

## = Poisoning of Alexander Litvinenko =

Alexander Litvinenko was a former officer of the Russian Federal Security Service ( FSB ) and KGB , who fled from court prosecution in Russia and received political asylum in the United Kingdom .

On 1 November 2006 , Litvinenko suddenly fell ill and was hospitalized . He died three weeks later , becoming the first confirmed victim of lethal polonium @-@ 210 @-@ induced acute radiation syndrome . Litvinenko 's allegations about the misdeeds of the FSB and his public deathbed accusations that Russian president Vladimir Putin was behind his unusual malady resulted in worldwide media coverage .

Subsequent investigations by British authorities into the circumstances of Litvinenko 's death led to serious diplomatic difficulties between the British and Russian governments . During the 2014 ? 2015 trial the Scotland Yard representative witnessed that " the evidence suggests that the only credible explanation is in one way or another the Russian state is involved in Litvinenko 's murder " . Another witness stated that Dmitry Kovtun has been speaking openly about the plan to kill Litvinenko that was intended to " set an example " as a punishment for a " traitor " . The main suspect in the case , a former officer of the Russian Federal Protective Service ( FSO ) , Andrey Lugovoy , remains in Russia . As a member of the Duma , he now enjoys immunity from prosecution . Before he was elected to the Duma , the British government tried to have him extradited without success .

At the same time , Litvinenko 's father , now residing in Italy , believes Boris Berezovsky and Alexander Goldfarb were behind the murder . Berezovsky was found dead at his home in England on 23 March 2013 .

## = = Background = =

Alexander Litvinenko was a former officer of the Russian Federal Security service who escaped prosecution in Russia and received political asylum in Great Britain . In his books , *Blowing up Russia : Terror from Within* and *Lubyanka Criminal Group* , Litvinenko described Russian president Vladimir Putin 's rise to power as a coup d 'état organised by the FSB . He alleged that a key element of the FSB 's strategy was to frighten Russians by bombing apartment buildings in Moscow and other Russian cities . He accused Russian secret services of having arranged the Moscow theater hostage crisis , through their Chechen agent provocateur , and having organised the 1999 Armenian parliament shooting . He also stated that the terrorist Ayman al @-@ Zawahiri was under FSB control when he visited Russia in 1997 .

Upon his arrival in London , he continued to support the Russian oligarch in exile , Boris Berezovsky , in his media campaign against the Russian government .

In the UK , Litvinenko became a journalist for a Chechen separatist site , Chechenpress . He wrote two books , *Blowing up Russia : Terror from Within* and *Lubyanka Criminal Group* , in which he accused the Russian secret services of staging the Russian apartment bombings and other terrorist acts to bring Vladimir Putin to power .

Just two weeks before his death , Litvinenko accused Putin of ordering the assassination of Anna Politkovskaya .

## = = Illness and poisoning = =

On 1 November 2006 , Litvinenko suddenly fell ill . Earlier that day he had met two former KGB officers , Andrey Lugovoy and Dmitry Kovtun . Lugovoy is a former bodyguard of Russian ex @-@ Prime Minister Yegor Gaidar ( also reportedly poisoned in November 2006 ) and former chief of security for the Russian TV channel ORT . Kovtun is now a businessman . Litvinenko had also had lunch at Itsu , a sushi restaurant on Piccadilly in London , with an Italian officer and " nuclear expert " , Mario Scaramella , to whom he reportedly made allegations regarding Romano Prodi 's connections with the KGB . Scaramella , attached to the Mitrokhin Commission investigating KGB penetration of Italian politics , claimed to have information on the death of Anna Politkovskaya , 48 ,

a journalist who was killed at her Moscow apartment in October 2006 . He passed Litvinenko papers supposedly concerning her fate . On 20 November , it was reported that Scaramella had gone into hiding and feared for his life .

For several days after 1 November , Litvinenko experienced severe diarrhoea and vomiting . At one point , he could not walk without assistance . As the pain intensified , Litvinenko asked his wife to call an ambulance for assistance . For several weeks , Litvinenko 's condition worsened as doctors searched for the cause of the illness . Surrounded by friends , Litvinenko became physically weak , and spent periods unconscious . A photograph was taken of Litvinenko on his deathbed and released to the public . " I want the world to see what they did to me , " Litvinenko said .

= = = Poison = = =

After being moved from his local hospital in north London to University College Hospital in central London for intensive care , his blood and urine samples were sent to the UK 's Atomic Weapons Establishment ( AWE ) for testing . Scientists at AWE tested for radioactive poison using gamma spectroscopy . No gamma rays were detected , however , a small spike was noticed at an energy of 803 kilo @-@ electron volts ( keV ) . The BBC reported that by coincidence another scientist , who had worked on Britain 's early atomic bomb programme decades before , happened to overhear a discussion about the small spike and recognised it as the gamma ray signal from polonium @-@ 210 , which was a critical component of early nuclear bombs . On the evening of 22 November , shortly before his death , his doctors were informed the poison was likely to be polonium @-@ 210 . Further tests on a larger urine sample using spectroscopy designed to detect alpha radiation confirmed the result the following day .

