

CHERNOBYL

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USSR — A DOSIMETER FOR EVERY DACHA

MUNICH, JULY 3 (NCA) — THE FOLLOWING ARTICLE APPEARED IN THE JULY/AUGUST EDITION OF THE AMERICAN JOURNAL "BULLETIN OF THE ATOMIC SCIENTISTS":

by Gabriel Schoenfeld

IN THE RECENT ELECTION campaign for the Soviet Congress of People's Deputies, one candidate, Mikhail Lemeshev, a U.N. environmental expert, advocated supplying radiation dosimeters to the Soviet population because the Soviet Union is "essentially an ecological disaster zone." The deputy chairman of the Soviet National Commission for Radiation Protection concurs: Academician L. Buldakov wants everyone to "have an opportunity to take his own dose readings." The laboratory chief of the Institute of Biophysics suggests that "an individual dosimeter must be kept in every apartment like a medical thermometer." According to the newspaper *Moskovskie Novosti*, the Institute of Atomic Energy has designed a "reliable, comfortable, attractive and inexpensive individual indicator" for personal use. Despite opposition from some quarters, according to Buldakov, orders have already been sent to the relevant ministries, including the Ministry of Medium Machine Building, responsible for nuclear weapons production, for the manufacture of individual dosimeters for sale to the public. Several thousand of the instruments are being produced in Leningrad and should be available by next year.

The high-level proposal to provide radiation-measurement devices to the population and the popular response to this proposal provide striking testimony to the extraordinary radiation situation that currently prevails in the Soviet Union. The demand for dosimeters stems in part from widespread fears that official monitoring of radiation from the Chernobyl accident is woefully inadequate. There are data to support these fears: *Moskovskie Novosti* reported on April 30 that more than 23,000 officials involved in monitoring the radioactive consequences of Chernobyl were fined, 5,500 were fired, and 2,000 administrative cases were initiated for violations in areas "with complex radiation circumstances."

But nuclear fears have not arisen solely from the Chernobyl accident. Radiation problems appear to stem from multiple sources, although Soviet information controls make it difficult for outside observers to assess their scope and seriousness. Details of the environmental problems were initially based on reports from recent émigrés interviewed by the staff of Radio Liberty.<sup>1</sup> Some of the charges have now begun to be echoed in the Soviet mass media. While there are still no independent means of verifying the details of the émigré reports or assessing the competing assertions about radiation contamination that appear in the

*Gabriel Schoenfeld is a doctoral candidate at Harvard University's Russian Research Center in Cambridge.*

Soviet press, the accumulating evidence strongly suggests that something has gone terribly awry in the Soviet processing and handling of radioactive materials.

THE EMIGRES REPORT a major health crisis stemming from unsafe uranium mining, processing, and waste disposal, and from radiation leaks associated with Soviet nuclear weapons manufacturing, storage, and testing. The accounts suggest that fruit, vegetables, and livestock grown in affected areas continue to be sold.<sup>2</sup> Some assert that the Soviet Ministry of Health and the KGB have tried to cover up the health consequences of the widespread radiation exposure as well as continuing health problems brought on by Chernobyl. The 1985 CIA *U.S.S.R. Energy Atlas* shows that most of the Soviet uranium mining and processing industry is located in Central Asia, near some of the cities, Karaganda and Ust-Kamenogorsk among others, where the émigrés say problems exist. A major nuclear test site, Semipalatinsk, is also located in this part of Central Asia.

The doctor in charge of Byelorussia's newly created radiological medicine research institute has confirmed one of the most disturbing elements of the émigré accounts, that radioactive produce is being brought to some markets. In a recent interview published in *Semya*, the doctor warned that "many people think that everything is okay, that one can eat

*"Radioactive meat is 'diluted' with clean meat, so the radioactivity of the boiled sausage does not exceed the natural background level."*

and do as one pleases. This impression is very mistaken." A letter published in *Ogonyok* on April 15 reported that radioactive meat from Byelorussia is marketed with the assurance that "after processing into sausage the output is absolutely innocuous for health." The journal *Sobesednik* reported in April that as a consequence of the presence of radioactive meat, a strike erupted at the Lenmyasokombinat meat processing plant. But the director of quality control at the plant declared that there is "no serious cause for alarm." According to him, radioactive meat is "reprocessed with special technology that lowers the concentration of radionuclides. The resultant hash is 'diluted' with clean meat so that the radioactivity of the boiled sausage (for example, 'Prima,' 'Stolichnaya,' 'Podmoskovskaya') does not

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exceed the natural background level." Whatever the source of the radiation—Chernobyl, the military, or industry—accounts of contaminated foodstuffs on sale to the public can no longer be dismissed as purely speculative.

