

Report on the results of the radiation situation survey in the city of Slavutych

February 17, 1988

Secret

In accordance with the instructions of the Central Committee of the Communist Party of the Soviet Union, the USSR State Committee for Hydrometeorology and Environmental Monitoring (Goskomhydromet) and the USSR Ministry of Health, with the participation of organisations from other ministries and agencies, conducted an additional detailed survey of the radiation situation in Slavutych and the surrounding area.

The survey results showed that the cesium-137 contamination density within the city limits ranged from less than 37,000,000,000 to 222,000,000,000 Bq/km² [37-222 GBq/km²] with a dose rate of up to 0.7 µSv/hr. The most contaminated areas are located in forested areas to the west and east of the city, at a distance of 2–3 km. Maximum cesium-137 contamination level at individual points in these areas ranged from 25,900,000,000 to 481,000,000,000 Bq/km² [25.9-481.0 GBq/km²] with dose rates up to 1.2 Sv/hr.

Contamination levels of strontium-90 (3,700,000,000 – 37,000,000,000 Bq/km²) [3.7-37.0 GBq/km²] and plutonium-239+240 (37,000,000 – 740,000,000 Bq/km²) [0.037-0.74 GBq/km²] within the city limits and adjacent areas are significantly below established standards (111,000,000,000 Bq/km² [111 GBq/km²] for strontium-90 and 3,700,000,000 Bq/km² [3.7 GBq/km²] for plutonium-239+240).

Surveys of the radiation environment inside the buildings prepared for delivery did not reveal elevated levels of contamination.

Calculations of the possible radiation doses to future city residents based on the current radiation situation show that even without any additional measures, they will be significantly lower than the dose limit (5 mSv/year) established in the USSR and recommended by international organisations for the population (including children and pregnant women) living in areas adjacent to nuclear power plants (in a non-accident environment).

The expected radiation dose to the population over 70 years, taking into account the effective half-life of caesium in the natural environment of 10 years, will not exceed 40 mSv.

Thus, the radiation situation in Slavutych and the surrounding area does not prevent settlement. This is consistent with the conclusions reached for the Nedanchichi settlement zone.

However, given that the city of Slavutych and the surrounding area are located near areas where elevated contamination levels are still observed, the USSR State Committee for Hydrometeorology and Environmental Monitoring and the USSR Ministry of Health recommend the following preventive measures:

- landscaping and paving open areas within the city;
- clearing and removing forest litter from forested areas within the city limits to designated areas;

- regular sanitary cleaning and watering of streets and courtyards;
- the creation of landscaped forest park zones in the forests adjacent to the city, primarily to the west and east, with the implementation of measures during their creation to remove forest litter from contaminated areas and selectively cut trees.

Furthermore, the USSR State Committee for Hydrometeorology and Environmental Monitoring and the USSR Ministry of Health consider it necessary, by the time Slavutych is repopulated, to implement a set of measures to completely eliminate the possibility of additional contamination during the transportation of workers from the Chernobyl Nuclear Power Plant zone.

Chairman of the USSR State Committee for Hydrometeorology and Environmental Control

Yu. A. Izrael

Minister of Health of the USSR E. I. Chazov