Unlike most common radiation sources , polonium @-@ 210 emits very little gamma radiation but large amounts of alpha particles that do not penetrate even a sheet of paper or the epidermis of human skin , thus being invisible to normal radiation detectors . This explained why tests conducted by doctors and Scotland Yard at the hospital with Geiger counters were negative . Both gamma rays and alpha particles are classified as ionizing radiation which can cause radiation damage . An alpha @-@ emitting substance can cause significant damage only if ingested or inhaled , acting on living cells like a short @-@ range weapon . Hours before his death , Litvinenko was tested for alpha @-@ emitters using special equipment .

Shortly after his death , the UK 's Health Protection Agency ( HPA ) said tests had established that Litvinenko had significant amounts of the radionuclide polonium @-@ 210 ( 210Po ) in his body . British and US government officials said the use of 210Po as a poison had never been documented before , and it was probably the first time anyone had been tested for the presence of 210Po in their body . The poison was in Litvinenko 's cup of tea . Those who had contact with Litvinenko may also have been exposed to radiation .

= = = 210Po content in the body of Litvinenko = = =

The symptoms seen in Litvinenko appeared consistent with an administered activity of approximately 2 GBq ( 50 mCi ) which corresponds to about 10 micrograms of 210Po . That is 200 times the median lethal dose of around 238 ?Ci or 50 nanograms in the case of ingestion .

= = = Thallium ? initial hypothesis = = =

Scotland Yard initially investigated claims that Litvinenko was poisoned with thallium . It was reported that early tests appeared to confirm the presence of the poison . Among the distinctive effects of thallium poisoning are hair loss and damage to peripheral nerves , and a photograph of Litvinenko in hospital , released to the media on his behalf , indeed showed his hair to have fallen out . Litvinenko attributed his initial survival to his cardiovascular fitness and swift medical treatment . It was later suggested a radioactive isotope of thallium might have been used to poison Litvinenko . Dr. Amit Nathwani , one of Litvinenko 's physicians , said " His symptoms are slightly odd for thallium

poisoning , and the chemical levels of thallium we were able to detect are not the kind of levels you 'd see in toxicity . " Litvinenko 's condition deteriorated , and he was moved into intensive care on 20 November . Hours before his death , three unidentified circular @-@ shaped objects were found in his stomach via an X @-@ ray scan . It is thought these objects were almost certainly shadows caused by the presence of Prussian blue , the treatment he had been given for thallium poisoning .

= = Death and last statement = =

Late on 22 November , Litvinenko 's heart failed ; the official time of death was 9 : 21 pm at University College Hospital in London .

The autopsy took place on 1 December . Litvinenko had ingested polonium @-@ 210 , a poisonous radioactive isotope . Mario Scaramella , who had eaten with Litvinenko , reported that doctors had told him the body had five times the lethal dose of polonium @-@ 210 . Litvinenko 's funeral took place on 7 December at the Central London mosque , after which his body was buried at Highgate Cemetery in North London .

On 25 November , an article attributed to Litvinenko was published by the Mail on Sunday Online entitled Why I believe Putin wanted me dead ...

In his last statement he said about Putin :

? this may be the time to say one or two things to the person responsible for my present condition . You may succeed in silencing me but that silence comes at a price . You have shown yourself to be as barbaric and ruthless as your most hostile critics have claimed . You have shown yourself to have no respect for life , liberty or any civilised value . You have shown yourself to be unworthy of your office , to be unworthy of the trust of civilised men and women . You may succeed in silencing one man but the howl of protest from around the world will reverberate , Mr Putin , in your ears for the rest of your life . May God forgive you for what you have done , not only to me but to beloved Russia and its people .

= = Investigation = =

= = = Initial steps = = =

Greater London 's Metropolitan Police Service Terrorism Unit has been investigating the poisoning and death . The head of the Counter @-@ Terrorism Unit , Deputy Assistant Commissioner Peter Clarke , stated the police " will trace possible witnesses , examine Mr. Litvinenko 's movements at relevant times , including when he first became ill and identify people he may have met . There will also be an extensive examination of CCTV footage . " The United Kingdom Government COBRA committee met to discuss the investigation . Richard Kolko from the United States FBI stated " when requested by other nations , we provide assistance " ? referring to the FBI now joining the investigation for their expertise on radioactive weapons . The Metropolitan Police announced on 6 December 2006 that it was treating Litvinenko 's death as murder . Interpol has also joined the investigation , providing " speedy exchange of information " between British , Russian and German police .

