

L-R: Ev. Fedorov, V. Uglev (Assistant to Kirpichev, inventor of Novichoks) and P. Mirzayanov in front of the office of the first foreigner in the first foreigner in Moscow News Building © V. Mirzayanov

The (agent) fate of Novichok

Dr Vil Mirzayanov, Former Chief of the Foreign Technical Counter-intelligence Department at Russia's premiere chemical weapons institute, discusses a very real Cold War relic

Without any exaggeration, I can say the last 26 years of my career as a Soviet/Russian physical chemist was spent on Novichok [Novichoks are the "latest" breed of chemical agents – those developed after VX. *Ed*] and other chemical agents. Though created by Petr Kirpichev, my assistants and I developed many analytical methods for evaluating these agents in the laboratory, in pilot factories, in biological and medical studies and during field testing. The real creator of Novichok did not get a bonus, nor did

he receive a Lenin Prize. His work on Novichoks for his doctoral thesis was stolen by our institute's director, who then gave it to his own son. Back in 1983, before I understood that chemical weapons are militarily useless, there were times when the fate of particular agents really depended on my professional qualifications and integrity. At the time, military contractors were unhappy with their effectiveness and tried to discredit some of the chemical agents, to block their acceptance as weapons by the Soviet Army. A special interdepartmental commission of the Military Industrial Committee was organised, and I was the analytical chemist responsible for the analysis of all the samples from the testing chambers. My analytical methods were also used during the final stages of the

field testing of chemical weapons with A-230 and binary chemical weapons with A-232. [For more information on these agents see Mirzayanov's *State Secrets*, reviewed on page 101.]

During the final stages of the negotiations in Geneva on the Chemical Weapons Convention (CWC), I was head of the Foreign Technical Counter-intelligence Department of GosNIIOKhT, the main developer of chemical agents in the Soviet Union, and for the branches of all enterprises connected with the development and production of chemical weapons. My principal task at that time was to track and prevent traces of these agents from leaking into the environment – not for safety reasons, but to prevent foreign intelligence services from getting their hands on them. As far as I know they

The (agent) fate of Novichok

never did, probably because I was successful at my job. During this time I witnessed how the military chemical complex was developing measures to hide the Novichok agents and keep them free from future control by the treaty. Another special commission, which I was a member of, was created for this exact purpose.

Internally, I was flustered by these hypocritical policies because, despite the potential of the approaching CWC, we were already plotting against it. So I published the first of two articles in Moscow newspapers, in Kuranty in September of 1991. I was simply fired from my job for this, and it surprised many people. The KGB was caught in an awkward legal position at that time, unable to arrest me and start prosecution. The Supreme Soviet in 1990 had declared all unpublished regulations to be unlawful, depriving the KGB of the tools to start their usual job, on the basis of secret rules and secret lists of state secrets. Nevertheless, the KGB rushed to help President Yeltsin to restore its old tools and by January 1992 he had satisfied the Chekists' claim.

On September 16 1992 I published a second article in Moscow News with more information about a new generation of chemical weapons and the tricks the military chemical complex used to circumvent the CWC. The KGB got its revenge and sent me to the notorious Lefortovo Prison for disclosing state secrets. My prosecution and persecution consumed the next two and half years – time spent under house arrest, in the Matrosskaya Tishina maximum-security prison and at my closed trial. Only the constant intense pressure of the media, scientists all over the world, statesmen and human right activists succeeded in getting my case dropped. During this time, the CWC was open for signing, though none of the Novichok agents were listed. Also, there were no restrictions on any scientific research and development work in this area. I was dejected and spoke out against these flaws, but I was branded a troublemaker who was trying to derail the Convention. Influential people on

both sides of the Atlantic didn't want to be bothered.

