

Report

The FSB and the U.S.-Russian Nuclear Security Partnership

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Russia's internal security agency—the Federal Security Service (FSB)—occupies a critical position with respect to the U.S. nonproliferation and anti-terrorism efforts in Russia. It has an important positive role in preventing nuclear terrorism involving Russian nuclear materials and facilities. It also influences U.S.-Russian cooperation by controlling its scope, as well as U.S. access to Russian nuclear facilities and personnel and information flows. An effective strategy of nuclear security cooperation with Russia must seek a better understanding of the FSB's role and modes of operation. It also must identify credible engagement options to make the FSB a helpful partner in the war against terrorism and proliferation, and lessen its resistance to cooperative initiatives.

Very little open information is available on the FSB organization and its nuclear missions. By design, it is a highly secretive, clandestine organization. The FSB's continuing evolution in response to international and domestic changes also makes it a moving target for research. Any open-source analysis is therefore somewhat speculative and is limited in its completeness and accuracy.

Given these constraints, this report seeks to explore the FSB's role in nuclear security. It begins by briefly reviewing the history of the FSB involvement in the Russian nuclear weapon program. It then discusses the FSB's structure and its major nuclear missions, including counterintelligence, information protection, and antiterrorism. Finally, the report considers options for and challenges of nuclear security cooperation with the FSB.

STATE SECURITY ORGANIZATIONS AND THE NUCLEAR COMPLEX: AN HISTORICAL PERSPECTIVE

From its inception, the Russian nuclear complex has been closely linked with the state security apparatus, known colloquially as the “organs.”¹ The Soviet crash nuclear weapons program, launched in 1945, was directed by a Special Committee chaired by Lavrenti Beria, then the head of the Soviet NKVD (People's Commissariat of Internal Affairs, a predecessor of the KGB). Beria continued to supervise the program until his demise in 1953.

NKVD generals were appointed to key management positions at nuclear research institutes and production facilities.

The NKVD also participated directly in the nuclear weapon program.² Directorate 9 of the NKVD was established to organize the production of uranium ore. The NKVD construction unit, Glavpromstroy, was charged with the construction of the Chelyabinsk-40 (currently Mayak) plutonium production complex and other nuclear facilities. The NKVD also created nuclear research and production facilities of its own. For example, the Bochvar Institute of Inorganic Materials (VNIINM), responsible for the development of plutonium production and processing technologies, was established in 1944 as the NII-9 research institute in the NKVD system (it was transferred to the nuclear weapon program in October 1945). The Soviet nuclear weapon program also benefited from the Soviet espionage effort in the United States and Great Britain.³

The NKVD and its successor organizations played a key role in nuclear safeguards and security. During the early years of the nuclear program, its primary task was to protect nuclear secrets. According to the security director of the Kurchatov Institute, which was then the centerpiece of the Soviet program,

[During the 1950s] everything was classified at Kurchatov (then LIPAN) at the OVA level [OVA—"of special importance"—the highest level of classification in Russia]. Everything was compartmentalized. There was a governmental decree to protect the institute as a vital military installation. There was a process of double selection of personnel based on: a) recommendations by those already working at the institute, and b) background investigations by the Ministry of State Security [MGB, predecessor of the KGB]. All physical protection functions (design, construction, implementation, evaluation, personnel) were carried out by the MGB. The Kurchatov institute was represented by an MGB general in the USSR Council of Ministers; there were MGB resident officers on-site; and there were supervisors for the institute at the Lubyanka headquarters. MGB officers also manned the access checkpoint at the institute's gates.⁴

This critical role of the state security organization in the Soviet nuclear program stemmed from its priority for national security, the requirement for absolute secrecy, the ability of nuclear managers with NKVD backgrounds to use their parent organization to cut through the Soviet bureaucratic morass and to get things done, and the

NKVD's vast resources, including prisoner labor (both construction workers and technical personnel), materiel, and funding.

Beria's execution following the death of Stalin in 1953, and subsequent purges of many former and active NKVD/MGB officers, reduced the state security presence in the nuclear complex. The complex itself was reorganized in June 1953 to become the USSR Ministry of Medium Machine-Building (Minsredmash, the predecessor of today's Russian Ministry of Atomic Energy, Minatom) and started to resemble other ministries of the Soviet military-industrial complex. Around that time, the Kurchatov Institute lost its status as a military installation. The state security organs no longer provided the guard force at the institute, and the position of the Kurchatov Institute representative to the USSR Council of Ministers was eliminated.

The Soviet system of nuclear safeguards and security had probably acquired its current shape by the late 1960s to early 1970s. Specialized institutes of the nuclear complex (which subsequently became the Eleron enterprise) had become responsible for designing technical security equipment and systems.⁵ At individual facilities, the responsibility for the implementation of safeguards and security had been assigned to a security department. These departments were outside of the KGB chain of command (although they presumably could include active-duty KGB officers). Regime (First) departments, also outside of KGB control, handled classified documents and implemented information protection measures. The Ministry of Internal Affairs (MVD) Internal Troops provided the protective guard force. The Second Main Directorate of the Ministry of Medium Machine-Building developed information protection and security policies and supervised their implementation. It probably had a close day-to-day relationship with the KGB.

