

INTERVIEW

NUCLEAR SECURITY: BEFORE AND AFTER THE MOSCOW SUMMIT

Vladimir Orlov, editor-in-chief of the Yaderny Kontrol journal, interviews Yuri Baturin, Presidential Aide for National Security.

Q. Yuri Mikhailovich, what do you think to be the crucial thing at the Moscow G-8 Summit?

A. It is important that all G-8 states realize their responsibility for strengthening security of the nuclear energy sector and the necessity of taking coordinated approaches to this problem. All G-8 leaders, not denying the need to diversify energy power resources and to continue research in the area of alternative energy options, consider the nuclear energy sector to be one of the most promising options and are rejecting "radiophobia." All of them agree that the nuclear energy sector, being one of the major energy sectors of the XXIst century, should meet ever-increasing safety requirements to rule out accidents which might result in contamination of large territories.

Finally, the fact that the Safety and Security Summit participants gathered in Moscow testifies to the fact that the principle of equal partnership, on which the G-8 is based, is becoming a reality.

Q. There have been many rumors associated with illicit trafficking in nuclear material, or just nuclear smuggling. Does Russia admit there is a problem?

A. Russia proceeds from the necessity to prevent by all possible means illicit nuclear trafficking. We admit that there is such a problem and that illicit nuclear trafficking even with small quantities of nuclear materials poses a threat. However, we believe that this phenomenon has not so far reached the level that would allow speaking of the threat of nuclear material proliferation for the purpose of acquiring weapons and that the scale of this problem has been to a large extent exaggerated by the mass media.

Given the fact that the problem of nuclear diversions concerns interests of various states and their citizens, its solution needs prompt and coordinated action of all states concerned.

Russia's Penal Code has four articles that stipulate for liability of illegal handling of radioactive substances. A special governmental commission has been set up to deal with nuclear weapons complex-related issues; *The State Program of the Russian Federation for creating and equipping with physical protection systems facilities of the nuclear weapons complex, of atomic industry, of power engineering and research facilities of the Atomic Energy Ministry of the Russian Federation and facilities of the Defense Ministry of the Russian Federation* has been worked out and has begun to be implemented, which stipulates for measures to improve physical protection at nuclear facilities. A number of laws have been adopted or are being developed, which regulate: procedures for accounting, control, storage, and physical protection of nuclear material and facilities, procedures for handling nuclear weapons and their components and for providing their safety and security during nuclear weapons production, storage and transportation; licensing procedures for granting access to nuclear materials and for operating nuclear facilities, as well as for moving, transporting and selling nuclear material; and control by law enforcement bodies and general prosecutor's office over implementation of appropriate acting laws.

This system of measures have been developed and implemented in cooperation with the Atomic Energy Ministry, the Defense Ministry, the Interior Ministry, the Foreign Economy Ministry, Gosatomnadzor, the General Prosecutor's Office, the State Customs Committee, the Federal Security Service, the External Intelligence Service, and the Federal Frontier Service.

Q. What are the first conclusions of the governmental commission?

A. According to analysis of the recently detected cases of illicit nuclear trafficking, the stolen material was not weapons-grade nuclear material. As a rule, it was natural uranium, as well as uranium dioxide containing from 2 to 4 percent of uranium-235 (in a number of cases it had a higher enrichment degree). In some cases the stolen materials were to be smuggled outside Russia.

As to the weapons-grade materials, we should point out that at Russia's nuclear facilities there is and has always been a well-adjusted and strict system of accounting, storage and protection of nuclear weapons and their components, which meets IAEA requirements and which is constantly upgraded with due consideration to the situation at a specific facility in particular and in the country in general.

Q. What about the so-called "nuclear mafia"?

A. According to analysis of data available to Russian concerned organizations, on the territory of the Russian Federation there are currently no organized criminal rings that specialize in this area only. Neither Russian, nor foreign interested organizations and agencies have so far managed to trace at least one final buyer of nuclear material. All those people involved in scandalous cases and mentioned by the press were just mediators who had nothing to do with nuclear facilities and had no idea about material they traded. So far, there have been no cases when "rogue states" showed interest in nuclear material.

It appears that these people went into this type of illegal business for profit which has been exaggerated by incompetent information and often obvious misinformation published by the press, producing an impression of an existing "black market" for nuclear material. It appears that this kind of campaign might result in an uncontrollable growth of offers for illicit market of nuclear materials and in an increase in the number of people who want to get "easy money" by all means. And one of the dangerous accompanying elements of this process might be emergence of a considerable number of radioactive substances, dangerous to people's health and to the environment.

Q. Is Russia ready for full-scale cooperation with its G-8 partners in such a sensitive area as security at nuclear facilities?

