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HOW GREAT IS SOVIET CITIZENS' FEAR OF NUCLEAR RADIATION?*

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The increasing number of nuclear power plants that are springing up near large centers of population in the USSR and the extensive use of radioactive substances in the economy appear to be evoking growing anxiety about the real or imaginary dangers of exposure to radiation among the Soviet population. This uneasiness is heightened, in part, by reports reaching the Soviet Union of protests staged by antinuclear movements in the West and by accounts of minor mishaps at nuclear plants there. Instruction in protection against nuclear contamination, which forms a part of Soviet civil defense measures, may also contribute to the population's fears. Because of the restricted flow of information, the anxiety that exists on this score is reflected most clearly in numerous letters addressed to newspapers and in questions put to lecturers who speak publicly on the subject of nuclear energy. From time to time these are reproduced and commented on in the press.

The newspaper Trud recently published some rather interesting excerpts out of letters from people worried about radiation and asked Professor P. V. Ramzaev, a well-known Soviet specialist in the field who is director of the Leningrad Radiation Hygiene Research Institute, to comment on them.¹ The editors pointed out that they had recently received quite a number of letters asking how serious a danger of radiation leakage was posed by the large-scale construction of nuclear power plants and the widespread use of ionizing radiation in the economy. The selection of excerpts suggest that the editors were trying to present the most typical misgivings of people in various jobs and thereby provide reassuring answers to the greatest possible number. Despite official assurances, many people who live relatively close to nuclear power plants are worried about the possibility of accidents. M. Terent'ev, a welder from Sverdlovsk, wrote, for example:

* Translation of RS 187/82.

1. Trud, September 29, 1982.

Several years ago, an accident occurred at an American nuclear power plant. This showed that nuclear power plants are not as irreproachable from the safety standpoint as is often claimed. And who can guarantee that the same thing will not happen at one of them at some inopportune moment?

M. Kravchenko, as operator of a gamma-ray defect-finder in a shipyard, asked how justified is the widely held opinion that on his job radiation leaks are inevitable irrespective of what precautionary measures are taken. Radiologist L. Shvedov raised the question of the amount of harm that can be done by frequent use of radioactive isotopes in diagnosis and the use of X-rays on every conceivable occasion, whether necessary or not. This is, no doubt, a matter of considerable concern to many patients as well as to radiologists.

Perhaps the most interesting item of all was a statement by L. Fomichev, a brigade leader working on the construction of the Smolensk nuclear power plant, about rumors and lack of information. It tends to refute official claims that the general public is quite unconcerned about the proximity of nuclear power plants. It has been customary to portray the scene as one in which people come to swim and fish in the cooling ponds of the plants and there are market gardens right beside them. Fomichev presents a somewhat different picture:

It is known that a health protection zone is set up around every nuclear plant, but at almost the same time, if not sooner, another "zone," sometimes comprising the most absurd rumors, comes into existence. It extends so far that people stop buying vegetables and fruits if they are raised in an area where a nuclear power plant is located. Could not the experts be asked to be a little more forthcoming about what goes on at these plants, so that there would be less idle conjecture?

Professor Ramzaev's brief comments on these and other questions are conspicuously evasive. By citing statistics on permissible doses of radiation, he is appealing primarily to people's reason and can thus hardly exert any influence on the population's growing feelings of anxiety and fear. The conclusions with which Professor Ramzaev ends his commentary sound somewhat less than convincing:

All in all, while the danger of radiation that has been engendered by our age can in no way be underestimated, it should also not be exaggerated. It calls for the sober view of an individual who is well informed about all the plusses and minuses of radioactivity. Today we are taking the first steps towards the extensive use of sources of

ionizing radiation. And, if you will excuse the possibly awkward choice of words, we are "greenhorns" in this area. Radiation hygienists know that "greenhorns"--that is, people who have been working with sources of ionizing radiation for from one to ten years--are inclined to exaggerate the risks their work entails.

Much the same sort of questions were asked by members of the audience at a lecture in the central lecture hall of the "Znanie" society at which I. Emel'yanov, a corresponding member of the USSR Academy of Sciences, spoke on the development of nuclear energy. Among the topics that recurred were the anti-nuclear movement in the West; public opposition in the West to the development of nuclear energy; the safety of employees of nuclear power plants and the surrounding population; the possibility of genetic consequences; and the fact that "some people think" a nuclear power plant could under certain conditions explode like a nuclear bomb. Two subjects that were not considered in Trud were brought up with Emel'yanov: the increased danger of the proliferation of nuclear weapons as the number of nuclear power plants grows, and the problem of disposing of nuclear waste.² This last issue is gaining in urgency in the USSR. A recent issue of Argumenty i fakty, an instructional bulletin published by "Znanie" for propagandists, contained a set answer to questions regarding disposal of nuclear waste, including the assertion that "a sufficiently reliable system has been adopted" in the Soviet Union for its harmless disposal.³

The population's growing interest in the safety of nuclear power plants is incidentally calling attention to the catastrophic shortage of labor on the sites of a number of these plants. In order to avoid failure to fulfill the plan, the construction organizations at the Kostroma, Balakovo, Tatar, and Bashkir nuclear power plants are having to advertise in newspapers in an attempt to recruit workers (both men and women) from Kirghizia and Uzbekistan.⁴ While workers on nuclear power plant construction sites are obviously not exposed to radiation, disquieting rumors and "negative public opinion" could affect recruitment, and nervousness can produce strange results. Workers engaged in the construction of the nuclear icebreaker Lenin were, for example, said to be experiencing symptoms of "radiation sickness" long before any nuclear fuel had been placed in the vessel's reactor.⁵

2. Literaturnaya gazeta, No. 9, 1982, p. 10.

3. Argumenty i fakty, No. 32, 1982, pp. 29-30.

4. Pravda Vostoka, September 14, 1982; Sovetskaya Kirgiziya, September 26, 1982.

5. Radio Moscow-2, 2000, December 18, 1979.

Numerous organizational and technical troubles that would be considered normal on conventional construction sites but can hardly be tolerated where nuclear energy is involved are also casting a cloud over nuclear plants now under construction. A correspondent of the newspaper Sovetskaya Rossiya at the site of the Balakovo nuclear plant describes how the chief engineer of "Saratovgesstroi" showed a USSR deputy minister of ferrous metallurgy "a piece of puff pastry made of steel" and felt obliged to point out that all the material for the nuclear power plant was similar. The correspondent also cites the words of the chief engineer to a representative of the firm supplying pipes for Balakovo:

We examined your pipes with ultrasound-- complete junk. There are even defects that can be seen with the naked eye. Moreover, the metal is not of the specification called for in the plan. After all, it is a nuclear plant!6

--Sergei Voronitsyn

6. Sovetskaya Rossiya, May 30, 1982.