**THE PREVALENCE OF** concerns about radioactive contamination is demonstrated by several recent steps taken by Soviet authorities in an effort to defuse mounting anxiety about both radiation pollution and the climatic and seismic effects of nuclear testing. The "Nevada" society, an unofficial group opposing nuclear testing, is active in Kazakhstan. The head of the society, the Kazakh poet Olzhan Suleimenov, has said that his organization's objectives are to "close nuclear test sites down, to begin work to phase out the plants which produce nuclear materials for military purposes, and to carry out public inspections of stations for the dumping of radioactive wastes." Because it also calls on Americans to "direct the entire power of their social influence towards banning nuclear tests in Nevada," the society is tolerated and perhaps even officially encouraged.

Suleimenov and other members of the public were given a tour on March 22 of the Semipalatinsk test site, near what the newspaper *Komsomolskaya Pravda* describes as "the scene of the last powerful explosion, and measurements were taken before their eyes." An official of the Ministry of Health Institute of Biophysics stated that the radiation levels at the site were within the normal range and three to four times lower than those at the U.S. Nevada test site. Another Soviet specialist offered reassurance that "medics constantly monitor people's health, the frequency of oncological diseases, longevity, and 'ordinary' illnesses. No changes have been recorded."

In May, however, the press agency Tass conceded that on February 12 of this year a serious leak occurred following

an underground nuclear blast at Semipalatinsk. As a result, the nearby settlement of Komsomolski received a dose of gamma radiation that "did not exceed 3 percent of the annual dose from natural background, which is absolutely safe in terms of health." Because of this accident a state commission studying the radiation picture near Semipalatinsk has recommended reducing both the quantity and yield of underground nuclear explosions at this site.<sup>6</sup>

Soviet officials have discounted fears about seismic effects from underground nuclear testing. The city of Rubtsovsk, also located near the Semipalatinsk test site, recently experienced damage to its water supply network that was popularly believed to be the consequence of tremors generated by an underground nuclear explosion. But Lt. Gen. Sergei Zelentsov, deputy chief of a Ministry of Defense main directorate, said an inspection of Rubtsovsk showed that the water problems were due to "mismanagement and negligence by the relevant services." Zelentsov explained that the magnitude of the tremors generated by nuclear tests are "insignificant" and "comparable to the tremor experienced by a railway station when a train passes by."

Soviet authorities have begun to make an effort to reassure the public regarding the dangers of uranium processing. A uranium combine in Central Asia, the last "blank spot" on the map of Kazakhstan, was recently stripped of its secret status and Soviet journalists were invited to visit it. On March 8, the morning edition of *Izvestiya* reported the reassuring news that as demand for uranium declines, the uranium refinery is gradually being reoriented to produce fertilizers, precipitate for livestock, and vegetable preservatives. The Soviet announcement of a moratorium in the production of enriched uranium, a step connected to arms control diplomacy, may have the bonus dividend of calming public anxiety.