A. Russia's leadership speaks for expansion of international cooperation and coordination to combat illicit nuclear trafficking. We assume that it is a responsibility of a sovereign state that has nuclear material to provide nonproliferation, physical protection, safety and security of such material, and it is liable for consequences if its disappearance, diversion or unauthorized movement. At the same time it is necessary to assist the IAEA in using its numerous capabilities to strengthen physical protection and to improve accounting and control systems. It is important to establish cooperation and coordination between law enforcement bodies of various states. We believe that the following principles should become a basis of bilateral coordination in preventing illicit nuclear trafficking. Number one, relevant data should be confidentially transmitted. Number two, cooperation should be based only on confirmed information, including on technical expertise. Number three, information regarding specific facts of illicit nuclear trafficking should be strictly controlled and, if necessary, closed for the mass media until investigations are over. Number four, samples of intercepted nuclear material should be examined under international control in a country where this material has been supposedly stolen, since laws of many countries stipulate that samples of stolen or smuggled material should be produced as evidence in court. Number five, sting operations that provoke criminal activities should be prohibited.

Law enforcement bodies and special services of interested states should be especially careful while creating and using the so called "controlled channels for illegal supplies of nuclear materials," since this might produce an impression of an existing "black market" for nuclear material and might increase the demand for fissile material on the part of criminal rings.

Q. What is your evaluation of such contacts with the United States and Germany?

A. Russia has the most close contacts in combatting illicit nuclear trafficking with Germany. Talks between the Federal Security Service in Bonn and Moscow and further contacts with the BKA representatives have made it possible to establish an operative information exchange, to coordinate joint actions, and, finally, to uncover individual nuclear dealers and prevent their criminal activity. In addition, the joint consultations between the FSS and BND/BKA officials regarding evaluating threats in this area allowed our positions to merge for mutual understanding on a number of debatable issues to be reached.

We have been expanding our cooperation with special services in a number of the former Soviet republics — Ukraine, Belarus, Moldova, Kazakhstan and Uzbekistan. There has been consultations with officials from special services of Poland, Romania, Hungary, France and Great Britain. At the same time Russia is ready for multilateral cooperation in the area of concept development and exchange of experience of how to strengthen protection of nuclear facilities and material and to create equipment systems to control and protect fissile material.

The Group for nonproliferation, which was set up by the G-8, is also concerned with the issues of combatting illicit nuclear trafficking. At its meeting in Ottawa in October 1995, the Group adopted a program to fight this phenomenon. Within the framework of the Group, a subgroup was set up to analyze intercepted nuclear material, which has held two organizational meetings (the first was in November 1995 in Livermore, USA, and the second — in January 1996, in Karlsruhe, Germany). At the international level the cooperation is carried out within the IAEA framework. The Agency adopted a program to combat illicit nuclear trafficking, which stipulates a whole range of appropriate measures.

Q. Though the issue regarding nuclear diversions has been exaggerated by the press, there were grounds for its posing. One cannot but admit that the level of nuclear material protection, control and accounting in Russia proved to be lower than the one required by full-scale reductions of nuclear weapons and widespread dispersion of fissile materials.

A. Indeed, we have been reviewing the present system of nuclear material protection, control and accounting. It is not accidentally that Presidential Decree *On Priority Measures for the Improvement of the System of Accounting and Safeguarding of Nuclear Material* # 1923 from September 15 of 1994 was adopted and Resolution of the Government of the Russian Federation *On 1995 Priority Measures to Develop and Implement a State System of Nuclear Material Control and Accounting* # 34 from January 13 of 1995.

During implementation of these documents, the main directions were defined to improve the system of nuclear material protection, control and accounting in the Russian Federation. The following belong to them: to create a national normative-legal basis and to improve an agency one; to develop and implement the federal purpose program; to develop information software; to improve equipment; to improve systems of safety and security of nuclear materials at installations and during their transportation; to develop state and agency inspections over nuclear materials; technical control devices for technological processes, inspection services, frontier and customs controls; to improve inspection services of federal executive bodies; to provide personnel, including education programs, retraining, creation of education centers.

In addition to *The State Program of the Russian Federation for creating and equipping with physical protection systems facilities of the nuclear weapons complex, of atomic industry, of power engineering and research facilities of the Atomic Energy Ministry of the Russian Federation and facilities of the Defense Ministry of the Russian Federation*, which is now being implemented; it is proposed to include this program into the list of presidential programs. There is *The Federal Program for developing and implementing a state system of control and accounting of nuclear materials*, which is in its final stage of development. Its draft project is to be submitted to the Government of the Russian Federation in the first half of this year.

Projects of federal laws *On state regulating nuclear and radioactive safety* and *On compensation for nuclear damage and nuclear insurance* are being prepared. A Concept of the state system of nuclear material control and accounting have been worked out and Regulations for the state system nuclear material control and accounting are being developed. Basic data for creating an information system and recommendations for improvements in the structure of inspection services in the area of nuclear material control and accounting, statute and composition of an education center for control and accounting. A Concept of physical protection is being developed.

