rods at the port in Vladivostok. <http://www.utro.ru/news/2005/06/23/451518.shtml>

**2005, August 11 / Russia / R:** A radioactive dosimeter containing a source of Strontium was discovered outside the Rezets factory in Tri Ruchya in Murmansk.

**2005, August 16 / Turkey / N:** Turkish police arrested two men in Istanbul trying to sell 173g of 17% Uranium 235 for \$7m, although the market value was \$1,500. This was part of a sting operation between the police and the secret service. (<http://www.nti.org/analysis/articles/turkey-seizes-leu/>)

**2005, August 18 / Turkey / N:** Two men of undisclosed nationalities were arrested in a sting operation organised by the Turkish police while attempting to sell 173g of a mixture that was 17% U-235 and 83% U-238 for USD 7 million. An undisclosed source at Rosatom confirmed that the material was likely to have come from Russia. [http://bellona.org/english\\_import\\_area/international/russia/nuke-weapons/nonproliferation/39468](http://bellona.org/english_import_area/international/russia/nuke-weapons/nonproliferation/39468)

**2005, September 19 / Bulgaria / R:** The BBC reported that a man was arrested for attempting to carry 3.4 kg of Hafnium across the Bulgarian border into Romania. It was transported as a metal and was therefore not radioactive. <http://news.bbc.co.uk/1/hi/world/europe/4260996.stm>

**2005, September 28 / Ukraine / R:** Ukrainian police recovered radioactive material missing since 1995. A plastic bag with 13 pipes and a 10-centimeter bar resembling fragments of nuclear fuel rods was discovered in the compound of the closed Chernobyl nuclear power plant (NPP). [2] The UNIAN news agency reported that the bag, emitting background radiation of 50 microroentgen per hour, was found during a routine radiation check in the territory surrounding the sarcophagus which encases unit four of the plant. The bag was hidden under a railroad car parked near the sarcophagus. (<http://www.nti.org/analysis/articles/radioactive-material-found-chornobyl-npp-ukraine/>; <http://english.pravda.ru/news/world/28-09-2005/66940-0/>)

**2005, October 14 / Ukraine / R:** An employee of the Crimean Heating and Wiring Enterprise found 31 containers marked radiation hazard, emitting 2000 micro roentgen per hour at the unfinished Crimean Nuclear Power Plant. (NTI NISTRAFF 13.04.2005)

**2005, October 18 / Ukraine / R:** A vial of Caesium-137 was found in a garage in Borisov. It emitted 2.5 - 3 times the level of background radiation, around 20 micro-roentgen per hour. (<http://kp.by/daily/23597/140011/>)

**2005, November 8 / Russia / R:** 113 capsules containing Plutonium-239 and Caesium-137 were discovered in the former biochemical plant in Blagoveshchensk in a building repair and machine shop. Radiation was at 1000 micro-roentgen per hour inside the building, and 600 outside. To receive an annual dose of radiation, it would have been enough to stand next to the dangerous sources for 5-7 minutes. The prosecutors did not rule out the possibility that people may have been exposed. (<http://www.mkset.ru/news/chronograph/2130/>)

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**2005, November 10 / Russia / R:** A source of radiation was discovered at Magadan port. The material was a non-ferrous metal from the village of Berry Magadan that had been brought into Magadan city for delivery to a scrap metal collection point. It was detected by a Yantar radiation detection system. A grey cylinder with a radiation symbol was found in the scrap. It emitted ten thousand times background radiation. ([http://www.korabel.ru/news/comments/v\\_morskomporgovom\\_portu\\_magadana\\_obnaruzhili\\_istochnik\\_radiatsii.html](http://www.korabel.ru/news/comments/v_morskomporgovom_portu_magadana_obnaruzhili_istochnik_radiatsii.html))

**2005, November 25 / Russia / R:** Caesium-137 was found in the former warehouse of the enterprise "Hlebprodservis". The source was a RMGZ-01 from 1976. It emitted milliroentgen 6 per hour. "The device was used to test for radioactivity of food products. After closing the warehouse, Hlebprodservisa's management was supposed to arrange its transfer to the appropriate authorities. The fact that Caesium-137 was abandoned in a warehouse constitutes "inexcusable negligence", commented the MOE laboratory. (<http://stolica.onego.ru/news/42064.html>)

**2005, December 23 / Russia / N/R:** The Russian Federal Security Service (FSB) detained three suspects and seized 12 kg of radioactive materials in Yaroslavl as part of an undercover sting operation. The suspects claimed the materials were "real uranium" but tests revealed the material was unnamed radioactive material (possibly Caesium). (<http://www.fsb.ru/fsb/comment/ufsb/single.htm%21id%3D10316366%40fsbComment.html>)

