Information on the need to ensure effective control over the environmental situation in the northern districts of Kiev Region, which suffered as a result of the Chernobyl accident

April 17, 1991
Secret

On Some Problems in the Northern Districts of the Kiev Region Affected by the Chernobyl Nuclear Power Plant Accident

The KGB Directorate of the Ukrainian SSR for Kiev and the Kiev Region, in the course of implementing security measures, analysed some of the problems that arose in the northern districts of the Kiev Region as a result of the Chernobyl Nuclear Power Plant accident. The total area of the northern districts of the Kiev Region (Polessky, Ivankov, and Vyshgorod), after the exclusion of some territories within the 30-kilometer zone, is 338,094 hectares. More than 150,000 people live in these districts, including more than 20,000 children under 14.

Economic activity in the districts is primarily related to the production of grain crops, vegetables, and livestock farming.

Almost the entire northern districts of the Kyiv region were contaminated (April-May 1987) by wind-blown radioactive emissions from the destroyed reactor of Unit 4 of the Chernobyl Nuclear Power Plant. The fallout of radioactive elements (mainly cesium-134, 137, strontium-90, and plutonium-239) is extremely uneven, with contamination having a patchy pattern and the ability to migrate in various environments.

In the Polesie and Ivankovsky districts, more than 36,000 hectares of agricultural land have been withdrawn from crop rotation due to radioactive contamination exceeding limits.

One of the most pressing issues in the affected districts remains ensuring effective monitoring of the radiation situation.

Currently, radiation monitoring is ineffective. Radiation monitoring is delegated to numerous institutions and organisations located in various regions, which often employ different methods and insufficient equipment.

Furthermore, the lack of a single coordination centre to collect and process radiation information prevents a comprehensive assessment of changes in the radiation situation, the determination of safe limits, and the living conditions of residents living in contaminated areas.

In the Vyshgorod district, seven different organisations (the district sanitary and epidemiological station and veterinary laboratory, the dose monitoring stations of the district agricultural chemical plant of the Dymersky dairy plant, and others) are responsible for radiation monitoring. The data they provide often contradict each other and raise doubts. Similar monitoring practices exist in other districts (Polessky and Ivankovsky) of the region.

To date, the districts lack large-scale contamination maps that could be used to determine the most favourable locations for grazing livestock, growing grain crops, vegetables, and so on.

There is also uncertainty regarding the distribution of the more dangerous (than cesium-134, 137) radionuclides strontium-90 and plutonium-239. The first attempts to clarify this issue by specialists from the Institute of Nuclear Research of the Ukrainian Academy of Sciences (research was conducted in the Vyshgorod district in 1990) showed that soil samples contained cerium-144 and ruthenium-100—radionuclides associated with plutonium-239 isotopes—with the estimated concentration reaching 814,000,000 Bq/km^2 [0.814 GBq/km^2].

In the village of Petrovskoye (Vyshgorod District), according to the State Hydrometeorological Committee of the Ukrainian SSR, strontium-90 contamination is 740,000,000,000 Bq/km^2 [740 TBq/km^2], which, according to existing criteria, should be considered grounds for the evacuation of the village's residents (225 people, 15 children).

Closely related to this problem are the issues of decontamination work – removal of contaminated soil, land reclamation, residential and industrial buildings, disposal, and secure disposal of radioactive waste.

In the Ivankovsky District, during a survey (in the summer of 1990) by specialists from the Decontamination Department of the Pripyat Scientific Production Association, the Spetsatom Production Association, and the Institute of Biophysics of the USSR Ministry of Health, a large number of areas with abnormal contamination (up to 50,000 beta particles/min/cm²) were discovered, as well as at all social, cultural, and industrial premises. However, to this day, there is no specific organisation assigned to carry out these decontamination measures.

The regional public utility companies' capacity to partially replace contaminated materials (roofs, houses, fences, etc.) is clearly inadequate.

Furthermore, there is no specific organisation responsible for monitoring and maintaining (in accordance with the "Sanitary Rules for Handling Radioactive Waste" - SPORO-85) the waste disposal sites where radioactive waste generated during decontamination work is transported. There are nine such waste disposal sites in the Polesie District alone.

