

ON INTERNATIONAL COOPERATION IN NUCLEAR WEAPONS SAFETY

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Appendix I

Key Russian Leaders Involved in Nuclear Weapons Safety Cooperation

Viktor Nikitovich Mikhailov

Made a fundamental contribution to the progress of technical cooperation between RF and the United States in the areas of nuclear arms reduction and the security of nuclear weapons.

Academician of the Russian Academy of Sciences and of the Russian Academy of Rocket and Artillery Sciences, Doctor of Technical Sciences, Professor, Laureate of Lenin and State Prizes of the USSR and RF.

He was not only a scientist, a theoretical physicist, but also a farsighted statesman. In 1992, he was appointed the Head of Minatom.



Early steps in the collaborative work of experts from Minatom and the United States were made with his direct involvement. Let me cite some of his words: “The historical place of our Motherland in the nuclear age is determined by the fact that at a very early stage we shared with the United States the responsibility to ensure its security and peaceful future. In the nuclear sphere, science and politics came to be closely related.” It was due to him that the first encounters between top-secret Russian and US installations and the directors’ exchange visits in January-February of 1992 took place.

By 1993, the first 25 agreements on collaborative work were signed, with highest priority set on cooperation with the US nuclear centers. In 1994, General Agreements were signed with Los Alamos and Sandia national laboratories, in 1995 – with the Lawrence Livermore National Laboratory, and in 1996 – with the Department for military applications at Commissariat for Atomic Energy of France. The “Iron Curtain” in collaboration of technical experts was raised particularly thanks to V.N. Mikhailov’s pro-active attitude. Viktor Nikitovich believed that international cooperation between nuclear weapon designers and between politicians of nuclear countries is the way to peace. That is how he summarized his life efforts in his book, “I did everything not to let the tragedy of war happen again.”*

* V.N. Mikhailov, *I am a Hawk*, Pentland Press (May 1996)

Radiy Ivanovich Ilkayev

Academician of the Russian Academy of Sciences, Doctor of Physical and Mathematical Sciences, Laureate of State Prizes of the USSR and RF, RFNC-VNIIEF Scientific Advisor, theoretical physicist.

At the onset of international cooperation, from 1988 to 1993, he was in charge of a key R&D department, which was designing nuclear warheads and where I have been working up to now. Since 1993, he was the First Deputy for the RFNC-VNIIEF Scientific Advisor (V.N. Mikhailov). From 1996 to 2007 – Director of RFNC-VNIIEF.



R.I. Ilkaev is one of those scientists-academicians who actively promote international collaboration with the nuclear laboratories of United States, China, Great Britain and France. Under his scientific supervision, key areas of international cooperation in the field of nuclear weapons safety were defined. R.I. Ilkaev always actively supported V.N. Mikhailov in justifying the necessity of scientific and technical cooperation with the leading countries of the world. He has been the initiator of many international scientific and technical conferences, including “Scientific Khariton Readings”, “Youth in Science”, and others.

He participated in many international meetings and technical workshops, which led to significant progress in safe plutonium disposal during nuclear weapons dismantlement, in designing, constructing and commissioning the state-of-the-art fissile materials storage facility, in developing and introducing long-term storage containers for fissile materials, in equipping Russian nuclear centers with diagnostic instruments and the means of safe handling for nuclear post-accident measures.

His direct involvement contributed to a better understanding of state-of-the-art and advanced methods and techniques for improving the nuclear weapons security and their protection against accidents and terrorist acts.

Lev Dmitrievich Ryabev

First Deputy of the Chairman of the USSR Council of Ministers, ex-Minister of Medium Machine Building of the USSR, he worked as VNIIEF Director prior to that. Laureate of the State Prize of the Russian Federation.

In the 1990s, like V.N. Mikhailov and R.I. Ilkaev, he took upon himself the high responsibility for the hard-to-predict results of international cooperation between strictly classified Russian institutes and US laboratories. In the 90s, there was hardly a public official of that rank who would take such a risk.

Lev Dmitrievich, a former secretary of the Municipal Committee of the Communist party in Sarov, then a head of the Defense Department in the Gorky (now Nizhny Novgorod) Regional Communist Party Committee, was among the few who opened the “iron curtain” for cooperation among nuclear weapons specialists. In fact, the then existing information blockade was lifted due to his efforts. Immediately after the RF-US Intergovernmental Agreement on the technical information exchange in the field of safety and security of nuclear warheads came into force, the First Deputy Minister of Atomic Energy L.D. Ryabev and the US DOE Assistant Secretary V. Reis met together. Signing of the ‘Ryabev-Reis’, ‘Ryabev-Moniz’ and later ‘Ryabev-Friedman’ Agreements largely determined the success of technical cooperation between experts from Russia and the United States. He also kept an increased focus on the International Science and Technology Center (ISTC) activities. As a result, projects involving over 70 thousand scientists from Russia and the CIS were funded, which made it possible to address the non-proliferation problems and to support nuclear weapons professionals in the difficult period of the collapse of the Soviet Union.



Some Other People Involved in Nuclear Safety Cooperation

I cannot mention all of the colleagues involved in our cooperative programs. So, let me only mention a few of the most interesting moments of this interaction and illustrate them with some photos from my archive.



This was probably the first encounter in Sarov with a silver-haired tall American. In the future, he was often seen at our meetings. His name is Paul White, from LANL.



Here is another active participant in our cooperation - John Ruminer (second from right). Together with Paul White, they organized a Los Alamos workshop on protection of nuclear facilities against forest fires.



Participants of the Russian-American seminar at the House of Scientists in Sarov.
Most look pleased with the results of the meeting.



L.F.Belovodsky and V.A.Afanasev at the Los Alamos fire station during a seminar on
protection of nuclear facilities against fire.



Specialists of the Russian Federation and the United States discuss areas of cooperation.
From left, John Ruminer and Paul White.



A joyful moment. Joint documents have been successfully signed. In the foreground,
heads negotiations N.P.Voloshin and D. Beck
In the background, John Ruminer and V.A.Afanasev.
On the right, of course, Paul White.



V.A.Afanasev reports about collaborations in the field of safety of nuclear weapons to attentive listeners.



The delegation headed by VNIIEF's R.I.Ilkaev with negotiators from the United States.



I shake hands at the end of a working session, but Paul White is concerned about the next meetings.



V.N.Mihaylov, on the right, and F. Celic exchange souvenirs after the presentation of our book on "Safety of nuclear weapons in Russia."



The delegations of the Russian Federation and the United States after a successful workshop on the history of nuclear weapons.



Russian-American meeting in Vienna in the Russian office in the IAEA



Working moment during the Los Alamos workshop on protection of nuclear facilities from fire.



Discussion of results and the topics of next workshops.
On the left, RI Voznyuk, N.P.Voloshin, G.A.Smirnov and oth.
In the background, V.A.Afanasev and John Ruminer.



The Delegation of the Russian Federation on the site tour of the Pentagon