**2006, January 31 / Russia / R:** A 1967 nautical sextant containing Radium-226, in a car, set off a Yantar radiation detection system ITAR-TASS in Vladivostok, emitting radiation over 30 times background radiation level, and was subsequently removed for disposal. (<http://www.regnum.ru/news/581711.html>)

**2006, February 1 / Russia/Ukraine / R:** A Ukrainian citizen was detained attempting to smuggle two RIO-3 radioisotope icing sensors for use in aviation without a license across the Russian-Ukrainian border at Belgorod. (<http://www.nti.org/analysis/articles/radioactive-cargo-stopped-border/>)

**2006, February 3 / Russia / R:** RIA Novosti-Yug reported that according to Usam Bakayev, chief epidemiologist at the Chechen Ministry of Health, 12 radioactive sources have been reported missing since 1995, while there were 29 sources between 2001 and 2005. There are no records of radioactive sources before 1995 because they have been destroyed. The Grozny Chemical Combine, where a radioactive accident occurred in 1999 at the 212 Unit, still poses a threat to health and safety, as on the territory on the unit, radiation levels at 90,000 times that of background levels. (<http://www.nti.org/analysis/articles/unidentified-number-radioactive-sources-still-missing-chechnya/>)

**2006, February 5 / Georgia / N:** Georgian media reported the alleged seizure of 80g of enriched Uranium by Georgian security agents on the South Ossetian border. This was disputed by the Russian Deputy Prime Minister and Defence Minister, Sergei Ivanov. (NTI NISTRAFF 29.04.2010)

**2006, February 10 / Belarus / R:** A cargo containing 3 tons of Charoit, a slightly radioactive semi-precious stone from Sakha Republic in Russia, was detained at customs at Brest. Background radiation near some of the stones was nearly 4 times higher than normal, but

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dropped to a normal level three to five metres away from the cargo. (<http://www.nti.org/analysis/articles/radioactive-cargo-semi-precious-stone-charoit-seized-belarus/>)

**2006, February 20 / Russia / R:** A truck carrying the debris of a minivan emitting 50 times the level of background radiation was detected by a Yantar radiation detection system and detained at the port of Vladivostok. The owner refused to cooperate and Primtekhnopolis, the company responsible for the removal of radioactive materials, was unable to extract the debris from the van. (<http://nti.org/analysis/articles/radioactive-truck-detained-entry-port-vladivostok>)

**2006, March 25 / Russia / R:** A fast neutron source, 2x3cm in size, and emitting 1500 neutrons per second and 14000 microroentgen per second, was discovered in scrap metal at the port of Vladivostok. (<http://nti.org/analysis/articles/neutron-radiation-source-detected-port-vladivostok>)

**2006, March / Russia / R:** Four dismantled Radioisotope Thermoelectric Generators were discovered in Norilsk, Krasnoyarsk with the Strontium-90 sources left intact. (NTI NISTRAFF 29.04.2011)

**2006, April 13 / Russia / R:** Russian police detained two men who tried to sell 5kg of 4% LEU pellets stolen from the Machine Building Plant in Elektrostaal in a sting. One of the men led them to a further 17kg LEU he was storing in his garage. (<http://nti.org/analysis/articles/ukrainians-tried-smuggle-military-equipment-poland>)

**2006, April 20 / Ukraine / R:** A man was detained at Smilnytsa on the Polish-Ukrainian border by Ukrainian police after his minivan containing 11 TZK-11 zenith tubes, 700 artillery compasses, 51 periscopes, 43 azimuth compasses, and 14 binocular telescopes set off radiation detection alarms without the required cross-border transport permit. (<http://nti.org/analysis/articles/ukrainians-tried-smuggle-military-equipment-poland>)

**2006, May 11 / Uzbekistan / R:** Two incidents were reported by the Uzbek authorities. A cargo of 15.386 kg of zinc powder destined for Iran set off radiation alarms at the Bukhara Oblast checkpoint because it contained traces of Caesium 127 emitting 240-300 microroentgen per hour at a distance of 1.5m. It was detained because the transporters did not have the appropriate permit and were using falsified documentation. In the other incident, a train cargo of Molybdenum was seized en route to Tajikistan because it contained Radium-226, Uranium-234, Uranium-238 and Thorium-234. (<http://www.nti.org/analysis/articles/uzbek-customs-uncovers-contraband/>)

**2006, July 27 / Georgia / R:** Two orphaned Caesium-127 sources were found by a joint Georgian Ministry of Environment and IAEA team in the first three days of a joint initiative to locate orphan sources. One was found in an abandoned arsenic processing plant in Iri and another was found in a house in Likhaura. (<http://www.nti.org/analysis/articles/radioactive-recovered-georgia/>)

**2006, October 23 / Russia / R:** Vremya Novostey reported that a car loaded with metal pipes contaminated with radiation was discovered in Rostov-on-Don. The radiation was seven times the background level and it is suspected that, as the cargo was of Ukrainian origin, the pipes came from the Chernobyl quarantine zone. (<http://www.nti.org/analysis/articles/metal-contaminated-radiation-again/>)