The KGB, however, continued to play a very prominent (albeit less visible) role in the nuclear complex. It remained responsible for counterintelligence, oversight of information protection programs, and secure communications. It also conducted independent oversight, assessment, and reporting on a wide range of issues. For example, following the 1986 Chernobyl disaster, the KGB became more active in identifying safety problems, as well as in preventing and responding to catastrophic accidents at nuclear facilities.⁶ The KGB also remained responsible for the collection of foreign intelligence, including nuclear science and technology information.

THE MODERN-DAY FSB AND NUCLEAR SECURITY

The failed 1991 putsch against Gorbachev, which had the sympathy of many top KGB officers, was the beginning of the downsizing and fragmentation of the KGB. The KGB elements responsible for foreign intelligence, executive protection, secure communications, border security, and special facilities (such as underground command bunkers and secret metro lines) were transferred to the newly established Foreign Intelligence Service (SVR), Federal Protective Service (FSO), Federal Information Protection Agency (FAPSI), Federal Border Service (FPS), and Directorate of Special Programs (GUSP), respectively. The internal security element of the KGB was consolidated to what became in 1995, after several reorganizations, the Federal Security Service of the Russian Federation (Federal'naya Sluzhba Besopasnosti, FSB). In March 2003, as this article was going to print, the Federal Border Service and elements of FAPSI were folded back into the FSB.⁷

The FSB is essentially a military organization. It employs an estimated 66,000 military officers and 18,000 civilian personnel and has a complex organizational structure.⁸ The Moscow-based headquarters has a staff of 4,000 and is organized in six "linear" departments and several independent directorates. From the nuclear security standpoint, the most important of them are the Department of Counterintelligence, the Antiterrorism Department, the Department of Economic Security, the Directorate of Military Counterintelligence, and the Directorate of Licensing, Certification, and Protection of State Secrets. Responsibilities of individual departments and directorates sometimes overlap, and they often rely on the same operational and support services.

The FSB has more than 70 field offices (regional directorates, UFSBs) located in regional (oblast, krai, republic) centers. The structure of regional offices is probably similar to that of the headquarters, and their "linear" subunits (such as counterintelligence or antiterrorism subunits) work directly with the corresponding departments of the Moscow headquarters.⁹ Territorial organizations are supervised by the Moscow-based Directorate of Inspections. Regional directorates have branches (otdely) in towns and districts in their respective regions. Some of these local branches are quite small in size with a focus on a narrow set of missions. FSB offices in the ten closed nuclear cities, however, are likely to be quite large and

complex. The Directorate of Military Counterintelligence also has field offices associated with military units of a battalion level and up.

The FSB's most important missions in the nuclear area are counterintelligence (CI), information protection, and antiterrorism.¹⁰ In addition to these three primary missions, which are discussed in more detail below, the FSB has several other nuclear-related tasks. For example, the information-analytical units of the FSB's regional directorates and headquarters prepare briefings for the federal government and regional authorities on nuclear terrorism, nuclear safety, defense conversion, and information security. The FSB is also responsible for investigating nuclear-related crimes such as espionage, terrorism, or trafficking in nuclear materials.

Counterintelligence

During the Soviet era, the KGB's primary task at home was to counter espionage and subversive activities of foreign intelligence and anti-Soviet organizations. To a significant extent, detection, prevention, and disruption of foreign intelligence operations remains the FSB's highest priority. In the nuclear area, CI activities are the responsibility of several departments and directorates. The lead organization is the Department of Counterintelligence, which works against foreign intelligence operations in Russia. The Directorate of Military Counterintelligence works in military units, including the MVD nuclear protective forces, as well as units of the Ministry of Defense responsible for the use, control, safety, and security of nuclear weapons. The Department of Economic Security provides counterintelligence support to industry (Directorate P), transportation networks (Directorate T), and the MVD (Directorate M). In particular, its main task is to identify security vulnerabilities and pathways for potential loss of classified information. It also helps its client organizations to develop protocols and procedures for meetings with foreign representatives.¹¹

The FSB's counterintelligence policies and activities have a direct impact on the issue of access to nuclear facilities and personnel and thus are critical to U.S.-Russian nuclear security cooperation, including the nuclear Material Protection Control and Accounting (MPC&A) program, the Nuclear Cities Initiative (NCI) program, warhead safety and security exchanges (WSSX), and other programs. Over the past several years, since the late 1990s, these FSB counterintelligence policies have

become more restrictive. For example, according to Nikolay Zelenkin, Deputy Head of the FSB Office in Sarov,