= = = Polonium trails = = =

Detectives traced three distinct polonium trails in and out of London , at three different dates , which according to the investigation suggests Andrey Lugovoy and Dmitry Kovt took two failed attempts to administer polonium to Litvinenko before the final and successful one . The first attempt took place on 16 October 2006 when radioactive traces were found in all places visited by the FSB operatives before and after their meeting with Litvinenko , where they administered the poison to his tea which he never drank . Apparently , Lugovoy and Kovtun did not fully realize they were handling a radioactive poison either and journalist Luke Harding described their behaviour as " idiotic , verging

on suicidal " ? while handling a leaky container , they stored it in their hotel rooms , used regular towels to clean up leaks and eventually disposed the poison in the toilet . On 17 October , perhaps realizing they contaminated their rooms , they prematurely checked out and moved to another hotel and left London the next day . Another unsuccessful assassination attempt took place on 25 October when they flew to London again . They left radioactive traces again in their hotel prior to meeting Litvinenko , but did not administer the poison , perhaps due to security cameras in the meeting room , and disposed of the poison into their room 's toilet and left London .

The third attempt of poisoning Litvinenko took place at around 5 pm of 1 November in the Millennium Hotel in Grosvenor Square . The bus he travelled in to the hotel had no signs of radioactivity ? but large amounts had been detected at the hotel . Polonium was subsequently found in a fourth @-@ floor room and in a cup in the Pine Bar at the hotel . After the Millennium bar , Litvinenko stopped at the office of Boris Berezovsky . He used a fax machine , where the radioactivity was found later . At 6 pm Akhmed Zakayev picked Litvinenko up and brought him home to Muswell Hill . The amount of radioactivity left by Litvinenko in the car was so significant , the car was rendered unusable . Everything that he touched at home during the next three days was contaminated . His family was unable to return to the house even six months later . His wife was tested positive for ingesting polonium but did not leave a secondary trail behind her . This suggested that anyone who left a trail could not have picked up the polonium from Litvinenko ( possibly , including Lugovoy and Kovtun ) . The patterns and levels of radioactivity they left behind suggested that Litvinenko ingested polonium , whereas Lugovoy and Kovtun handled it directly . The human body dilutes polonium before excreting it in sweat , which results in a reduced radioactivity level. There were also traces of Po @-@ 210 found at the Hey Jo / Abracadabra bar , Dar Marrakesh restaurant , and Lambeth @-@ Mercedes taxis .

Besides Litvinenko , only two people left the polonium trails : Lugovoy and Kovtun who were school friends and worked previously for Russian intelligence in the KGB and the GRU respectively . These people handled the radioactive material directly and did not ingest it , because they left more significant traces of polonium than Litvinenko .

Lugovoy and Kovtun met Litvinenko in the Millennium hotel bar twice , on 1 November ( when the poisoning took place ) , and earlier , on 16 October . Trails left by Lugovoy and Kovtun started on 16 October , in the same sushi bar where Litvinenko was poisoned later , but at a different table . It was assumed that their first meeting with Litvinenko was either a rehearsal of the future poisoning , or an unsuccessful attempt at the poisoning .

Traces left by Lugovoy were also found in the office of Berezovsky that he visited on 31 October , a day before his second meeting with Litvinenko . Traces left by Kovtun were found in Hamburg , Germany . He left them on his way to London on 28 October . The traces were found in passenger jets BA875 and BA873 from Moscow to Heathrow on 25 and 31 October , as well as flights BA872 and BA874 from Heathrow to Moscow on 28 October and 3 November .

Andrey Lugovoy has said he flew from London to Moscow on a 3 November flight . He stated he arrived in London on 31 October to attend the football match between Arsenal and CSKA Moscow on 1 November . When the news broke that a radioactive substance had been used to murder Litvinenko , a team of scientists rushed to find out how far the contamination had spread . It led them on a trail involving hundreds of people and dozens of locations .

British Airways later published a list of 221 flights of the contaminated aircraft , involving around 33 @, @ 000 passengers , and advised those potentially affected to contact the UK Department of Health for help . On 5 December they issued an email to all of their customers , informing them that the aircraft had all been declared safe by the UK 's Health Protection Agency and would be re @-@ entering service .

= = = British extradition request = = =

British authorities investigated the death and it was reported on 1 December that scientists at the Atomic Weapons Establishment had traced the source of the polonium to a nuclear power plant in Russia . On 3 December , reports stated that Britain had demanded the right to speak to at least five

Russians implicated in Litvinenko 's death , and Russian Foreign Minister Sergey Lavrov asserted that Moscow was willing to answer " concrete questions . " Russian Prosecutor @-@ General Yuri Chaika said on Tuesday 5 December that any Russian citizen who may be charged in the poisoning will be tried in Russia , not Britain . Moreover , Chaika stated that UK detectives may ask questions to Russian citizens only in the presence of Russian prosecutors .

On 28 May 2007 the British Foreign Office submitted a formal request to the Russian Government for the extradition of Andrey Lugovoy to the UK to face criminal charges relating to Litvinenko 's murder .