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**2006, November 1 - 23 / UK / R:** Former KGB agent, Alexander Litvinenko fell ill on 1 November and died on 23 November in London from poisoning by an estimated 5 microcuries of Polonium-210. Two of his associates, Andrei Lugovoi and Dmitry Kovtun were also taken ill, 120 individuals showed probable contamination, 17 showed contamination not significant enough to cause a risk to health, and 12 locations in London tested positive for trace levels of Polonium-210. On 28 May 2007, the UK authorities formally requested that Russia extradite Lugovoi under charges for Litvinenko's murder. This was refused, sparking a period of diplomatic tension between the UK and Russia.

**2006, November 13 / Kazakhstan / R:** Kazakh customs inspectors seized 500g Caesium-137 from a Chinese citizen at Maykapchagay. The material emitted 22.67 microsieverts per hour. (NISTRAFF 05.05.2011; [http://www.yorkintel.com/NFCInitiate\\_Trafficking\\_News.aspx](http://www.yorkintel.com/NFCInitiate_Trafficking_News.aspx))

**2007, January 15 / Georgia / N:** Media reports appear alleging that Russian national Oleg Khintsagov was arrested in February 2006, alongside three Georgian citizens, for trying to sell 100g of almost 90% enriched HEU, in a sting operation by the Georgian Secret Service in Tbilisi. Reportedly, he was secretly tried and jailed for eight years. (<http://nti.org/analysis/articles/heu-seized-georgia>)

**2007, February 27 / Russia / R:** A radioactive isotope icing sensor used in aviation was discovered by a railroad worker 50 meters away from the Krasnodar-Yeysk highway. It was covered in oiled paper and measured 30cm by 30cm. (<http://www.nti.org/analysis/articles/radioactive-object-krasnodar-territory/>)

**2007, April 13 / Russia / R:** It was reported that a resident of Taganrog was arrested in Podolsk in Moscow for attempting to sell 6.5g of Osmium Tetraoxide for \$52,000. ([http://www.yorkintel.com/NFCInitiate\\_Trafficking\\_News.aspx](http://www.yorkintel.com/NFCInitiate_Trafficking_News.aspx))

**2007, April 22 / Belarus/Lithuania / N:** Two Belarusian nationals were detained at the border between Belarus and Lithuania as part of a joint operation between the Belarus Main Directorate for the Fight Against Organised Crime and Corruption under the Ministry of Internal Affairs and the Lithuanian Bureau of Criminal Police. An empty container labelled Russian Uranium-238 1991 was recovered from their car. (<http://nti.org/analysis/articles/two-belarus-residents-detained-lithuania-suspicion-smuggling-radioactive-cargo>, <http://afn.by/news/i/85625>, <http://afn.by/news/i/92844>)

**2007, May 7 / Russia / R:** A radioactive item in a sealed pipe and a radioactive item in a metal container were discovered at the site of the Stroyindustriya joint stock company in Togliatti, Samara Oblast, by officials from the local Center for Hygiene and Epidemiology. The radioactive item in the pipe was 1.5 cm in diameter and 15 cm in length and emitted 9 – 10 microsieverts per hour, while the other item emitted 1.55 microsievert per hour. (<http://nti.org/analysis/articles/highly-radioactive-discovered-togliatti>)

**2007, May 8 / Tajikistan / R:** Eight men face prosecution for attempting to sell two containers of Plutonium-Beryllium and one container of Caesium-137 to two Kazakh buyers and one buyer from an unidentified Arab country for USD 400,000. (<http://nti.org/analysis/articles/criminal-prosecution-attempted-sale-plutonium>)

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**2007, May 16 / Russia / R:** A radioactive parcel was detected at Moscow's Sheremetyevo-I airport. It emitted 20 times background radiation levels and was detected by a Yantar radiation detection system in a mail screening operation. (<http://nti.org/analysis/articles/radioactive-parcel-found-sheremetyev>)

**2007, June 5 / Russia / R:** A cylinder 4.5cm in diameter and 5cm in height marked with a radioactivity sign and a serial number was discovered in a forest in Stavropol Kray in southwestern Russia. It emitted 8.4 microsieverts per hour at the surface, although it emitted only background radiation from 1m away. (<http://nti.org/analysis/articles/radioactive-container-stavropol-kray>)

**2007, June 5 / Kazakhstan / R:** 10 glass ampoules marked Caesium-137 were discovered in an abandoned water well in a forest near Ivanovka, although they emitted background radiation normal for the region. (<http://nti.org/analysis/articles/ampoules-labeled-caesium-133-uncovered-water-well-kazakhstan>)