[W]e have analyzed our activities and concluded that efforts by foreign special services to target the facility [Sarov and its nuclear facilities] have not declined but have increased considerably during the past several years. During the last 3-4 years, the U.S. Department of Energy and its major laboratories hired many people who call themselves retired military officers. . . . [They say that] they work in security, administrative or management positions in the laboratories. . . . Obviously, this is a cover. In reality, they are from special services. And because cooperation of our facilities with foreign laboratories is increasing, the main task of these "retired military" is to collect information about our facilities. Any information. Foreign special services are even interested in the economic and social situation in our city. Following a foreign delegation visit, we conduct an analysis: which questions did they ask from our facility personnel; what did they discuss; what was of interest to them? . . . Foreign special services are trying to dismantle our nuclear complex. Having analyzed prospects of foreign visits to the Avangard Plant and VNIIEF [the Institute of Experimental Physics], we adopted a more restrictive policy. This year [2001], both the Moscow headquarters and the FSB office in our town have denied access to approximately ten delegations, mainly from U.S. laboratories.¹²

Several factors have probably contributed to this stiffening CI posture by the FSB. Countering Western espionage was the *raison d'être* of the Soviet secret services, and suspicion of westerners remains deeply rooted in the FSB mindset and institutional culture. As a recent example of the influence of such views, in late 2002 the Russian government decided to withdraw from its 1992 Peace Corps program agreement with the United States in part because of FSB assertions that some U.S. volunteers were gathering intelligence on the economic and social situation in Russia's regions.

A profound belief prevails in the FSB that post-Soviet changes in Russia in the 1990s have made the country more vulnerable to espionage: Foreign intelligence services are now capable of staging operations from stations in Eastern Europe (and in cooperation with East European special services) and former Soviet republics; foreign agents can use the cover of commercial and philanthropic entities; Russian borders have become porous, and tracking foreign nationals inside Russia is virtually impossible; and the collapse of communist ideology and

economic hardships have given rise to the phenomenon of "initsiativnik" espionage, in which Russian citizens voluntarily initiate contacts with foreign intelligence agencies to sell classified information they have. The perception in the FSB is that Western intelligence services are taking advantage of these new opportunities and are increasing their collection efforts in Russia. According to an FSB analytical report from the mid 1990s, "According to counterintelligence data, foreign special services consistently and on a long-term basis target...the defense complex, and, in particular, its nuclear facilities..."¹³

The operational approach of the FSB might be partially responsible for the translation of these perceptions into more aggressive CI policies. The FSB regards its CI task as detection, prophylactic prevention, and disruption of foreign intelligence efforts.¹⁴ The first objective is to develop a comprehensive and objective picture of activities by specific foreign intelligence organizations and to identify their personnel and agents. Based on this information, FSB analysts make predictions regarding the scope and nature of foreign espionage threats. The analysis then serves to focus operational activities and evaluate results.

Detection efforts are based on foreign intelligence, informant reports, and analysis of foreign visits to sensitive facilities. Also of critical significance is the work of FSB operatives against suspected foreign intelligence officers. In particular, by analyzing their biographical data, by studying itineraries, and by using clandestine surveillance, FSB operatives seek to confirm their affiliation with intelligence services, to establish their personal weaknesses, to learn about their plans, and to detect recruitment approaches to Russian citizens, who are then thoroughly investigated (see Box 1).¹⁵ The goal is to refocus foreign espionage efforts toward low-value targets or toward satisfying the personal needs of foreign spies, and to compromise agents who are excessively active. The FSB encourages its CI personnel to conduct proactive and preemptive actions—including counterrecruitment of suspected foreign agents, diversionary actions that tie up the resources of foreign intelligence organizations, disinformation, and in the case of closed nuclear cities, denial of access.

The shortcoming of the approach described above is that projections of espionage activities, if based on a worst-case threat analysis and conservative interpretation of ambiguous indicators, result in pressure on FSB personnel to find spies and disrupt espionage operations, even if

Box 1 THE CASE OF EDMOND POPE

Edmond Pope, a U.S. citizen, was arrested in Moscow in 2000 and later convicted and sentenced to a 20-year prison term for his alleged attempt to buy reports with classified information on the technology of the high-speed Squall torpedo. He was subsequently pardoned by President Putin and sent home to the United States. The Pope case provides useful insight into FSB CI techniques.

First, the FSB determined that the Squall technology was the target of Western espionage efforts. In fact, the Russian government had already successfully prevented Canada from buying several Squall torpedoes from Kyrgyzstan.

Second, Pope appeared to be hunting Squall technology. Having learned about Pope's career in U.S. naval intelligence, and having analyzed the profile of research institutes he visited, the FSB placed him under nearly continuous surveillance during his visits to Russia.

Third, the surveillance concluded that Pope behaved in a manner consistent with that of a seasoned intelligence operative: He utilized countersurveillance (such as stepping inside the metro and immediately stepping out) when going to meetings with his Russian contacts; meeting places were selected to make FSB surveillance difficult; the most controversial report was bought informally and was paid for with cash. This behavior, and reports that U.S. naval intelligence had authorized the use of commercial cover for its operatives (Pope worked in Russia as a representative of a small company), convinced FSB investigators that Pope was a spy.

Finally, the fact that Pope brought with him to Russia a subject-matter expert, Daniel Howard Kiely, who, in the eyes of the FSB, was there to evaluate technical information and to focus the collection effort, made it a textbook example of an espionage operation as far as the FSB was concerned.