= = = Extradition declined = = =

The Russian General Prosecutor 's Office declined to extradite Lugovoy , citing that extradition of citizens is not allowed under the Russian constitution ( Article 61 of the Constitution of Russia ) . Russian authorities later said that Britain has not handed over any evidence against Lugovoy . Professor Daniel Tarschys , former Secretary General of the Council of Europe , commented that the Russian Constitution actually " opens the door " for the extradition , and Russia ratified three international treaties on extradition ( on 10 December 1999 ) ; namely , the European Convention on Extradition and two Additional Protocols to it . Yury Fedotov , Ambassador of the Russian Federation , pointed out that when the Russian Federation ratified the European Convention on Extradition it entered a declaration concerning Article 6 in these terms : " The Russian Federation declares that in accordance with Article 61 ( part 1 ) of the Constitution of the Russian Federation , a citizen of the Russian Federation may not be extradited to another state . " The same protections are extended to the citizens of France and Germany , both of which refuse to extradite their citizens .

= = = BBC programme = = =

On 7 July 2008 , a British security source told the BBC 's Newsnight programme : " We very strongly believe the Litvinenko case to have had some state involvement . There are very strong indications . " The British government claimed that no intelligence or security officials were authorised to comment on the case .

= = = Litvinenko Inquiry = = =

In January 2016 , a UK public inquiry , headed by Sir Robert Owen , found that Andrey Lugovoy and Dmitry Kovtun were responsible for the poisoning of Litvinenko . The inquiry also found that there was a strong probability that Lugovoy and Kovtun were acting under the direction of the FSB , and that their actions were probably approved by both Nikolai Patrushev , Director of the FSB , and President Vladimir Putin .

= = Possibly related events = =

On 2 March 2007 , Paul Joyal , a former director of security for the U.S. Senate intelligence committee , who the previous weekend alleged on national television that the Kremlin was involved in the poisoning of Litvinenko , was shot near his Maryland home . An FBI spokesman said the agency was " assisting " the police investigation into the shooting . Police would not confirm details of the shooting or of the condition of Joyal . A person familiar with the case said he was in critical condition in hospital . It was reported that while there were no indications that the shooting was linked to the Litvinenko case , it is unusual for the FBI to get involved in a local shooting incident . A person familiar with the situation said NBC had hired bodyguards for some of the journalists involved in the program .

= = Polonium @-@ 210 = =

= = = Possible motivation for using polonium @-@ 210 = = =

Philip Walker , professor of physics at the University of Surrey said : " This seems to have been a substance carefully chosen for its ability to be hard to detect in a person who has ingested it . " Oleg Gordievsky , the most senior KGB agent ever to defect to Britain , made a similar comment that Litvinenko 's assassination was carefully prepared and rehearsed by Russian secret services , but the poisoners were unaware that technology existed to detect traces left by polonium @-@ 210 : " Did you know that polonium @-@ 210 leaves traces ? I didn 't . And no one did . ... what they didn 't know was that this equipment , this technology exists in the West ? they didn 't know that , and that was where they miscalculated . "

Nick Priest , a nuclear scientist and expert on polonium who has worked at most of Russia 's nuclear research facilities , says that although the execution of the plot was a " bout of stupidity " , the choice of polonium was a " stroke of genius " . He says : " the choice of poison was genius in that polonium , carried in a vial in water , can be carried in a pocket through airport screening devices without setting off any alarms " , adding , " once administered , the polonium creates symptoms that don 't suggest poison for days , allowing time for the perpetrator to make a getaway . " Priest asserts that " whoever did it was probably not an expert in radiation protection , so they probably didn 't realize how much contamination you can get just by opening the top ( of the vial ) and closing it again . With the right equipment , you can detect just one count per second " .

Filmmaker and friend of Litvinenko Andrei Nekrasov has suggested that the poison was " sadistically designed to trigger a slow , tortuous and spectacular demise " . Expert on Russia Paul Joyal suggested that " A message has been communicated to anyone who wants to speak out against the Kremlin .... If you do , no matter who you are , where you are , we will find you , and we will silence you , in the most horrible way possible " .

= = Theories = =

Many theories regarding the Litvinenko poisoning circulated after his death . Circumstances led to the suspicion that he was killed by the Russian secret service . Viktor Ilyukhin , a deputy chairman of the Russian Parliament 's security committee for the Communist Party of the Russian Federation , said that he " can 't exclude that possibility . " He apparently referred to a recent Russian counter @-@ terrorism law that gives the President the right to order such actions . An investigator of the Russian apartment bombings , Mikhail Trepashkin , wrote in a letter from prison that an FSB team had organised in 2002 to kill Litvinenko . He also reported FSB plans to kill relatives of Litvinenko in Moscow in 2002 , although these have not been carried out . State Duma member Sergei Abeltsev commented on 24 November 2006 : " The deserved punishment reached the traitor . I am confident that this terrible death will be a serious warning to traitors of all colors , wherever they are located : In Russia , they do not pardon treachery . I would recommend citizen Berezovsky to avoid any food at the commemoration for his accomplice Litvinenko . "

Many publications in Russian media suggested that the death of Litvinenko was connected to Boris Berezovsky . Former FSB chief Nikolay Kovalyov , for whom Litvinenko worked , said that the incident " looks like [ the ] hand of Berezovsky . I am sure that no kind of intelligence services participated . " This involvement of Berezovsky was alleged by numerous Russian television shows .