**2007, June 15 / Georgia/Azerbaijan / R:** A Plutonium-Beryllium source hidden inside a truck carrying stainless steel scrap metal set off a radiation alarm, entering Georgia from Azerbaijan at the Red Bridge port of entry. The truck was sent back, according to Georgia because it did not want to incur the cost of storage of a radioactive source, and according to Azerbaijan because there was no source and the truck was merely emitting higher than average levels of radiation. (<http://nti.org/analysis/articles/georgian-authorities-thwart-attempt>)

**2007, June 18 / Kazakhstan / R:** Kazakh media reports that two individuals were arrested for attempting to sell a container of Caesium by an operational investigation group from the Kazakh Interior Ministry. (<http://nti.org/analysis/articles/radioactive-material-seized-kazakhstan>)

**2007, June 29 / Kazakhstan / R:** In Petropavlosk, a radioactive source was found at the bottom of a metal pole 50cm in diameter, fixed into the ground 2m from a street. The source was 15cm in length and 10cm in diameter, was marked with a radioactivity symbol and emitted 25 times background radiation. (<http://nti.org/analysis/articles/potentially-radioactive-orphan-sources-found-construction-site-arkhangelsk-russia>)

**2007, July 29 / Russia / R:** A sealed container holding 2.1kg of Mercury was discovered by workers on a construction site in Arkhangelsk. A site inspection discovered a further eight instruments 10cm x 8cm that were labeled, "caution: radioactive". (<http://www.arhpress.ru/arkhangelsk/2007/8/1/22.shtml>, <http://nti.org/analysis/articles/potentially-radioactive-orphan-sources-found-construction-site-arkhangelsk-russia>)

**2007, August 27 / Russia / R:** Three men were arrested in Dimitrovgrad in possession of 300g of Americium-241, possibly stolen from the All-Russian Scientific Research Institute of Atomic Reactors, although this may have been part of a training exercise. (<http://nti.org/analysis/articles/nuclear-attack>)

**2007, September / Russia / N:** 30.7 kilograms of Uranium rods were stolen from an enterprise in Udmurtia. (<http://www.nti.org/analysis/articles/trial-uranium-rod-thieves-begin-udmurtia/>)

**2007, September 7 / Belarus / R:** Media reported that Belarussian customs officials detained a truck carrying of Aluminium concentrate that was radioactive on the Belarussian-Polish border en route to Russia. (<http://nti.org/analysis/articles/belarussian-customs-seize-radioactive>)

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**2007, September 24 / Ukraine / R:** A 12 kg package emitting high levels of radiation was seized at Zhulyany airport. It was emitting radiation 100 times the normal level. ([http://kartina-ua.info/index.phtml?art\\_id=180344&action=view&sel\\_date=2007-11-01](http://kartina-ua.info/index.phtml?art_id=180344&action=view&sel_date=2007-11-01))

**2007, September 28 / Russia / R:** A 15cm x 15cm metal cylinder emitting 3 milliroentgen of gamma radiation at close range was discovered by an employee at a scrap metal receiving station in Ufa. ([http://www.yorkintel.com/NFCInitiate\\_Trafficking\\_News.aspx](http://www.yorkintel.com/NFCInitiate_Trafficking_News.aspx))

**2007, October 3 / Russia / R:** The Department of the Interior Directorate for Fighting Organised Crime arrested four Russian citizens for attempting to sell an ampoule of 10.5g of Osmium for \$735,000 as part of a sting operation. Authorities also discovered an ampoule labelled “Osmium-187” which was filled with a Cobalt-Zinc mixture. (<http://www.nti.org/analysis/articles/authorities-department-interior/>)

**2007, October 3 / Russia / R:** A piece of scrap metal emitting 3 microroentgen per hour was brought to a scrap metal collection point in Ufa. (<http://www.nti.org/analysis/articles/three-cases-radioactive-metal-scrap-are-uncovered-russia/>)

**2007, October 15 / Ukraine / R:** A railroad car carrying 54 metric tons of Zirconic ore was detained by officials at the Chop checkpoint between Ukraine and Hungary and was sent back to Italy because of a lack of relevant certificates. (<http://nti.org/analysis/articles/railroad-car-radioactive>)

**2007, October 22 / Russia / R:** A Russian customs official in Vladivostok discovered a parcel sent from Russia to the UK containing binoculars and a strand for the binoculars covered in Radium-266, emitting 400 times the legal limit of radiation. The parcel was disposed of by Primtekhnopolis. (<http://nti.org/analysis/articles/parcel-object-radium-discovered>)

**2007, October 23 / Russia / R:** Customs officials in Vladivostok discovered two shipping containers labelled “concentrated ore” that emitted 20 times background radiation levels. (<http://nti.org/analysis/articles/parcel-object-radium-discovered>)