Regulations of physical protection of materials and installations in the Russian Federation prepared by Russia's Minatom in cooperation with Russia's other ministries and agencies are at the final stage of coordination. This document sufficiently encompasses provisions and recommendations contained in the Convention on Physical Protection of Nuclear Materials and in IAEA recommendations regarding physical protection of nuclear materials.

International cooperation in the area of physical protection of unsafe nuclear facilities has been primarily carried out on a bilateral basis because of the sensitive nature of information. The Russia/Germany and Russia/United States cooperation in this area has made the greatest progress.

A complex U.S./Russia program for nuclear material protection, control and accounting is currently being implemented. The joint statement *On general principles of cooperation between the Ministry of Atomic Energy of the Russian Federation and the Department of Energy of the United States in the area of nuclear material protection, control and accounting* signed in January 1996 during the work of the U.S./Russia Commission for economic and technological cooperation (the Gore-Chernomyrdin Commission) points out that the U.S./Russia cooperation on nonproliferation issues has expanded over the recent years.

Eleven largest centers and enterprises of Minatom, seven organizations that do not belong to Minatom, the U.S. Department of Energy, the U.S. Nuclear Regulatory Commission, and six U.S. leading national nuclear laboratories have been involved in U.S./Russia cooperation in this area. There are government-to-government as well as lab-to-lab U.S./Russia efforts.

At the governmental level there has been activities to upgrade systems of material protection, control and accounting at the PO [Production Association] Mayak in Ozersk city, at the Mashinostroitelnny Zavod [Machine-building plant] in Elektrostal, at the GNI NIIAR [the State Research Institute of Atomic Reactors] in Dimitrovograd, at the NPO [Research-Manufacturing Association] Luch in Podolsk, at the GNI FEI [the State Research Institute of Physics and Power Engineering in Obninsk], and at the RKP KI [the Kurchatov Institute Center], etc.

In particular, a computerized system of material physical protection, control and accounting has been developed and introduced in a production line of low-enriched uranium-based fuel at the Mashinostroitelnny Zavod [Machine-building plant] joint-stock company of Russia's Minatom (Elektrostal). Americans delivered equipment to control access to nuclear material and Russians tested it. Both sides have jointly developed requirements to equipment for a system of material physical protection, control and accounting, they considered non-destructive control practices from the point of view of material properties and procedures of physical inventory.

Specialists from Russia's Gosatomnadzor [The Federal Nuclear and Radiation Safety Authority of Russia — Tr.] and the U.S. Nuclear Regulatory Commission have made a joint inspection of material control and accounting at the joint-stock company Mashinostroitelnny Zavod [The Machine-building plant — Tr.]. At the next stage of cooperation it is planned to upgrade a production line for highly-enriched fuel for fast-neutron reactors, and to create a unified system of physical protection at the enterprise, including organization of a pass control system.

More and more direct contacts have been established between U.S. national nuclear laboratories and Russian research organizations. Cooperative efforts at the Obninsk institute and the Kurchatov institute have proved that U.S./Russia cooperation in this area could be very effective.

Q. A year has passed since the Treaty on the Nonproliferation of Nuclear Weapons (the NPT) was indefinitely extended. How much importance does Russia attach to this international document?

A. The consensus decision on the indefinite extension of the NPT has convincingly proved that it is a reliable guarantor of national and global interests regarding peace and security. It is important to continue to effectively implement the Treaty and to attract as many countries as possible to it.

Russia has been concerned that not all states in South Asia and in the Middle East have been covered by the Treaty. "Rogue states" in these regions have carried out certain nuclear activities, which could strengthen the proliferation threat and slow down the process of all states adherence to the Treaty. Unfortunately, another dangerous tendency has emerged: some East European parties to the Treaty, allegedly not understanding the letter and the spirit of this important international document, have been expressing their readiness to deploy nuclear weapons of other states on their territories.

We believe that the realization of the New York Conference decisions needs to undertake activities to prevent "spreading" of nuclear weapons into East Europe alongside with the G-8 diplomatic efforts to make "rogue" states adhere to the Treaty. At the present stage it would be reasonable to promote jointly the idea of creating regional zones free of nuclear and other kinds of weapons of mass destruction. Moreover, given the interest that the international community has shown in creating such zones at the conference. The most promising regions in this respect are the Middle East, Africa (where a nuclear-weapon-free zone has already been created) and, probably, Central Europe in the future.