Sources: "The Secret of the 'Squall' Missile," video film, 2001; available at <<http://www.fsb.ru>>; "The Case of Edmond Pope," April 27, 2001, <<http://www.agentura.ru>>; Amy Knight, "Canada's Bear-Faced Secret: Ottawa's Efforts to Land Some of Moscow's High-Tech Torpedoes May Have Landed us in Hot Water Instead," *Globe and Mail* (Toronto), January 10, 2001; and Statement by the FSB Center of Public Relations, August 25, 2000, <<http://www.fsb.ru/press/2000/msg0825-1.html>>.

they do not exist.¹⁶ This problem is further compounded by organizational dynamics within the FSB. Russian state security agencies were seriously weakened during the 1990s. Between 1991 and 1999, the FSB went through numerous reorganizations and had eight different directors. Many of its most qualified and competent personnel have left for retirement or found more lucrative jobs in the growing Russian commercial sector. The corps of confidential informants ("neglasny apparat") has shrunk. Funding for operational activities, salaries, and social benefits for FSB officers has also been reduced. And, in the early to mid-1990s, the FSB also lost a great deal of its domestic political clout (as evidenced by the removal of the statue of Dzerzhinski from Lubyanka square in front of the FSB headquarters).¹⁷ The political resurgence of

the FSB in the last few years may have caused the pendulum to swing back. FSB CI policies have changed from being relatively liberal in the early and mid-1990s to increasingly restrictive in the late 1990s.

Russian observers point to other factors that might have prompted the FSB to adopt more aggressive CI policies.¹⁸ They suggest that the FSB may have found it politically beneficial to demonstrate its effectiveness by chasing real and imaginary spies, including journalists, scientists, and environmentalists. (In fact, for a CI officer, a successful espionage case probably represents a rare career-enhancement opportunity.¹⁹) The expansion of NATO and its 1999 bombing campaign against Yugoslavia have fostered an increase in anti-Western sentiment in Russian society, which, in turn has encouraged tougher FSB

policies toward the West. A reinvigorated role of Russian state institutions over the past few years has also meant fewer checks and balances on the FSB in Russia.

Information Protection

According to the FSB statute, one of the organization's main tasks is the protection of state secrets. The FSB is responsible for issuing licenses to and inspecting facilities that work with classified information and materials. The FSB Center for Licensing, Certification, and Protection of State Secrets has a network of regional attestation offices associated with the FSB's field offices. The licensing process involves an integrated facility assessment with a focus on a facility's information protection organization (its First or Regime department) and personnel, countermeasures to satellite surveillance and other technical intelligence means, electronic and computer security, and other related areas. Regional FSB organizations also conduct the background investigations required for granting security clearances to facility personnel and review the list of positions requiring access to classified information. At nuclear facilities, the FSB presumably directly oversees the implementation of Minatom's numerous information security programs. It also probably has an active role in ensuring the secrecy of more sensitive research and development or production projects.²⁰

The FSB plays an important role in the Interagency Commission on the Protection of State Secrets, which develops and coordinates national information protection standards and policies.²¹ The commission also coordinates classification and declassification activities, as well as expert assessments of information to be transferred to a foreign government.²²

It should be emphasized, however, that the FSB does not make decisions (nor does it generally have necessary expertise) regarding the classification and declassification of nuclear technology information. This responsibility belongs to the Minister of Atomic Energy and the heads of other relevant ministries, who, in turn, rely on their respective facilities and organizations. For example, a decision to declassify the currently secret isotopic composition of Russian weapons-grade plutonium, which would greatly facilitate U.S.-Russian cooperative projects to store and dispose of excess military plutonium, would have to be made not by the FSB, but by Minatom institutes and facilities, in consultation with the Ministry of Defense. As a result, future efforts to define the scope of and to exchange sensitive nuclear technology informa-

tion would have to be directed primarily at these two agencies of the Russian government, not the FSB.

Antiterrorism

The FSB is responsible "(in the area of its competence) for the security of defense facilities, nuclear industry and power facilities, transportation facilities . . . and other strategic facilities. . . ."²³ This mission includes both preemption of terrorist attacks (antiterrorism) and response to terrorist incidents (counterterrorism). In the Soviet KGB, the antiterrorism mission was nominally assigned to the Fifth Main Directorate, the primary function of which was to hunt political dissidents. The counterterrorism mission did not emerge until 1974, when, after the massacre of Israeli athletes during the 1972 Munich Olympics, the KGB established its own rapid reaction paramilitary capability, the A unit (also known as the Alpha group). In 1981 it was augmented by the V unit (also known as Vympel), tasked with supporting Soviet foreign intelligence operations and conducting sabotage against nuclear and other high-profile targets abroad.²⁴

The domestic antiterrorism mission, however, remained marginal until the dissolution of the Soviet Union and the outbreak of radical nationalistic movements, political instability, and organized crime. The need to revamp and strengthen Russia's policies and capabilities in this area became apparent following the botched attempt to rescue Chechen-held hostages from a hospital in the southern Russian town of Budennovsk in 1995. In response to the Budennovsk events, the FSB created the Antiterrorism Center, which included the A and V units and a support infrastructure. In 1997, the center became the foundation for the establishment of the FSB Department of Antiterrorism. (Also in 1997, the Russian government established the Interagency Antiterrorism Commission to coordinate antiterrorism activities. The Commission, chaired by the Prime Minister and, in his absence, by the Head of the FSB, involves all agencies with antiterrorism responsibilities, including Minatom.) The importance of the antiterrorism mission increased in January 2001 when the FSB was placed in charge of coordinating the Chechen war.²⁵ The October 2002 hostage crisis in a Moscow theater has probably made antiterrorism the top priority of the FSB.