Nonetheless, I testified before the Russian Duma on March 24 1994 about the CWC loopholes related to the Novichok binary agents. There was no reaction, but I clearly read the hostile and arrogant faces of the deputies and representatives of military chemical complex. On October 11 1994 I attended a meeting of the Duma Defense Committee about the CWC's ratification. A Colonel there, from the General Staff of the Ministry of Defense, argued that some provisions of the Convention contravened Russia's national interests. The Committee's final resolution on ratification pointed out that the CWC mostly deals with solving the problems of destroying Russia's "old and obsolete" chemical weapons arsenal. Everyone there understood that Russia had no intention of destroying the new generation of chemical weapons.

Ultimately Russia met CWC well armed and well prepared. All technical documentation of the chemical weapons factories was falsified. For instance, all documents about the real production of Substance 33 – an analogue of VX gas – were changed so they listed VX gas and its precursors in its place. Even President Yeltsin issued a decree with a list of the precursors of chemical agents prohibited for export to other countries, which did not contain the precursors of Substance 33. It is clear this loophole tempted his advisor on chemical weapons issues related to the Convention, General Anatoly Kuntsevich, to sell in 1995 several hundred kilograms of one of the precursors to Syria. Another interesting detail is that the Russians submitted VX gas to the OPCW list of chemical agents, not Substance 33. Why bother? In this way they tried to hide their stockpiles with binary weapons based on Substance 33. Perhaps my revelations helped prevent this fraud from happening.

Under these circumstances my life in Russia quickly became more dangerous, so in 1995 I immigrated to the US, where I found that Novichok

agents worried only me. Nobody was trying to solve the problem; the main issue was ratification. I supported that, because I was sure it was better to put Russia under the Convention's control. I believed that, in time, the CWC would be amended, and Novichok agents surely would be included in the Control List. I waited in vain. Even chemical disarmament was placed out of control. All of that needs to change.

Surprisingly, when I moved to the United States, the CIA was unfriendly and tried to compromise me, preventing my real contribution to this problem. Moreover, I most certainly became a target for eavesdropping by both the CIA and the KGB. Did each believe I was an agent of the other? The CIA was probably retaliating against me, because they had entirely missed Russia's chemical weapons fraud. It is also logical to suppose that over time President Bush's unlimited violations in the field of human rights were very helpful in masking the real story about chemical weapons. Sometimes I wonder if his Washington advisors were sane when they imagined Iraqis could create chemical weapons or biological agents on trucks, bouncing around in the hot desert.

In Russia, I never did reveal the name or any detailed specifications about the Novichok agents in my articles and interviews. The first person who identified the Novichok programme by its real code name was my friend Andrei Zheleznyakov in his interviews with the Baltimore Sun's reporter Will England and with Oleg Vishnyakov, a Russian reporter from Novoe Vremya.

So, what is the problem? Why are Novichok agents so dangerous? First, agent A-230, which was adopted as a chemical weapon by the Russian Army, is 5-8 times more poisonous than VX gas. It is impossible to cure people who are exposed to it. Next, agent A-232 doesn't belong to the class of phosphonates, as all other known phosphor organic chemical agents do. It is a phosphate, like many pesticides. Phosphates are not listed among the controlled chemicals on the CWC lists.

The (agent) fate of Novichok

In order to hide it more effectively, they synthesised and started producing a decoy pesticide, based on a component of the binary version of A-232. Laboratory tests at GosNIIOKhT confirmed the high efficiency of this binary of A-232, and so, on October 6 1989, the First Secretary of the Central Committee of the CPSU and future Nobel Peace Prize laureate Mikhail Gorbachev signed Resolution N 518-33 to begin mass development and testing of this agent.