**2007, October 24 / Georgia / R:** Georgian police officers and operatives from the Special Operations Center of the Main Directorate of the Ministry of Internal Affairs of Georgia for the Autonomous Republic of Adjara arrested an Armenian citizen for attempting to smuggle 2.04g of Lawrencium-103 to Turkey in a specifically designed gold container. (<http://www.regnum.ru/news/905759.html>, <http://www.nti.org/analysis/articles/rare-transuranic-element-lawrencium-seized-georgian-turkish-border/>)

**2007, November 2 / Georgia / R:** Police officers discovered an unspecified amount of Caesium-137 in a car and arrested its occupants after detaining the car after a traffic violation. They also discovered a device for opening the container of Caesium and detonators. (<http://www.nti.org/analysis/articles/cesium-137-seized-zugdidi-western-georgia/>, <http://www.apsny.ge/news/1194031045.php>, <http://www.rian.ru/politics/20071102/86427236.html>, <http://www.rian.ru/politics/20071102/86452125.html>, <http://www.lenta.ru/news/2007/11/02/caesium/>)

**2007, November 8 / Russia / R:** A railcar emitting over 20 microroentgen per hour was detained in Murmansk. The content of the cargo is unknown. It was on its way from Saratov to a military base in Kola Peninsula. (<http://www.murman.ru/news/?d=09-11-2007>, <http://www.nti.org/analysis/articles/kola-peninsula-bound-railway-car-radioactive-shipment-detained-murmansk/>)

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**2007, November 11 / Ukraine / R:** A 32 kilogram container of Caesium-137 was seized from a suspect in Lugansk. 7 vials of what may have been Mercury were also seized. (<http://www.nti.org/analysis/articles/ukrainian-police-seizes-mercury-and-caesium-137-individual/>)

**2007, November 27 / Russia / R:** Ferrous metal scrap containing Barium and Thorium emitting ionising radiation twice background levels was discovered in a train car bound from Kazakhstan to Estonia at the Kartaly checkpoint. (<http://www.nti.org/analysis/articles/three-cases-radioactive-metal-scrap-are-uncovered-russia/>)

**2007, December 21 / Russia:** The Russian Federal Customs Service announced that technical radiation detection had helped intercept approximately 850 attempts at illicit trafficking of radioactive materials. (<http://nti.org/analysis/articles/russias-federal-customs-service-releases-trafficking-statistics>)

**2007, December 31 / Uzbekistan / R:** A “chunk of black metal” emitting 1000 milliroentgen per hour was discovered aboard a freight train travelling from Kyrgyzstan to Iran by Uzbek border officials. ([http://www.yorkintel.com/NFCInitiate\\_Trafficking\\_News.aspx](http://www.yorkintel.com/NFCInitiate_Trafficking_News.aspx))

**2008, January 10 / Kazakhstan / R:** The Department of State Ecological Expertise of the Ministry of Ecology and the Environment of Kyrgyzstan Kubanychbek Noruzbaev announced that Uzbek customs guards detained a railcar from a Kyrgyz train passing through Kazakhstan on 31 December 2007. It was carrying Caesium-137 emitting more than 1000 milliroentgen per hour. <http://news.mail.ru/incident/1553844/>

**2008, January 23 / Russia / R:** The city court in Kurgan found four Russian citizens guilty of contraband and sentenced them to 7 – 10 years in prison for smuggling a container containing 9 radionuclides across the Russian-Kazakh border in 2006, including Iridium, Cobalt, Radium, Promethium and Europium, with intent to sell. (<http://nti.org/analysis/articles/four-russians-sentenced-smuggling-radioactive-sources-across-russian-kazakh-border>)

**2008, February 28 / Kazakhstan / N:** Integrum Techno reported that two individuals had been sentenced by a Kazakh court in Almaty for attempting to sell 2 kg of Uranium-235. (<http://nti.org/analysis/articles/almaty-court-sentences-two-individuals-two-years-prison>)

**2008, March 11 / Kazakhstan / R:** 65 barrels of Tantalum concentrate emitting radiation 4 times higher than normal was seized from an airplane that had arrived from Fujairah. It later emerged that there were no irregularities in the transport of this material and that its travel had been legitimate. (<http://nti.org/analysis/articles/kazakh-customs-detain-consignment>)

**2008, April 5 / Russia / R:** A radioactive container was found in cargo from Chita at Vladivostok port emitting 130 microroentgen per hour. The container was later destroyed. (<http://nti.org/analysis/articles/kazakh-customs-detain-consignment>)

**2008, April 21 / Ukraine / R:** Radiation detection equipment installed at a checkpoint detected 4,500 tons of used medical isotopes emitting 60 microroentgen per hour on a truck travelling from the Institute of Oncology in Chisinau, Moldova, to the Czech Republic through the Ukraine. The driver did not possess the required documentation and hazard signs were not displayed. (<http://nti.org/analysis/articles/truck-radioactive-medical-isotopes-detained-ukraine-moldova-border>)