In order to enhance effectiveness of the NPT, one should strengthen national systems of information control to prevent dissemination of direct or indirect information regarding nuclear weapon design and its production technologies, and to develop a global automated system of control and accounting of material that goes on the international market of nuclear materials and services. It is high time we started to develop an international agreement on a system of safeguards to non-nuclear-weapon states, which would eliminate the possibility of the use of nuclear weapons against non-nuclear-weapon states. Today the G-8 and a number of other states should join their efforts to work out an international program to reorientate specialists who design and operate nuclear weapons towards peaceful uses of nuclear energy and maintenance of the nuclear weapon nonproliferation regime.

Q. Under the Agreement on application of the IAEA's safeguards of June 10, 1985, the USSR on a voluntary basis gave the IAEA a list of peaceful nuclear installations to be placed under the IAEA's safeguards. At a number of these installations they were successfully applied. What steps will be next?

A. Russia continues close cooperation with the IAEA in the area of safeguards. In 1991 a BN-600 fast-neutron reactor of the Beloyarsk NPP, which the Agency finds interesting as a possible promising direction in development of the nuclear energy sector, was finally placed under the IAEA's safeguards. New Russian peaceful facilities were added to the list of Russian peaceful facilities, which the Agency could inspect.

The Russian Federation also assisted and cooperated with the Agency in its activities regarding safeguards by providing it highly-qualified specialists and experts to carry out inspections in Iraq within the framework of the Resolution # 687 of the UN Security Council, and to evaluate the former nuclear weapon program in South Africa. In addition, Russian experts worked in consultative groups to develop approaches to evaluate effectiveness of the safeguards application and to find out the best ways to upgrade technical safeguards means. They also took part in activities of the Standing consultative group for safeguards application.

Russia continues to contribute to technical development of safeguards through a considerable volume of works within the framework of its national program of scientific and research support of the IAEA's safeguards, which is aimed at developing ways and procedures and technical means used in safeguards. In 1990-

1994, more than 600 million rubles was spent on funding works stipulated for in the Russian national program and carried out by leading Russian research institutes and organizations, in 1995 it was 1.1 billion rubles. In 1996, it is planned to allot 1.7 billion rubles. Much importance is being given to research regarding development of methods and equipment for destructive and nondestructive analyses of nuclear material.

In the Russian Federation it has become a tradition to annually conduct international educational courses for IAEA inspectors: for beginners at the Novovoronezh NPP, and for advanced students on placing new nuclear installations under the IAEA's safeguards. In addition, Russian research institutions organize training for personnel in the area of national systems of material control and accounting.

According to Russian experts, the IAEA's new measures to enhance the safeguards system (the 93 + 2 Program) have yielded positive results, especially in the area of detecting undeclared nuclear weapon activities. The Russian Federation has been providing considerable support to the program. Research has been carried out regarding the possibility of environmental monitoring to detect undeclared activities associated with designing and testing nuclear explosive devices. There are plans to detect indications of nuclear weapon activity, to perfect methods of selection and analysis of environmental samples and to evaluate efficiency of application of this method in international safeguards.

Special interest has been drawn to the possibility of using confidential information, including information received through national intelligence services, in a control mechanism. Russian experts believe that participation of the national intelligence services in informational support of control activity is justified. They do not rule out the possibility of information exchange between special services of different states within the framework of international regimes and programs aimed at reduction of proliferation risks.

Q. As far as I can judge, a national regime of export controls has already formed up in Russia. How smooth does the dialogue with the Western partners proceed in this direction?

A. The dialogue is taking place, though one cannot call it a smooth one. The Russian Federation has been actively participating in the work of the Group for development of principles of control over nuclear export and import, as well as over export and import of dual-use equipment and material and appropriate technology used for nuclear purposes. Jointly with the other nuclear suppliers, it verifies and updates control lists.

Russia has been constantly improving national systems of export control in the area of nuclear export and export of dual-use technologies. It has been working toward unification of requirements in this area. Its export policy is based on the principle of full-scope safeguards as terms for new deliveries. Under the Russian President's Decree # 312 of March 27, 1992, in the Russian Federation it is prohibited to export nuclear products to states which have no agreement with the IAEA on application of its safeguards to peaceful nuclear activities.

In order to increase effectiveness of the control mechanism, parties of the Nuclear Suppliers' Group have been exchanging information regarding violations of the regime of dual-use materials and equipment export, information on nuclear programs of non-parties to the NPT, on cases when competent national organs refused to give licenses for dual-use materials and equipment export. Leading Western states propose to expand for this purpose exchange of information, including confidential information which is received through the use of capabilities of national intelligence services.

The Russian Federation has been consistently speaking against establishing "black lists" of states. We believe that our decisions on export to any state should be guided by the UN sanctions, by the fact of whether this state is a member to the Treaty or not, and whether it has an agreement with the IAEA on full-scope safeguards. Introduction of other limits in regard to the parties to the Treaty could undermine the regime.