It is important to remember that this happened, not in the 1970s when Americans started producing binary VX gas, but when the Geneva negotiations were close to producing the final version of the CWC and immediately after the US and USSR governments signed the Wyoming Memorandum of Understanding, on September 23 1989. Ironically, everything worked out as planned by the Kremlin with the Novichok agents; the CWC was ratified without even mentioning them or their binaries. Moreover, the CWC doesn't prohibit any scientific research and development on the creation of new chemical agents. So, they could be used as the basis for further synthesis of more potent agents, which could be tested and weaponised without using open test sites. Modern techniques don't require such costly experiments. Everything could be designed by computers and performed in laboratories. The development of nanotechnologies can contribute a lot of trouble to this area. For instance, in the 1990s there were limits to the size to which molecules of chemical compounds could be enlarged for the synthesis of more potent chemical agents, because of the insurmountable difficulties of weaponising them.

It is not surprising that GosNIIOKhT became a member of the governmental consortium "Nano". At the same time GosNIIOKhT was also included on a list of so-called system-creating enterprises of Russia, which are under governmental protection. There is no doubt this institute will not develop something for civilian purposes. For this reason, a couple

years ago the Directorate of the Chemical Troops sent young Major General Kondratiev to be the new Director of GosNIIOKhT.

Russia has changed a lot since my case was dismissed in 1994. Since then a number of scientists have been persecuted and sentenced to long prison terms (Sutyagin, Reshetnikov, and Danilov are among them) under false accusations of spying for foreign intelligence. On October 20 2002, I came as an American citizen with my wife Gale to Kazan in Russia for the presentation of my book *Challenge*. The Chekists put me under house arrest, and we spent the night in the hotel/jail. The next day I was deported from the country. Probably I was a lucky man, because they could have sent me again to Lefortovo Prison. Isn't it interesting that, despite many reports in the Russian media about this incident, no one from the American or European press reported it? Apparently America and other Western countries are already used to the bullying behaviour of the Russian dictatorship.

In spite of all that, I'd like to emphasise that the Novichok formulas and agents are not terrorist weapons. They are extremely dangerous – most likely lethal – for people who would try to synthesise or manipulate them without the help of highly experienced scientists and engineers in special laboratory installations observing extreme safety measures. Without exception, Novichok weapons cannot be used for any reason without specially trained military personnel under medical supervision. Chemical weapons (chemical agents in specially designed mines, bombs, rockets) need special launchers, and binaries need special chemical reactors. From time to time some people in the US raise the alarm about the possible use of chemical agents by terrorists. It is just evidence of their lack of specific knowledge about the details in this field. Chemical agents cannot be sent in envelopes to kill and terrorise innocent people, as someone from a bio-defence laboratory did with anthrax. This is also evidence of how such hysteria can be misused by

evil people. In connection with that, we cannot ignore the fact that the US Congress funded bio-defence laboratories a few years ago, with several billion dollars. Coincidence? Perhaps, but a very strange one when some authors are using an intimidation strategy to generate such a profit for lobbying non-existent weapons.

Historically speaking, chemical weapons have not been used by terrorists in the past, except by the Aum Shinrikyo cult in the sarin attack in the Tokyo subway in 1995. Chemical weapons are much more dangerous in the hands of governments, who have used them against their enemies in the past, as well as their own citizens. Keeping Novichok a mystery is not going to make it disappear. Those who try to scare people, saying Novichok could be used as terrorist weapons, are clearly ignorant about the nature of these agents. They can only be dangerous when a highly developed country plans, with help from loopholes in CWC, to use them for military purposes. The real danger is mostly in the "scare value," which can cost us dearly in terms of our civil and Constitutional rights.

Even so, we have to take all the steps necessary to prevent this from happening, by strengthening international regulations, verification and disarmament regimes. First, the CWC must include Novichok agents into its Control List. Then, small quantities can be synthesised to calibrate detectors. For this reason, I published their chemical formulas in my book *State Secrets: An Insider's Chronicle of the Russian Chemical Weapons Program*. It is up to the good will and determination of the states parties to the CWC to put the Novichok agents under their control. Finally, the inspection and verification problems must be resolved. If positive solutions to these problems are found and implemented, many people who supported my struggle against this evil would be happy, because the world would be safer. Only at that time will we probably be able to say: "Mission accomplished!"