At present, the Department of Antiterrorism contains several operational-investigative and coordination directorates that, presumably, are responsible for detection, tracking, infiltration, and disruption of terrorist organiza-

tions and their supply routes, as well as threat assessment and warning. The department cooperates with FSB counterintelligence and organized crime personnel (including in the Department of Economic Security) and with local law enforcement organizations. These organizations are probably particularly important to the FSB's efforts to thwart illicit trafficking in nuclear materials. For example, in 1992-1993, the FSB conducted an operation to recover approximately 100 kilograms (kg) of natural uranium stolen from the fuel fabrication plant in Glasov. In 1998, the FSB regional directorate in Chelyabinsk oblast reported that it had prevented the diversion of some 18.5 kg of highly enriched uranium from the Mayak facility in the closed city of Ozersk. In 2001, the FSB directorate in Yekaterinburg intercepted several containers of the radioactive isotope cobalt-60. (For a forensic analysis of intercepted nuclear materials, the FSB would likely place a contract with a Minatom organization such as the Institute of Inorganic Materials [VNIINM].) The Department of Counterintelligence is also a critical participant in operations against foreign-sponsored terrorist organizations.

Another critical element of the Department of Antiterrorism is the Special Operations Center, which includes the Alpha and Vypel counterterrorism units (the A and V directorates, respectively) and support services. Directorate V (Vypel) has an explicit responsibility for responding to terrorism incidents at nuclear facilities. (Directorate A focuses on terrorism against transportation and other targets; the two units conduct joint operations during particularly significant incidents, such as the October 2002 hostage crisis at a Moscow theater.) Vypel also provides mockup adversary teams for large-scale exercises to identify vulnerabilities and test the performance of security systems and protective forces at nuclear facilities. Vypel has participated in performance-testing drills at nuclear weapon production facilities, such as the Avangard plant in Sarov and the plutonium production complex in Zheleznogorsk; nuclear power plants; nuclear icebreakers; and other nuclear installations (see Box 2).

The FSB's field offices also have an important role in fighting terrorism. They conduct regional-level threat assessment and monitoring.²⁶ Preventive measures involve close cooperation with local law enforcement agencies near nuclear facilities. FSB personnel inspect storage facilities for nuclear materials and conventional explosives.²⁷ They also inspect facilities' security to verify

that technical security systems are turned on and are in operation, and that MVD guards conduct patrols and occupy fixed security posts in accordance with the security plan.

Regional directorates and some local branches have counterterrorism capabilities of their own. These could be a detachment of the Moscow-based Alpha unit, which has branches in 11 large cities in Russia, or an independent antiterrorism operational and combat team. For example, a dedicated special operations unit (formerly the antiterrorism center) is located in Sarov.²⁸

During a terrorist incident at a nuclear facility or involving nuclear assets, the head of the local FSB office (or a deputy) automatically becomes the on-the-scene commander, and FSB forces could be tasked with resolving such an incident. For example, in September 1998, the regional antiterrorism center affiliated with the FSB directorate in Murmansk conducted a hostage rescue operation at the Novaya Zemlya Test Site.²⁹ In another example, in April 1999, when an MVD soldier took a hostage in the closed city of Sarov, the negotiations and, eventually, resolution of the crisis were conducted by a senior officer from the FSB office of the Sarov MVD division.³⁰ FSB regional units are also utilized in security drills at nuclear facilities. For example, following the October 2002 Moscow theater crisis, the Alpha detachment of the FSB directorate in Nizhni Novgorod tested the security of the nuclear installations in Sarov.³¹

WORKING WITH THE FSB

Traditionally, many officials in the U.S. government have treated the FSB as a purely external factor to U.S. cooperative nuclear security efforts in Russia. This approach may be outdated in view of urgency and the significance of the post 9/11 nuclear terrorism threat. Indeed, according to Gordon Bennett of the U.K. Ministry of Defense Conflict Studies Research Centre, because of the global nature of modern crime and terrorism, "[C]o-operation with the Russian special services ceased to be an option and became a must."³²

In fact, FSB cooperation with U.S. organizations, while not visible to the public, has been in progress for several years. The FSB maintains a "real-time" communication channel with the Moscow offices of both the CIA and FBI, and, presumably, it has an official liaison officer in Russia's embassy in Washington. In 1999, the FSB signed a memorandum of cooperation in the area of counternarcotics with the U.S. Drug Enforcement Agency

Box 2**TESTING SECURITY IN SAROV**

A journalist's account of a security performance exercise in the closed city of Sarov (formerly Arzamas-16), home to the Institute of Experimental Physics (VNIIEF), one of Russia's two primary nuclear warhead design centers, and the Avangard plant, a warhead assembly/disassembly facility, provides a rare public glimpse of Vypmel's activities in testing facility security. The operation, code-named "Arzamas-16," consisted of two parts.