The above-mentioned problems must be addressed by the relevant agencies, including the State Committee of the Ukrainian SSR for the Protection of the Population from the Consequences of the Chernobyl Nuclear Power Plant Accident.

According to Resolution No. 315 of the Council of Ministers of the Ukrainian SSR dated December 14, 1989, residents of the urban-type settlement of Poleskoye must be resettled, subject to their voluntary consent, to selected districts of the Ukrainian SSR.

Currently, only 1,491 of the 4,000 families living in the urban-type settlement have been resettled, compared to the planned 2,050 in 1990.

The main reason for the delays in resettlement plans is the lack of adequate housing in the proposed areas. Specifically, in the Ukrainian SSR, only 602 of the 1,210 apartments reserved

for re-settlers are actually ready, including 65 of the 110 in the Kiev Region (as of early 1991). Some oblasts (Zaporozhie and Dnepropetrovsk) are proposing settlements with difficult environmental conditions for resettlement, while some oblasts (Ivano-Frankivsk, Zakarpatiye, Odessa, Kherson, and Cherkasy) have practically failed to fulfill their apartment reservation plans.

Furthermore, the intensity of resettlement was somewhat influenced by Resolution No. 180 of the Council of Ministers of the Ukrainian SSR of August 8, 1990, which established higher salaries for those working in contaminated areas.

In the Ivankov district, increased migration of residents to other regions of Ukraine has been observed. By the end of March, 326 families had left the district (437 are currently processing documents to leave).

Residents living in contaminated areas continue to be concerned about deteriorating health and the radiation-free quality of food products.

During a 1990 medical examination of 7,230 children under 14 in the Ivankovsky District, 4,814 were found to have pathologies. An increase in blood diseases, chronic bronchitis, cholecystitis, and nervous system disorders was noted, and the birth rate declined. Moreover, despite the increasing incidence of illness among both children and adults, the district hospital is 96 medical workers short.

In the Polesie district, cases of strokes and haemorrhages have increased. The incidence of hyperplasia (enlargement of the thyroid gland) in children is 40%.

Furthermore, there have been disruptions in the supply of "clean" food products to contaminated areas from other regions. School meals are low in calories and lack variety. Fresh vegetables, essential during spring vitamin deficiencies, are lacking.

Despite significant amounts of humanitarian aid arriving from abroad in the first quarter of this year, the Polesie district received four small shipments of food and clothing, the Ivankovsky district received one, and the Vyshgorod district received none.

The current rudimentary monitoring of agricultural products (meat, milk, etc.) indicates that permissible limits for radionuclide content are exceeded.

For example, in 1990, of the 40,583 tons of milk delivered from farms to the Ivankov Dairy Plant, 1,912 tons (2.3%) exceeded permissible limits. Moreover, of the 6,998 tons delivered from the private sector, 789 tons (8.8%) had contamination levels of 585 to 1,406 Bq/L, with the permissible limit being 370 Bq/L (for caesium 137 and 134). All milk delivered to the dairy plant is processed into butter, which is then shipped to Kiev and the Zaporozhie, Khmelnytsky, and Donetsk regions.

The seemingly positive situation in this area, upon closer examination, has a number of negative aspects. This is primarily due to the current lack of effective dosimetric equipment for rapid analysis of radionuclide content in food products. Even in the best-equipped Polesie

district, compared to Ivankovsky and Vyshgorodsky, where the district sanitary and epidemiological station has four spectrometers, it is practically impossible to thoroughly monitor all food products produced by the population. Random checks are periodic and do not provide a complete picture of the purity of the products.

In addition, the new VDU-91 ("Temporarily Permissible Levels of Contamination of Food and Drinking Water with Radionuclides") regulate maximum concentrations of strontium-90 (the current VDU-88 only took into account caesium 134–137), which will require a virtually complete re-equipment of the dosimetry laboratories operated not only in the districts but also in food industry enterprises in the republic.

In this regard, the Ministry of Health, the Ministry of Bread and Grain Products, the Ministry of Trade, and the State Agro-Industrial Committee of the Ukrainian SSR must address the issue of intensifying efforts to acquire effective dosimetric equipment and train specialists in its operation.

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