Shortly after the incident Russian government dismissed theories of FSB involvement in the assassination using the argument that Litvinenko was " not important " and " mentally unstable " , implying that the government had no interest in killing such an insignificant figure . Eduard Limonov observed that the same argument was raised after assassination of Anna Politkovskaya , and described Litvinenko death as " very public execution " .

An explanation put forward by the Russian Government appeared to be that the deaths of Litvinenko and Politkovskaya were intended to embarrass President Putin . Other theories included

involvement of rogue FSB members or suggestions that Litvinenko was killed because of his research of certain Russian corporations or state officials , or as a political intrigue to undermine president Putin .

= = Suspects = =

#### Andrey Lugovoy

A former Federal Protective Service of Russia officer and millionaire who met with Litvinenko on the day he fell ill ( 1 November ) . He had visited London at least three times in the month before Litvinenko 's death and met with the victim four times . Traces of polonium @-@ 210 have been discovered in all three hotels where Lugovoy stayed after flying to London on 16 October , and in the Pescatori restaurant in Dover Street , Mayfair , where Lugovoy is understood to have dined before 1 November ; and aboard two aircraft on which he had travelled . He has declined to say whether he had been contaminated with polonium @-@ 210 . The Crown Prosecution Service has charged him with murder and has sent an extradition request to Russia that includes a summary of the evidence , but the only third party to have seen the extradition request , American journalist Edward Epstein , has described the substantiation as " embarrassingly thin " .

#### Dmitry Kovtun

A Russian businessman and ex @-@ KGB agent who met Litvinenko in London first in mid @-@ October and then on 1 November , the day Litvinenko fell ill . On 7 December Kovtun was hospitalized , with some sources initially reporting him to be in a coma . On 9 December , German police found traces of radiation at a Hamburg flat used by Kovtun . The following day , 10 December , German investigators identified the detected material as polonium @-@ 210 and clarified that the substance was found where Kovtun had slept the night before departing for London . British police also report having detected polonium on the plane in which Kovtun travelled from Moscow . Three other points in Hamburg were identified as contaminated with the same substance . On 12 December Kovtun told Russia 's Channel One TV that his " health was improving " .

Kovtun was under investigation by German detectives for suspected plutonium smuggling into Germany in October . Germany dropped the case against Kovtun on November 2009 ;

Vyacheslav Sokolenko : A business partner of Andrey Lugovoy .

#### Vladislav

The Times stated that the police have identified the man they believe may have poisoned Litvinenko with a fatal polonium dose in a cup of tea on the fourth @-@ floor room at the Millennium Hotel to discuss a business deal with Dmitry Kovtun and Andrey Lugovoy before going to the bar . These three men were joined in the room later by the mystery figure who was introduced as Vladislav , a man who could help Litvinenko win a lucrative contract with a Moscow @-@ based private security firm .

Vladislav is said to have arrived in London from Hamburg on 1 November on the same flight as Dmitry Kovtun . His image is recorded by security cameras at Heathrow airport on arrival . He is described as being in his early 30s , tall , strong , with short black hair and Central Asian features . Oleg Gordievsky , an ex @-@ KGB agent , has said that this man was believed to have used a Lithuanian or Slovak passport , and that he left the country using another EU passport . He has also said Vladislav started his preparations in early 2006 , " some time between February and April " , that he " travelled to London , walked everywhere , and studied everything . "

Businessman and politician Boris Berezovsky said in a police interview that " Sasha mentioned some person who he met at Millennium Hotel " , but would not " remember whether [ his name ] was Vladimir or Vyacheslav . " Litvinenko 's friend Alex Goldfarb writes that according to Litvinenko , " Lugovoy brought along a man whom [ Litvinenko ] had never seen before and who had ' the eyes of a killer . ' "

#### Igor the Assassin

The code name for a former KGB assassin . He is said to be a former Spetznaz officer born in 1960 who is a judo master and walks with a slight limp . He allegedly speaks perfect English and Portuguese and may be the same person who served Litvinenko tea in the London hotel room .

= = Other persons related to the case = =

#### Yegor Gaidar

The sudden illness of Yegor Gaidar in Ireland on 24 November 2006 , the day of Litvinenko 's death , has been linked to his visit to the restaurant where polonium was present and is being investigated as part of the overall investigation in the UK and Ireland . , Other observers noted he was probably poisoned after drinking a strange @-@ tasting cup of tea . Gaidar was taken to hospital ; doctors said his condition was not life @-@ threatening and that he would recover . This incident was similar to the poisoning of Anna Politkovskaya on a flight to Beslan . Afterwards , Gaidar claimed that it was enemies of the Kremlin who had tried to poison him .