During the first part of the exercise, Vypmel was to infiltrate the city and to demonstrate an ability to hijack a nuclear weapon. The Phase 1 objective for the group was to develop a suitable cover and to conduct reconnaissance in order to identify a credible pathway for infiltrating the city despite aggressive efforts by the local FSB and law-enforcement elements in the area around the city to detect such reconnaissance. Vypmel operatives began the drill by setting up a small business venture specializing in children's tourism of places of worship. (There are several such tourist attractions around Sarov.) Under this cover, they established a base of operations in the nearby women's monastery, and in the course of reconnaissance, identified the Satis River flowing through Sarov's territory as a workable infiltration route for terrorists with scuba diving equipment.

Phase 2 involved an infiltration by land from a staging point some 30 kilometers from Sarov, and included bypassing technical perimeter security systems and MVD observation posts and patrols. Phase 3 involved a covert infiltration of the Avangard protected area.

The second part of the "Arzamas-16" exercise was designed to study and practice techniques of recovering hijacked nuclear weapons. The role of terrorists was played by local FSB operatives. The first drill involved recovery of a simulated nuclear warhead located in one of Avangard's warhead assembly buildings, which was occupied by a group of mock terrorists. Another drill involved retaking a railcar containing simulated nuclear warheads that had been hijacked by mock terrorists.

Source: Sergei Voronov, "Terrorists' in 'Atomic City,'" Soldier of Fortune 2 (2001).

(DEA).³³ Since the beginning of the U.S. war in Afghanistan in the fall of 2001, the FSB (in cooperation with Russian intelligence agencies) and the CIA have exchanged intelligence data to facilitate U.S. operations against the Taliban and Al-Qaeda in that country. In fact, according to its senior officers, the FSB had been calling for anti-terrorist cooperation well before the events of September 11, 2001, but its calls went largely unanswered in the United States. According to Gordon Bennett's 2000 report, "[T]he Russians [the FSB] were surprised and unhappy that the USA did not want to sign a . . . [bilateral cooperation] agreement."³⁴

Limited contacts between the FSB and the U.S. government have also taken place on nuclear matters. In 1994, during the initiation of U.S.-Russian MPC&A cooperation, Department of Energy (DOE) officials vis-

ited the FSB (then FSK) headquarters in Moscow to describe the MPC&A program's objectives and to provide assurances that it was not another U.S. espionage program. In negotiating an agreement to exchange classified information in the area of nuclear warhead dismantlement transparency, the two countries exchanged expert visits to ensure that each country could adequately protect the classified information provided by the other side.

The Russians apparently attach considerable importance to having an equal, formal relationship with their Western counterparts. Establishing and maintaining such cooperation, however, could be difficult. The problem can be illustrated by the story of cooperation between the SVR and the U.S. CIA in the early to mid-1990s.³⁵ According to Evgeni Primakov, then the SVR's director, many in the SVR were ambivalent or directly opposed to

any such cooperation. The CIA apparently also had reservations about cooperating with an organization in which the top managers were known to have (at least in the past) dedicated their careers to working against the United States.³⁶ Establishing a fully symmetrical partnership, which involves equal exchanges of sensitive information, personnel, and official visits, also presented a challenge. SVR-CIA relations were hurt badly in 1994, following the arrest of Aldrich Ames, a Russian spy inside the CIA. While the FSB generally does not conduct intelligence operations in the United States, it does often work against the United States inside Russia. For the FSB, therefore, there is an inevitable tension between cooperation with the West and its counterintelligence mission and mindset, which dictate that the West is an adversary with a hidden agenda, playing a zero-sum game with Russia.

U.S. efforts to stop the flow of Russian nuclear and ballistic missile technology to Iran demonstrate additional challenges of working with the FSB. Since the mid-1990s, the United States has provided information to the Russian government on the Iranian connections of certain Russian institutes and organizations. The FSB responded that its investigation did not detect any criminal activity by these institutes, and that the U.S. information was not specific enough to be useful. (On separate occasion(s) the FSB in fact has disrupted Iranian attempts to buy Russian ballistic missile technologies.) The U.S. intelligence community, however, has been reluctant to provide more specific data because of the fear that the FSB could tip off target institutes in Russia and thus undermine ongoing and future intelligence collection and investigation efforts. According to media allegations, rogue elements within the FSB might even have facilitated some Russian-Iranian technology deals. Indeed, while the FSB's situation might be better than that in other Russian agencies, it is not free from corruption. In one recent example, a Moscow military court convicted FSB lieutenant colonel Alexandr Mezhev in 2002 for stealing and selling more than 10,000 highly classified documents to Russian commercial entities.³⁷

CONCLUSION: CAREFUL COOPERATION

Any cooperation with the FSB needs to be built up carefully and step-by-step. The CIA and the FBI should continue information exchanges on nuclear exports, proliferation, and terrorism. It is important to improve the mechanism for exchanging sensitive data.

