

15th of August, '86

SECRET
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REPORT NOTE

The reliability of dosimetric control of the contaminated environment and food products

There are considerable failures in the process of the planned work by Ministries and agencies of the Republic to eliminate the effects of the accident at the Chernobyl nuclear power station. The reason for this is a lax adherence to the established standards, which are developed to achieve the maximum possible reduction of radioactive contamination of the environment and of the food products.

The work of complex transfer and decontamination units (CTDU's) within the 30-kilometre zone is not organised in the way it should be. In July, practically no work was done to unload the transport at the Dibrov CTDU. A total of only three trucks were loaded at the Starye Sokoly CTDU. At the Dityatki CTDU the loading was carried out 73 times in the period from 27th to 31st of July; this is significantly less than the expected daily workflow of a CTDU (2,500 trucks enter the 30-kilometre zone daily).

The re-loading areas commenced operations before the construction was completed and are being operated without any repair work (at the Starye Sokoly CLDU there is no runoff channel for the contaminated water, there are no separate zones for the "clean" trucks and trucks working in the zone, the treatment plant has cracks in its foundations). There is no coordination of work between the groups of specialists from different agencies.

One of the main causes for this situation is the lack of coordination between organisations undertaking the work at the CTDU's (the teams from 12 Ministries and agencies are actively participating in the work).

In accordance with the opinion of specialists, in order to ensure greater efficiency of the work at the CTDU's, it would be expedient to create one dispatcher service, which should resolve the question of the provision of advance information on the timelines and volumes of loads that are expected to arrive. The transport demand of all three areas should be assessed and divided in accordance with the schedule of arriving loads, and shifts for workers should be coordinated. It would also be expedient to tighten the control over entry and exit from the 30-kilometre zone, with the help from the Office of Internal Affairs.

There are also defects in the work of Transport Decontamination Units (TDU's). For instance, at the Gorenichi TDU a tank for the contaminated silt and sand was not cleaned for a period of two months. Due to this fact, after 7-10 days it will overflow and will become unsuitable for further use. At the Dibrova TDU, run by Civil Defence force (number 42216), the processed water is being discharged into defective storage containers that are not hermetically sealed, as they should be. TDU ATP-31043, located at the crossroads between Ovruch, Vilcha, Polesskoe and Chernobyl, is designed to process only one unit of transport at a time, causing transport delays of up to 5 hours. Contaminated water is being discharged into an ordinary ditch that is not intended for this purpose.

As it is known, Party and Soviet offices of the Republic are dedicating a great attention to the provision of the population of the city of Kiev and Kiev region with high-quality food products, as well as to the problem of the supply of clean drinking water. However, there are problems that require constant control and a timely resolution in this area as well.

For example, since the accident at the Chernobyl nuclear power plant, radioactive contamination exceeding established limits for meat and dairy products was noted in 231 households from 45 districts in Kiev, Chernigov, Cherkassy, Zhytomir, Vinnitsa, and Khmel'nitski regions. The reliability of government dosimetric inspections is decreasing due to the shortage or lack of the monitoring equipment.

For the same reason, the radiological control at a number of enterprises within the Republic's Ministry of Bread Production is not being carried out. Failures of an organisational nature are also taking place. For example, no dosimetric inspection of the bread produced by the third shift at the bread factory No.12 in Kiev is being conducted (the inspection is provided only during two shifts); the laboratory at the bread factory No.1 is understaffed.

The questions about the burial of filters from ventilation equipment, radiation inspection of packaging, the transport and storage of food products and raw materials remain unresolved, there are no reliable enclosures using specialised protective materials at many factories of the Main Food Processing Industry Administration of the Ukrainian SSR, Gosagroprom.

Furthermore, the Ministry of Health has still not established the maximum allowable limits of radioactive contamination in food products such as sugar, sweets, beer, and other products.

The specialists propose a full prohibition of the delivery of food products from the producers directly to the shops, bypassing district and city warehouses. This is expected to increase the effectiveness of the measures taken to prevent radioactive contamination of goods. It is also proposed to introduce specific documents (forms), describing the results of dosimetric inspection in central organisations, as well as forms or stamps to demonstrate the origin and the route of the transportation of goods. In order to prevent negative attitudes among the population, it is also considered useful to inform consumers in shops about the details of food delivered to a specific location.

A special attention of the appropriate agencies and organisations is required in the consideration of different aspects and defects in the operation of collective farm markets and their significance in providing the population with food products.