**THE SOVIET UNION** has long been secretive about nuclear affairs and has shown a deplorable lack of respect for the dangers bound up in the atom. Soviet émigré geneticist Zhores Medvedev's account of a nuclear disaster in the Urals in the late 1950s has only now been obliquely confirmed in the Soviet press. A decade ago, one Soviet engineer

man cavalierly declared that the problem of low- and medium-level radioactive waste disposal is "regarded as solved in the Soviet Union." Another Soviet specialist has advocated locating nuclear power stations near cold northern lakes, because raising their water temperature by a few degrees "would be beneficial to the fishing industry, and would make life pleasanter for the people living in the vicinity."<sup>7</sup>

The nightmare of Chernobyl forced the Soviet leadership to awake from this extraordinary lassitude, but even now the Soviet press offers abundant evidence of recklessness with nuclear materials. Boris Kurkin, a lecturer for the Ministry of Internal Affairs, claims "there are unmarked burial sites containing radioactive waste from production, science, and medicine—various ampules, flasks, gowns, and a host of other 'contaminated' items—near virtually every major industrial center. People do not know about them. They cut grass nearby, graze livestock, go out and enjoy nature."<sup>8</sup>

Kurkin's claim is supported by a wealth of radiation horror stories from a variety of sources. On May 13 the newspaper *Sotsialisticheskaya Industriya* revealed that close to the polytechnical institute in the Siberian city of Irkutsk, radioactive wastes were found buried under a spot where "mushrooms had grown luxuriously; the experts had considered this patch to be their 'own' and 'specially fed.'" The official in charge of the cleanup commented: "I am forbidden to give information, there is an order on this from Comrade Platonov." The Latvian newspaper *Sovetskaja Latvija* has disclosed that an ampule containing a radioactive substance was carelessly discarded in a Krasnoyarsk schoolyard, leading the local population to demand that the school be closed and the food in its cafeteria be destroyed. An ampule containing gamma-ray-emitting iridium 192 was "lost" along the site where the Gazli-Chimkent pipeline is being constructed. An investigation is being conducted by the Soviet procurator to find out who buried radioactive substances on the grounds of a Kirovograd reinforced concrete plant.<sup>9</sup> Schoolchildren on an excursion near the Far Eastern city of Khabarovsk wandered unwittingly into a forgotten and unguarded nuclear waste dump formerly used by the "Radon Enterprise."<sup>10</sup>

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An incident near Moscow is particularly revealing. Geologists carrying out "radiation monitoring" near the town of Mytishi last year discovered that gloves contaminated with radiation had been tossed into a public toilet, contaminating "four anomalous points, each several square meters in size." Why radiation was being monitored in this area was not disclosed, but it is known that in the 1940s and 1950s nuclear waste was routinely deposited in dumps surrounding Moscow. These dumps were subsequently "liquidated, buried with soil," but the plans that indicate their locations "cannot be found." As the territory surrounding Moscow is developed, sanitary inspectors and geologists must check new construction sites with radiometric devices.<sup>10</sup>

The Soviet practice of taking spent nuclear fuel from the Eastern bloc countries and Finland for burial on Soviet territory, and proposals to take even more nuclear waste from Western countries in exchange for scarce hard currency, are also feeding anxieties and popular discontent. According to one estimate from the Soviet press, the Soviet Union already receives annually an average of nine tons of nuclear waste from abroad for disposal. There are complaints that the Soviet Union asks its foreign partners for "less in payment for this 'service' than China had done."<sup>11</sup> While the current burst of openness about this and other problems stemming from nuclear power shows that the Soviet authorities have summoned the courage needed to hang their contaminated laundry in public, they still have a long way to go in cleaning up their nuclear mess. □

1. Soviet Background Notes, prepared by Soviet Area Audience and Opinion Research of Radio Liberty/Radio Free Europe (March, April, Aug. 1988).
2. Gabriel Schoenfeld, "A Secret Soviet Disaster?" *Washington Post*, March 5, 1989.
3. Foreign Broadcast Information Service, "Tass in English," March 22, 1989.
4. Foreign Broadcast Information Service, "Tass in English," May 17, 1989.
5. Boris Belitsky, "Removing Radioactive Rubbish in the U.S.S.R.," *New Scientist* (Feb. 26, 1976).
6. *Komsomolskaya Pravda*, May 5, 1989.
7. *Sovetskoe Letvite*, Dec. 25, 1988.
8. *Moskovskie Novosti*, April 30, 1989.
9. *Moskovskie Novosti*, Aug. 24, 1988.
10. *Moskovskie Novosti*, April 30, 1989.
11. *Komsomolskaya Pravda*, May 5, 1989.

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