The DOE, which implements several large and important cooperative nuclear security programs in Russia, could also engage the FSB directly. Indeed, cooperation with the FSB might offer several important benefits. It is in the U.S. national security interest that the Russian government and its individual elements, including the FSB, are effective in preventing nuclear terrorism and nuclear trafficking. A more collaborative relationship with the FSB might also make possible a deepening of U.S.-Russian cooperation to secure nuclear warheads and materials, which is of vital importance to the United States in the post-9/11 era.³⁸

If a political decision was made to undertake such activity, the DOE could begin by signing a memorandum of cooperation with the FSB. Protection of nuclear materials and nuclear power plants as a part of the ongoing U.S.-Russian MPC&A program would be the least controversial and the most natural venue of cooperation, and would be in line with the increasing level of bilateral interactions under the U.S.-Russian working group on antiterrorism. In particular, the two organizations could explore the possibility of unclassified exchanges on performance testing methodologies, threat assessment, and design basis threat development. Although the FSB's suspicions would probably never entirely go away, such initial cooperation might alleviate some of its concerns and provide opportunities for engagement on other critical issues.

¹ The internal security organization in the Soviet Union and Russia has a long history of restructuring and renaming. The principal incarnations have included: VChK (All-Russian Extraordinary Commission, 1917-1922); GPU (State Political Directorate, 1922-1930); OGPU (Joint State Political Directorate, 1930-1934); NKVD (People's Commissariat of Internal Affairs, 1936-1943); NKGB (People's Commissariat of State Security, February-July 1941 and 1943-1946); MGB (Ministry of State Security, 1946-1953); MVD (Ministry of Internal Affairs, 1953-1954); KGB of the USSR (Committee of State Security, 1954-1991); Interrepublican Security Service, KGB of Russia, and AFB (Agency of Federal Security, 1991); MB (Ministry of Security, 1992-1993); FSK (Federal Counterintelligence Service, 1993-1995); FSB (Federal Security Service, April 1995 to present). Russian Federal Security Service, "Istoricheskaya spravka ob organzkh gosbesopasnosti," <<http://www.fsb.ru/history/organi.html>>.

² See, for example, Arkadi Kruglov, *How the Soviet Atomic Industry Was Created* (Moscow: CNIIAtomInform, 1995).

³ *Manuscript on the History of the Soviet Nuclear Weapons and Nuclear Infrastructure*, Technical Report, ISTC Project 1763, Analytical Center for Nonproliferation, The Institute of Experimental Physics (VNIIEF), Sarov, Russia, 2001.

⁴ Nickolai Bondarev, "Physical Protection Concept for Kurchatov Institute," paper delivered to the Nonproliferation Conference, sponsored by the Russian Nuclear Society, Moscow, May 1996.

⁵ The nuclear complex became involved in the development of technical security systems in 1963. In 1968, Minsredmash (Minatom's predecessor) became the lead agency for the development of such equipment for the KGB. This work has since been conducted in close cooperation with the KGB (and its successor organizations). Eleron was established in 1989 on the basis of previously existing

Minsredmash organizations. See "Evgeni Trofimovich Mishin is 80," *Atompressa* 26 (July 2000).

⁶ This activity, however, was deemphasized in the early 1990s. See Iosif Legan, *KGB-FSB: Looking from the Inside*, vol. 1 and 2 (Moscow: Tsentrkniga, 2001).

⁷ Vadim Solovyev, "FSB Acquires Leading Roles," *Nezavisimoye Voennoye Obozrenie*, March 14, 2003, <nvo.ng.ru/armament/2003-03-14/1_fsb.html>.

⁸ Vladimir Urban, "Dead Bayonets," *Noviye Izvestia*, January 16, 2003.

⁹ Legan, *KGB-FSB: Looking from the Inside*.

¹⁰ The FSB's structure and missions have been evolving in response to the changing economic, political, and threat environments in Russia. The political police function has been scaled down. Some new missions include antiterrorism, counternarcotics, organized crime, arms trafficking, and economic security. *Statute and Structure of the FSB of Russia*, Russian Presidential Decree No. 633, June 23, 1995, <http://www.fsb.ru/under/pologen.html>.

¹¹ Legan, *KGB-FSB: Looking from the Inside*.

¹² Natalia Kocheshkova, "The Issue of Statehood," *Gorodskoy Kuryer* (Sarov), December 20, 2001.

¹³ Anatoli Elizarov, *FSB Counterintelligence Against the World's Leading Intelligence Services* (Moscow: Gelios, 1999), p. 22.

¹⁴ This analysis of FSB CI methodology is based on Legan, *KGB-FSB: Looking from the Inside*.

¹⁵ *Ibid.*

¹⁶ For example, there is a risk that a person who tends to check his inside pockets frequently could be suspected of operating a clandestine electronic device; in the same way, a person who frequently looks behind himself or herself could be suspected of countersurveillance.