#### Mario Scaramella

The United Kingdom 's Health Protection Agency ( HPA ) announced that significant quantities of polonium @-@ 210 had been found in Mario Scaramella although his health was found to be normal . He was admitted to hospital for tests and monitoring . Doctors say that Scaramella was exposed to a much lower level of polonium @-@ 210 than Litvinenko , and that preliminary tests found " no evidence of radiation toxicity " . According to the 6 pm Channel 4 news ( 9 December 2006 ) the intake of polonium he suffered would only result in a dose of 1 mSv . This would lead to a 1 in 20 @,@ 000 chance of cancer . According to The Independent , Scaramella alleged that Litvinenko was involved in smuggling radioactive material to Zürich in 2000 .

Boris Volodarsky , a KGB defector residing in London , stated that Evgeni Limarev , another former KGB officer residing in France , continued collaboration with the FSB , infiltrated Litvinenko 's and Scaramella 's circles of trust and misinformed the latter .

#### Igor Ponomarev

Igor Ponomarev was a Russian diplomat whose death was called a possible murder by Paolo Guzzanti .

#### Marina Litvinenko

UK reports state Litvinenko 's widow tested positive for polonium , though she is not seriously ill . The Ashdown Park hotel in Sussex has been evacuated as a precaution , possibly to do with Scaramella 's previous visit there . According to the 6 pm Channel 4 ( 9 December 2006 ) news the intake of polonium she suffered would only result in a dose of 100 mSv , leading to a 1 in 200 chance of cancer .

#### Akhmed Zakayev

The forensic investigation also includes the silver Mercedes outside Litvinenko 's home believed to be owned by his close friend and neighbour Akhmed Zakayev , then foreign minister of the separatist government in exile of Ichkeria . Reports now state that traces of radioactive material were found in the vehicle .

#### British police

Two London Metropolitan Police officers tested positive for 210Po poisoning .

#### Bar staff

Some of the bar staff at the hotel where the polonium @-@ contaminated teacup was found were discovered to have suffered an intake of polonium ( dose in the range of 10s of mSv ) . These people include Norberto Andrade , the head barman and a long @-@ time ( 27 years ) worker at the hotel . He has described the situation thus :

" When I was delivering gin and tonic to the table , I was obstructed . I couldn 't see what was happening , but it seemed very deliberate to create a distraction . It made it difficult to put the drink down .

" It was the only moment when the situation seemed unfriendly and something went on at that point . I think the polonium was sprayed into the teapot . There was contamination found on the picture above where Mr Litvinenko had been sitting and all over the table , chair and floor , so it must have been a spray .

" When I poured the remains of the teapot into the sink , the tea looked more yellow than usual and was thicker ? it looked gooey .



" I scooped it out of the sink and threw it into the bin . I was so lucky I didn 't put my fingers into my mouth , or scratch my eye as I could have got this poison inside me . "

= = Chronology = =

= = = Background history = = =

7 June 1994 : A remote @-@ controlled bomb detonated aiming at chauffeured Mercedes 600 with oligarch Boris Berezovsky and his bodyguard in the rear seat . The driver died but Berezovsky left the car unscathed . Litvinenko , then with the organized @-@ crime unit of the FSB , was an investigating officer of the assassination attempt . The case was never solved , but it was at this point that Litvinenko befriended Berezovsky .

17 November 1998 : At a time that Vladimir Putin was the head of the FSB , five officers including Lieutenant @-@ Colonel Litvinenko accuse the Director of the Directorate for the Analysis of Criminal Organizations Major @-@ General Eugeny Hoholkhov and his deputy , 1st Rank Captain Alexander Kamishnikov , of ordering them to assassinate Boris Berezovsky in November 1997 .

= = = 2006 = = =

= = = = October 2006 = = = =

7 October : The Russian journalist and Kremlin critic Anna Politkovskaya is shot in Moscow .

16 October : Andrey Lugovoy flies to London .

16 ? 18 October : Former KGB agent Dmitry Kovtun visits London , during which time he eats two meals with Litvinenko , one of them at the Itsu sushi bar ( see 1 November 2006 ) .

17 October : Litvinenko visits " Risc Management " , a security firm in Cavendish Place , with Lugovoy and Kovtun .

19 October : Litvinenko accuses President Putin of the Politkovskaya murder .

28 October : Dmitry Kovtun arrived in Hamburg , Germany from Moscow on an Aeroflot flight . Later German police discovered that the passenger seat of the car that picked him up at an airport was contaminated with polonium @-@ 210 .