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**2008, May 23 / Kazakhstan / R:** Kazakh customs officials intercepted a truck travelling from Petropavlovks in Russia to Germany, which was emitting 116.22 microrentgen per hour. (<http://www.nti.org/analysis/articles/kazakh-customs-detain-germany-bound-lorry-radioactive-material/>)

**2008, May 27 / Russia / R:** Customs officials at the Kartaly checkpoint discovered a 60-ton consignment of scrap metal containing a source of Caesium-137 on its way to Latvia. It was sent back to Kazakhstan. (<http://www.nti.org/analysis/articles/latvia-bound-train-radioactive-cargo-detained-russo-kazakh-border/>)

**2008, June 5 / Belarus / R:** The Deputy Chairman of the Belarussian State Border Committee Vadzim Zaytsaw announced that in the past 6 months, Belarussian customs officials have halted more than 10 cargoes emitting more than the legal amount of radiation, all attempts to transport material from Western European countries to southern countries. (<http://nti.org/analysis/articles/belarusian-customs-say-theyve-stopped-10-vehicles-radioactive-cargo>)

**2008, June 17 / Russia / R:** A former pilot travelling to Kazakhstan installed an airplane turn indicator in an abandoned warehouse in Chelyabinsk airport in his car with scotch tape. He was detained by customs officials and it is believed that he was unaware that it emitted 6.17 microsieverts per hour. <http://uralpress.ru/news/2008/06/17/magnitogorskie-tamozhenniki-sokhranili-zdorove-byvshemu-aviatoru>

**2008, June 19 / Russia / R:** A lighting element containing Radium-226 emitting 47 500 microrentgen per hour was found in a lighting sign in cargo at Vladivostok port. (<http://www.nti.org/analysis/articles/radiation-sources-discovered-vladivostok-port/>)

**2008, June 20 / Russia / R:** A container containing Radium-226 emitting 475 microsieverts was detained at the port in Vladivostok. The material was removed by Primtekhnpolis. (<http://primamedia.ru/news/vladivostok/20.06.2008/73870/istochnik-radiatsii-obezvrezhen-v-portu-vladivostoka.htm>)

**2008, July 1 / Kazakhstan / R:** Three vehicles with radioactive cargo were detained at Zhanozol checkpoint, containing metal with excessive amounts of radiation. Kazakh customs detained a Volvo emitting 34.3 microsieverts per hour, an Iveco-model truck emitting 12.5 microsieverts per hour and another Iveco-model truck emitting 51.6 microsieverts per hour. The cargo was 60 tons of the insulating material vermikulit bound for the UK. (<http://www.nti.org/analysis/articles/kazakh-customs-officials-detain-vehicles-radioactive-cargo/>)

**2008, July 7 / Ukraine / N:** Two men were arrested at a location between Dnepropetovsk and Kiev Boryspil for trafficking enriched Uranium and Caesium as part of a sting operation conducted by the Interior Ministry General Directorate for Combating Organized Crime. They had planned to sell the material for USD5 million. (<http://www.kommersant.ua/doc.html?docId=910052>)

**2008, July 8 / Kazakhstan / R:** Kazakh customs officials sent two trucks carrying 39.2 tons of granite emitting over 18.5 times background level radiation back to China. (<http://news.gazeta.kz/art.asp?aid=233823>)

**2008, July 8 / Ukraine / R:** An individual was arrested in Dnepropetrovsk on suspicion of dealing in Uranium and Caesium as part of a sting operation. Two radioactive containers were

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also seized. (<http://www.nti.org/analysis/articles/ukrainian-police-arrest-suspected-sellers-cesium-and-uranium/>)

**2008, July 8 / Ukraine / N:** Deutsche Welle reported that a worker at the Ukrainian Embassy in Germany and the security manager of a bank in the Ukraine were arrested in Cherkassy with radioactive metals worth 3.1 million euros in their car, including Uranium and Caesium. The material was stolen from a holding facility in Kiev and intended to be sold to a criminal group. (<http://www.dw-world.de/dw/article/0,,3467700,00.html>, [http://bellona.org/articles/articles\\_2008/ukraine\\_smuggling](http://bellona.org/articles/articles_2008/ukraine_smuggling))

**2008, September 11 / Russia / R:** Zakon reported that a train destined for Moldova carrying a radioactive cargo was detained at the Kartaly checkpoint in Russia. The train had begun its journey in Ust-Kamenogorsk in Kazakhstan. From there, it had passed undetected through the Kazakh customs point at Uba and the Russian customs points at Tretyakov and Veseloyarsky. It continued its journey through Karaganda, Akmola and Kostanai and the customs point at Tobol, before it was discovered in Kartaly. The radioactive sources were found to be bismuth-207 and technetium-99 and emitted 4 microsieverts per hour. (<http://www.zakon.kz/120490-po-territorii-kazahstana.html>)