First and foremost, the necessary radiation inspections are not carried out for food products being sold, because of a lack of dosimetric equipment. For 19 markets in Kiev, where up to six thousand salespeople work every day, only 51 radiation monitors are available. The low throughput capacity and frequent breakdowns of the equipment lead to the attempts by some sellers to either avoid dosimetric inspection or to sell their food in areas adjacent to the markets. There are no designated areas at the markets for the collection and storage of rejected food products, with the view of their subsequent disposal at authorised facilities.

According to the opinion of specialists, to ensure reliable radiation inspections and to prevent the sale of contaminated food products to the public, the relevant agencies must consider their capabilities and provide inspection groups with sufficient equipment, legislate the possible confiscation of contaminated products (with appropriate compensation for their cost), take measures to organise preliminary inspections in areas from which food is being brought into Kiev, and allocate designated areas at the markets for the storage of contaminated food and organise its subsequent removal to special storage areas or for the disposal.

In order to suppress trade in food products that have not been properly inspected, it would be justified to strengthen the preventative work, with the involvement of the community and Internal Affairs authorities, and to establish the measures/fines in regards to the administrative responsibility for the violations of the rules.

It is suggested that appropriate agencies consider the certification of food processing industry enterprises, by the workers of the sanitary epidemiological stations, Civil Defence and scientific institutions. It is expected that the detailed recommendations on the preventative measures will be developed and the actual number and quality of dosimetric devices needed will be established, taking into consideration the current production technology. At the same time, the measures to certify the transport involved in delivery of food products will also be determined.

The population of Kiev is being provided with the drinking water from the Desna and Dnieper water treatment stations with an overall capacity of 1,400,000 m³ per 24 hours, as well as from 298 artesian wells with a capacity of 320,000 m³ per 24 hours. Dosimetric inspection of the water in Kiev is considered to be reliable, and the quality of drinking water meets established standards. In the opinion of specialists, in order to achieve a more effective assessment of water quality, it is necessary for the administration of the Kiev water supply authority to repair the SEG-SO 6 spectrometer that is installed at the Dnieper water treatment station.

In the population centres in the Kiev region, drinking water quality also meets the current temporary standard, with the exception of individual cases of elevated radioactivity in the water in Poleskoe District. According to the agreement with local authorities and with the Citizens Defence, the work to hermetically seal off wells in selected local areas and to periodically pump the water out from them is currently under way. However, this work is not yet completed in the Borispol, Vasilkov, Vyshgorod and Ivankov Districts (overall there are 17,654 wells in Kiev region that have not yet been hermetically sealed). There is a lack of specialised equipment for pumping the water out from the sealed wells for treatment purposes in Ivankov, Borodianka, Irpen, Skvyra, and Belaya Tserkov.

Specialists recommend that, due to approaching autumn and winter seasons, it is necessary to strengthen the quality control over water from Poleskoe, Borodianka and Ivankov areas, with the simultaneous provision of more precise measurement equipment (DP-100) for the teams carrying out the measurements. Additional dosimeters are also to be provided, due to the current insufficient supply. It is also recommended that Civil Defence Headquarters

organises and conducts an additional training of the personnel by qualified specialists, physicists or radiologists.

In reporting on the above information, it would be necessary, first and foremost, to increase the responsibility of the leaders of related ministries and agencies in regards to the unconditional and immediate compliance with established technologies for the reduction of the level of radioactive contamination, and the elimination of the effects of the accident at the Chernobyl nuclear power plant. The reliable radiological inspections are essential in resolving the problems relevant to the living conditions of the population.

In our opinion, it is necessary to request the appropriate agencies to consider proposals from specialists that are described in this document – it is reasonable to expect that the organisations will promptly undertake these measures.

We also suggest that it is necessary for the Ukrainian Ministries for Housing and Community Services, Land Improvement and the Water to focus their efforts on addressing the long-term problems such as:

- The development of means and methods to construct reliable systems for the treatment of drinking water with the removal of radionuclides;
- The determination, in cooperation with the Ukrainian Academy of Sciences, of areas and methods of the disposal of contaminated sewage waste (over 200,000 tons have been accumulated), as well as the leaves from trees in Kiev parks (that will fall in the autumn), in a way that will prevent negative impact of this waste on the environment;
- The research into the inadequacies in the current water supply to the operational nuclear power plants in Ukraine, where the disposal of untreated used water into open water bodies may result in irreversible ecological consequences.

The Committee of State Security [KGB] of the Ukrainian SSR is using its operative capabilities to take all measures to promptly uncover and eliminate inadequacies in the operations that are being carried out to eliminate the consequences of the accident at the Chernobyl nuclear power plant.

The operational conditions are under control.

This note is for your information.

Chair of the Committee of State Security [KGB] of the Ukrainian SSR.