31 October : Dmitry Kovtun comes to London from Hamburg , Germany . German police found that his ex @-@ wife 's apartment in Hamburg was contaminated with polonium @-@ 210 .

= = = = November 2006 = = = =

1 November : Just after 3 pm , at the Itsu sushi restaurant on Picadilly , Litvinenko meets the Italian security expert Mario Scaramella , who hands alleged evidence to him concerning the murder of Politkovskaya . Around 4 : 15 pm , he comes to the office of Boris Berezovsky to copy the papers Scaramella had given him and hand them to Berezovsky . Around 5 pm he meets with the former KGB agents Andrey Lugovoy , Dmitry Kovtun and Vyacheslav Sokolenko in the Millennium Hotel in London . He later becomes ill .

3 November : Litvinenko is brought into Barnet General Hospital .

11 November : Litvinenko tells the BBC he was poisoned and is in very bad condition .

17 November : Litvinenko is moved to University College Hospital and placed under armed guard .

19 November : Reports emerge that Litvinenko has been poisoned with thallium , a chemical element used in the past as a rat poison .

20 November : Litvinenko is moved to the Intensive Care Unit . The police take statements from people with close relation to Litvinenko . A Kremlin speaker denies the Russian government is involved in the poisoning .

22 November : The hospital announces that Litvinenko 's condition has worsened substantially .

23 November : 9 : 21 pm : Litvinenko dies .

24 November : Litvinenko 's dictated deathbed statement is published . He accuses President Vladimir Putin of being responsible for his death . The Kremlin rejects the accusation . The HPA announces that significant amounts of polonium @-@ 210 have been found in Litvinenko 's body . Traces of the same substance are also found at Litvinenko 's house in North London , at Itsu and at the Millennium Hotel .

24 November : Sergei Abeltsev , State Duma member from the LDPR , in his Duma address he commented on the death of Litvinenko with the following words : The deserved punishment reached the traitor . I am sure his terrible death will be a warning to all the traitors that in Russia the treason is not to be forgiven . I would recommend to citizen Berezovsky to avoid any food at the commemoration for his crime accomplice Litvinenko

24 November : The British police state they are investigating the death as a possible poisoning .

28 November : Scotland Yard announces that traces of polonium @-@ 210 have been found in seven different places in London . Among them , an office of the Russian billionaire Boris Berezovsky , an avowed opponent of Putin .

29 November : The HPA announces screening of the nurses and physicians who treated Litvinenko . The authorities find traces of a radioactive substance on board British Airways planes .

30 November : Polonium @-@ 210 traces are found on a number of other planes , most of them going to Moscow .

= = = = December 2006 = = = =

1 December : An autopsy is performed on the body of Litvinenko . Toxicology results from Mr Litvinenko 's post @-@ mortem examination revealed two " spikes " of radiation poisoning , suggesting he received two separate doses . Scaramella tests positive for polonium @-@ 210 and is admitted into a hospital . Litvinenko 's widow also tests positive for polonium @-@ 210 , but was not sent to the hospital for treatment .

2 December : Scotland Yard 's counter @-@ terrorist unit have questioned Yuri Shvets , a former KGB spy who emigrated to the United States in 1993 . He was questioned as a witness in Washington in the presence of FBI officers . Shvets claimed that he has a " lead that can explain what happened " .

6 December : Scotland Yard announced that it is treating his death as a murder .

7 December : Confused reports state that Dmitry Kovtun was hospitalized , the reason has not yet been made clear .

7 December : Russian Office of the Prosecutor General has opened a criminal case over poisoning of Litvinenko and Kovtun by the articles " Murder committed in a way endangering the general public " ( ????????? , ????????????? ????????????? ) and " Attempted murder of two or more persons committed in a way endangering the general public " .

8 December : Kovtun is reported to be in coma .

9 December : German police find traces of radiation at Hamburg flat used by Kovtun .

9 December : UK police identify a single cup at the Pines Bar in the Millennium Hotel in Mayfair which was almost certainly the one used to administer the poison .

11 December : Andrey Lugovoy is interrogated in Moscow by UK Scotland Yard and General Procurator 's office of the Russian Federation . He refuses to reveal any information concerning the interrogation .

12 December : Dmitry Kovtun tells a Russian TV station that his " health [ is ] improving " .

24 December : Mario Scaramella was arrested in Naples on his return from London , on apparently unrelated charges .

27 December : Prosecutor General of Russia Yury Chaika accused Leonid Nevzlin , a former Vice President of Yukos , exiled in Israel and wanted by Russian authorities for a long time , of involvement in the poisoning , a charge dismissed by the latter as a nonsense .

= = = 2007 = = =

=== February 2007 ===

5 February : Boris Berezovsky told the BBC that on his deathbed , Litvinenko said that Lugovoy was responsible for his poisoning .

6 February : The text of a letter written by Litvinenko 's widow on 31 January to Putin , demanding that Putin work with British authorities on solving the case , was released .