**2008, October 2 / Russia / R:** A criminal case was opened by the police in Saratov into the theft of a RIO-3 ice detector. The ice detector was from a decommissioned YAK-40 airplane owned by Avia Alyans. (<http://www.nti.org/analysis/articles/strontium-stolen-saratov/>)

**2008, October 13 / Ukraine / R:** 20 tons of radioactive scrap metal emitting 1.4 times background radiation was discovered in a trailer attached to a Daimler Chrysler at the Zhanazhol checkpoint in the Mamlyutsky region. (<http://www.emer.kz/conditions/archiv/detail.php?ID=3049>)

**2008, December 1 / Russia / R:** Welding equipment emitting 190-340 microrentgen per hour was seized from the Dutch ship "Nedloyd Barentz" at Ilyichevsk. (<http://www.nr2.ru/odessa/209277.html>)

**2008, December 22 / Russia / R:** The Deita news agency reported that radioactive scrap metal was detected in cargo at Vladivostok. It emitted 21.05 microsieverts per hour and the source of the radiation was found to be a broken measuring device containing radium-226. (<http://www.nti.org/analysis/articles/radioactive-cargo-detained-vladivostok/>)

**2009, March 12 / Ukraine / R:** A Moldovan citizen was detained when a radioactive receiver was found in the back of his car as he crossed the checkpoint from the Ukraine to Moldova. He told police that he had purchased it from a man in Mikhaylovka-Rubensovka in the Sviatoshynsky Kiev region. (<http://www.odvestnik.com.ua/issue/271/5887/>)

**2009, April, 9 / Russia / N:** The FSB detained a man on the Chelyabinsk-Ufa highway after discovering an iron container containing suspected Uranium-235 and Uranium-238 particles in the back of a truck full of bricks. (<http://vecherka.su/katalogizdaniy?id=24642>, <http://eanews.ru/news/33/item142306>)

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**2009, April 13 / Russia / R:** Russian news outlet Sever Info reported that a German tourist was detained at Pulkovo airport when the Yantar-3 radiation detection system detected 138 grams of Radium-226 and Thorium-232 with him. He was en route from Prague to St Petersburg. The material emitted 2 400 microrentgen per hour. (<http://www.old.severinfo.ru/news/26791>)

**2009, May 14 / Ukraine / R:** Kompromat reported that a sheet of radioactive scrap metal emitting 30 times background radiation from Chernobyl was discovered buried 0.3m underground beneath a scrap metal collection point near a housing estate in Chernihiv. (<http://kompromat.ua/ru/16/25073/index.html>)

**2009, June 9 / Ukraine / N:** Ukrainian regional news outlet Donbass reported that a railroad car in Donetsk carrying 60 tons of scrap metal and emitting 54-64 microrentgen per hour was stopped by a security company for the steel and metal works company Azovstal. (<http://donbass.ua/news/region/2009/06/09/na-azovstali-obnaruzhili-radioaktivnyi-metall.html>)

**2009, June 9 / Georgia / R:** Four sources of Caesium-137 and Strontium-90, emitting 3 millisieverts per hour were discovered at a scrap metal detection point in Tblisi. (<http://newsgeorgia.ru/politics/20090709/151193925.html>)

**2009, July 20 / Russia / R:** A cylinder containing Caesium-137 emitting over 100 times background radiation was found in a glove in a railcar on a train from Almaty to Moscow. The train was detained at the Ilesk-1 checkpoint. (<http://www.nti.org/analysis/articles/railcar-emitting-radiation-detained-kazakh-russian-border/>)

**2009, August 16 / Russia / R:** A man was detained on a train from Nikolaev to Moscow at the Dolbino checkpoint at Belgorod station and found in possession of 28 sets of radioactive night-vision devices for the Kalashnikov rifle. They emitted over 600 times the background level of radiation. The man claimed he had bought them in Dnepropetrovsk and was going to use them for hunting. (<http://www.nti.org/analysis/articles/man-carrying-radioactive-night-vision-devices-detained-belgorod/>)

**2009, September 11 / Ukraine / R:** A truck carrying 25 tons of radioactive scrap metal from Pripjat was detained at a checkpoint at the Chernobyl exclusion zone. It emitted over 13 times the background level of radiation. Six people were detained, including the truck driver and owner, a man who was accompanying the truck in another car, two police officers that were on duty at the time, and two police battalion commanders. The seizure was part of a sting in which a deputy chief of the Kiev SBU (Security Service) intended to test police and the Ministry of Interior Affairs (MIA) official in charge of the exclusion zone by calling him to ask him to let the truck pass. The Deputy Chief and the four detained policemen were subsequently fired. No authorisation had been requested prior to the sting. (<http://russia-ukraine-byelorussia.com/kak-sbu-mvd-na-pushku-brala/>)