¹⁷ The decline in morale of state security officers in the early 1990s is discussed in Amy Knight, *Spies Without Cloaks* (Princeton: Princeton University Press, 1996).

¹⁸ Irina Borogan, "Yuri Schekochikhin: 'This Imitation of Activity is Confusing to Me,'" December 18, 2001, <www.agentura.ru/experts/shekochihin/>.

¹⁹ According to Nikolai Patrushev, current director of the FSB, KGB academy mentors during the Soviet era used to say to their students that "[I]f some of you during your KGB career...will participate in an espionage case...consider yourself lucky..." Patrushev was quoted in "We Serve Russia," *Literaturnaya Gazeta*, December 18, 2002.

²⁰ For example, in the 1970s, the KGB directed the head of the KGB office in Sarov to take personal responsibility for the secrecy of the VNIIEF project to develop a warhead for the SS-20 missile. Anatoli Veselovsky, *Nuclear Shield* (Sarov, Russia: VNIIEF, 1999).

²¹ The FSB Director is one of the two deputy chairs of the Interagency Commission. (The Commission's chairman is the First Deputy of Prime-Minister; its other deputy is the Chairman of GosTechCommission) The FSB Deputy Director, along with the Minister of Atomic Energy and the heads of other power agencies, is a member of the commission. *Statute of the Interagency Commission on the Protection of State Secrets*, Presidential Decree No. 71, January 20, 1996, in *State Secrets in the Russian Federation* (St.Petersburg: St.Petersburg University, 2000).

²² Any such information must be prepared and evaluated according to the "Rules

of Preparing State Secret Data for Transmission to a Foreign Government," Edict of the Government of the Russian Federation No. 973, August 2, 1997.

²³ *Statute and Structure of the FSB*, Russian Presidential Decree No. 633.

²⁴ After the 1991 putsch against Gorbachev, Vypfel was transferred out of the KGB into the Presidential Security Service. Following its refusal to attack the Russian Parliament during the October 1993 standoff between President Yeltsin and the parliament, Vypfel was transferred into the Ministry of Internal Affairs (MVD). Vypfel was returned to the FSB in 1995.

²⁵ It is expected that in 2003-2004, the responsibility for the Chechen operation will be assigned to the MVD. See, for example, Vadim Udmatsev, "First-Hand: We Train Universal Soldiers," *Nezavisimoye Voennoye Obozrenie*, November 1, 2002.

²⁶ For example, according to Colonel Yuri Kornev of the FSB regional directorate in Nizhni Novgorod, the FSB's analysis indicates that critical strategic installations could be targeted by foreign terrorist organizations from Lebanon, Iraq, Turkey, and India. The principal threat, however, originates from Chechen operatives and Islamist groups in the North Caucasus. Yuri Kornev, "Urgent Problems of the Counterintelligence in the Fight against Bandit and Terrorist Activities," in *Counterintelligence: Yesterday and Today* (Velikii Novgorod: UFSB of the Nizhni Novgorod Region, 2000), pp. 82-88.

²⁷ Natalia Kocheshkova, "The Issue of Statehood," *Gorodskoy Kuryer* (Sarov), December 20, 2001.

²⁸ "Special Service Strengthens Positions," *Gorodskoy Kuryer* (Sarov), November 2, 2000.

²⁹ Vladimir Anufriev, "Details: Terrorist Beyond the Polar Circle," *Rossiiskaya Gazeta*, September 10, 1998. According to this account of the incident, six Russian servicemen being punished for misconduct killed a guard, took another guard hostage, and subsequently took 40 children and nine teachers in a local school as hostages. Two of the criminals surrendered shortly; the rest, all of whom were from the North Caucasus, requested weapons and an airplane to fly to Makhachkala, Dagestan. FSB special forces freed the hostages and captured the hostage takers as they were preparing for departure.

³⁰ Natalia Kocheshkova, "Takedown," *Gorodskoi Kuryer* [Sarov], April 22, 1999.

³¹ "They Tried to Place a Bomb," NTA Privolzhye, November 11, 2002, <http://www.nta-nn.ru/?id=12127>.

³² Gordon Bennett, *The Federal Security Service of the Russian Federation* (Surrey, U.K.: Conflict Studies Research Centre, March 2000).

³³ Vladimir Zuba, "The Main Thing is to Preempt Terrorists," *Nasha Vlast* 1 (January 2000).

³⁴ Bennett, *The Federal Security Service of the Russian Federation*.

³⁵ See Evgeni Primakov, *Years in the Big Politics* (Moscow: Sovvershenno Sekreto, 1999).

³⁶ Gordon Bennett, *The SVR, Russia's Intelligence Service* (Surrey, U.K.: Conflict Studies Research Centre, March 2000).

³⁷ "[He] Was Selling Secrets," *Nezavisimoye Voennoye Obozrenie*, March 7, 2003.

³⁸ For a discussion on the urgency of nuclear security efforts in Russia, see Matthew Bunn, Anthony Wier, and John P. Holdren, *Controlling Nuclear Warheads and Materials: A Report Card and Action Plan*, (Cambridge: Harvard University, March 2003), <www.nti.org/cnwm>.