8 February 2007 : Update to HPA ( Health Protection Agency ) investigation of polonium 210 incident .

=== May 2007 ===

21 May : Sir Ken Macdonald QC ( Director of Public Prosecutions of England and Wales ) say that Lugovoy , should face trial for the " grave crime " of murdering Litvinenko .

22 May : Macdonald announces that Britain will seek extradition of Lugovoy and attempt to charge him with murdering Litvinenko . The Russian government states that they will not allow the extradition of any Russian citizens .

28 May : The British Foreign Office formally submits a request to the Russian Government for the extradition of Lugovoy to the UK to face criminal charges. The Constitution of Russia forbids extradition of Russian citizens to foreign countries ( Article 61 ) , so the request can not be fulfilled .

Extradition requests had been granted in the past ( For example , in 2002 Murad Garabayev has been handed to Turkmenistan . , Garabayev 's extradition was later found unlawful by the Russian courts and he was awarded 20 @, @ 000 Euros in damages to be paid by the Russian government by the European Court of Human Rights . ) Article 63 does not explicitly mention Russian citizens , and therefore does not apply to them , but only to foreign nationals living in Russia . Article 61 supersedes it for the people holding the Russian citizenship .

31 May : Lugovoy held a news conference at which he accused MI6 of attempting to recruit him and blamed either MI6 , the Russian mafia , or fugitive Kremlin opponent Boris Berezovsky for the killing .

=== July 2007 ===

16 July : The British Foreign Office confirms that , as a result of Russia 's refusal to extradite Lugovoy , four Russian diplomats are to be expelled from the Russian Embassy in London .

17 July : Russia 's deputy foreign minister , Alexander Grushko , threatens to expel 80 UK diplomats .

19 July : The Russian Foreign ministry spokesman , Mikhail Kamynin , announced the expulsion of four UK diplomats from the British Embassy in Moscow .

=== October 2007 ===

27 October : Stephen Wright and David Williams of the British Daily Mail newspaper reported that Alexander Litvinenko was an MI6 agent and was receiving a retainer of £ 2000 per month when he was murdered and that the current head of MI6 Sir John Scarlett was involved in his recruitment , quoting unnamed " diplomatic and intelligence " sources . Such claims have been denied by Marina Litvinenko and Oleg Gordievsky .

=== December 2008 ===

In a 16 December 2008 interview , when asked by the Spanish newspaper El País if Litvinenko could have been killed in the interests of the Russian state , Lugovoy ? wanted by British police on suspicion of the murder of Litvinenko ? replied that he would order the assassination of anyone , for

example , President Saakashvili of Georgia and the KGB defector Gordievsky , in the interests of the Russian state .

= = Comparisons to other deaths = =

= = Deaths from ingesting radioactive materials = =

According to the IAEA in 1960 a person ingested 74 MBq of radium ( assumed to be  $^{226}\text{Ra}$  ) and this person died four years later . Harold McCluskey survived 11 years ( eventually dying from cardio respiratory failure ) after an intake of at least 37 MBq of  $^{241}\text{Am}$  ( He was exposed in 1976 ) . It is estimated that he suffered doses of 18 Gy to his bone mass , 520 Gy to the bone surface , 8 Gy to the liver and 1 @. @ 6 Gy to the lungs ; it is also claimed that a post mortem examination revealed no signs of cancer in his body . The October 1983 issue of the journal Health Physics was dedicated to McCluskey , and subsequent papers about him appeared in the September 1995 issue .

= = Similar suspicious deaths and poisonings = =

Comparisons have been made to the alleged 2004 poisoning of Viktor Yushchenko , the alleged 2003 poisoning of Yuri Shchekochikhin and the fatal 1978 poisoning of the journalist Georgi Markov by the Bulgarian Committee for State Security . The incident with Litvinenko has also attracted comparisons to the poisoning by radioactive ( unconfirmed ) thallium of KGB defector Nikolay Khokhlov and journalist Shchekochikhin of Novaya Gazeta ( the Novaya Gazeta interview with the former , coincidentally , prepared by Russian journalist Anna Politkovskaya , who was later found shot to death in her apartment building ) . Like Litvinenko , Shchekochikhin had investigated the Russian apartment bombings ( he was a member of the Kovalev Commission that hired Litvinenko 's friend Mikhail Trepashkin as a legal counsel ) .

KGB defector and British agent Oleg Gordievsky believes the murders of Zelimkhan Yandarbiev , Shchekochikhin , and Politkovskaya and the incident with Litvinenko show that the FSB has returned to the practice of political assassinations , which were conducted in the past by Thirteenth Department of the KGB . A comparison was also made with Roman Tsepov who was responsible for personal protection of Anatoly Sobchak and Putin , and who died in Russia in 2004 from poisoning by an unknown radioactive substance .

Officers of FSB " special forces " liked to use Litvinenko photos for target practice in shooting galleries , according to Russian journalist Yulia Latynina .