**2009, October 21 / Russia / N:** Lenta reported that a Chinese man was arrested at Irkutsk airport for attempting to transport six pieces of rock containing natural uranium from Russia. (<http://www.lenta.ru/news/2009/10/21/chinese/>)

**2009, November 19 / Russia / R:** A car containing sports equipment contaminated with Cobalt-60 was detained on the Russian border. The cargo emitted 4 microsieverts per hour. The car was sent back to Lithuania and the cargo was isolated and sent back to the owner in

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Germany. (<http://ru.delfi.lt/news/crime/na-granice-zaderzhan-radioaktivnyj-gruz.d?id=19371033>)

**2010, March 14 / Ukraine / N:** Six elderly friends came into possession of 2.5 kg of enriched uranium-235 in Slavayansk Donetsk. Two were arrested in a sting organised by Donetsk security officers, in which they attempted to sell the material initially for a deposit of \$10 000. The other four were arrested at a nearby train station. The material emitted 250 microroentgen per hour. (<http://old.inforotor.ru/visit/3902488?url=http://kp.ua/daily/140510/227265/>)

**2010, May 16 / Ukraine / N:** The Ukrainian security service announced that it had seized 2.5 kg of depleted uranium and two products containing strontium-90, which exceed 300 times background radiation, as part of a special operation in Donetsk and Lugansk. (<http://www.newsland.ru/news/detail/id/503406/cat/48/>)

**2010, August 24 / Moldova / N:** Several individuals were arrested and 1.8 kg of uranium-238 was seized in Chisinau. They were attempting to sell the material for 9 million euros. Three of the individuals had previous convictions for illicit trafficking in Moldova, Romania and Russia. (<http://www.bbc.co.uk/news/mobile/world-europe-11074645?SThisEM>)

**2010, November 30 / Pakistan / N:** A Wikileaks cable dated May 27 2009 detailed that an unknown quantity of HEU from an old research reactor has been in Pakistan for the past three years awaiting removal and disposal by a US team because the Pakistani government is delaying concluding an agreement with the US on the matter. ([http://www.nytimes.com/2010/12/01/world/asia/01wikileaks-pakistan.html?\\_r=1](http://www.nytimes.com/2010/12/01/world/asia/01wikileaks-pakistan.html?_r=1))

**2010, December 14 / Kazakhstan / R:** Ria Novosti reported that customs officials detained a Volvo with a semitrailer loaded with scrap metal at the Zhanazhol checkpoint in north Kazakhstan. The scrap metal exceeded the legal limit of 0.6-0.7 microroentgen per hour. The car was en route to Ankara, Turkey. (<http://www.newskaz.ru/incidents/20101214/989606.html>)

**2011, 5 April / Georgia / R:** The Nuclear and Radiation Security Service of Georgia announced that metal containing Caesium-137 had been located on board a cargo train at Batumi International Container Terminal. It is believed that the radioactive material may have become mixed up in radioactive scrap metal. (<http://www.newsgeorgia.ru/incidents/20110405/213859214.htm>)

**2011, 29 June / Moldova / N:** Moldovan police arrested six people for attempting to sell more than 1kg of uranium-235 with a value of approximately 20m USD. It is reported that they were intending to sell the material to an individual from North Africa. (<http://www.bbc.co.uk/news/world-europe-13968903>)

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**Notes**

[1] This inventory was originally meant to go as Appendix to an article by Vladimir Fenopetov, Bruce Lawlor, Tedo Japaridze, Yannis Tsantouli & Alex P. Schmid. New Security Threats – Old Security Architecture and Mind-Sets: Countering the Threat of Radiological and Nuclear Terrorism in the Black Sea Region. *American Foreign Policy Interests*, 33,197-208, 2011 and should best be read in conjunction with it (see: <http://dx.doi.org/10.1080/10803920.620510>). The views and opinions expressed in this introduction do not represent any official views or positions but are solely the responsibility of the authors. Errors in the inventory are possible as are omissions, due to the type of open sources utilized.

[2] Figures based on Matthew Bunn (Kennedy School of Government), as quoted in *The Economist*, Vol. 402, Number 8778, 31 March – 6 April 2012, pp. 61-62 and in M. Bunn's presentation 'The Threat of Nuclear Terrorism: What's New? What's True?' Cambridge, Mass.: Belfer Center, Harvard Kennedy School, March 2012.

[3] For this aspect, see Alex P. Schmid & Robert Wesley. Possible Causes and Motives of Nuclear and Radiological Terrorism in the Light of Empirical Data on Smuggling Incidents of Nuclear Materials. In: Jeff Victoroff (Ed.). *Tangled Roots: Social and Psychological Factors in the Genesis of Terrorism*. Amsterdam: IOS

[4] Gnosis: Global Nuclear Open Source Information System; U.S. Nuclear Regulatory Commission, Office of International Programs