

**PIM 4:
The murder/assassination of Alexander Litvinenko by 210Po poisoning.**

Alexander Litvinenko, a former Russian security officer who has died in a London hospital after apparently being poisoned, was a fierce critic of Russia's government.

Litvinenko was born in the Russian city of Voronezh, Mr Litvinenko first became a security agent in the FSB's predecessor, the Soviet-era KGB, after transferring from the military. He is reported to have fallen out with Russian President Vladimir Putin, then head of the FSB, in the late 1990s, after failing to crack down on corruption within the organization. The nature of his job, as a specialist in fighting organized crime, meant he would certainly have made enemies. Intelligence analyst Glenmore Trehear Harvey said of his friend: "He headed up one of the internal investigations branches that was looking into the corruption and coercion that was going on within the Russian intelligence service so he made a lot of enemies way back then." (1)

Mr. Litvinenko fled to the UK where he sought, and was granted, asylum. The Times newspaper reported ~~On~~ November 1st, 2006, Alexander Litvinenko, a former KGB agent, was given a dose of 210Po that resulted in his death 23 days later. Tests have established that Mr Litvinenko had a significant quantity of the radioactive isotope Polonium-210 in his body. It is not yet clear how this entered his body. Police are investigating this.

Po-210 occurs naturally and is present in the environment and in people at very low concentrations. As it emits alpha particles, Po-210 can represent a radiation hazard if it is taken into the body - by breathing it in, by eating it, or if it gets into a wound. It is not a radiological hazard as long as it remains outside the body. Because it emits alpha particles, Po-210 represents a radiation hazard if it is taken into the body - by inhalation, ingestion or through wound entry. (2)

Where does polonium-210 usually occur? It has industrial uses such as static control and as a heat source for satellite power supplies, but is not available in these areas in a form conducive to easy poisoning. It is also present in tobacco. Polonium-210 is a radioactive element derived from the natural decay of uranium, which occurs naturally in sediments present in the Lahontan Valley. There is no indication that the occurrence of Po-210 stems from any human activity in this area, all signs point to natural occurrence associated with geologic characteristics of the Lahontan Valley, and specifically to alluvial sediments derived from Sierra Nevada granites. Po-210 found in drinking-water wells, concentrations in untreated, unfiltered water collected from wells in the Lahontan Valley ranged from <0.1 to 67.7 picocuries per liter (pCi/L). The fatal poisoning of Alexander Litvinenko with Po-210 in 2006 has made the public aware that Po-210 can be acutely toxic. The amount of Po-210 that is thought to have killed Litvinenko was hundreds of millions of times greater than the amount that the public would be exposed to by drinking any well water in the Lahontan Valley. (3)