Extract from the certificate on the conclusions of the commission of the Presidium of the Ukrainian SSR Academy of Sciences on the forecast of the consequences of increased radiation for the health of the population of the Ukrainian SSR

May 14, 1986
TOP SECRET

On May 13 of this year, Major V.S. Randin, head of the 3rd Section of the 2nd Department of the 6th Directorate of the KGB of the Ukrainian SSR, together with Captain A.A. Kalashnikov, senior detective of the same department, held a meeting with the authorised representative of "O.S.P.", who proactively provided the following information:

In a conversation with A.I. Bykorez, the following was revealed: the commission of the Presidium of the Academy of Sciences of the Ukrainian SSR was tasked with preparing a forecast of the health consequences of increased radioactivity for the population of the Ukrainian SSR. It is accepted that at present there is no immediate threat to the population of Kiev (meaning radiation injuries).

What people have received, each to a different degree, is already there, and nothing can be done about it. The question that should concern everyone is the consequences. In this regard, the following can be said: the radiation doses received by Kiev residents do not have blastomogenic effects *[induction of the formation of tumours]*. Concerns are raised by the side effects of radiation on the immune system (immune cells, primarily stem cells) and bone marrow.

A weakened immune system can lead to an increased incidence of infectious diseases and an exacerbation of chronic inflammatory processes. This primarily affects children under 10-12 years of age and the elderly. Impact on the bone marrow can lead to the development of anaemia, and after 1-3 years, to an increased incidence of leukemia.

The central nervous system will also suffer, leading to an increase in the incidence of neuroses in the population. Therefore, it will likely be necessary to protect the nervous system to a certain extent over the next 1–2 years, especially in children.

The amount of strontium currently present and which will accumulate in the bones, displacing calcium, will have a certain detrimental effect on bone tissue, but will likely not have a blastomogenic effect.

The liver will also likely not be susceptible to the blastomogenic effects of radiation. Regarding the thyroid gland, the issue is complex and the situation is quite alarming. Changes in thyroid function will lead to disruptions in the body's hormonal regulation, which can lead to various serious consequences.

Based on the above, it can be predicted that in 5-6-8-10 years, the incidence of cancer will increase by 2-3 times.

All of this suggests that average life expectancy in Ukraine will decrease by 1-2 years.

A serious situation is developing with the gene pool of the population of Ukraine, especially in the regions immediately adjacent to the site of the accident. It can be assumed that the children of children currently aged 5-12 may be born with deformities, developmental defects, and weakened immune responses. There is a possibility that these effects may become fixed and be passed on to future generations.

A serious question arises regarding the nutrition of the Ukrainian population.
The commission made it clear that Ukraine will be self-sufficient in food. Given that the soil is contaminated with radioactive substances, people will receive certain doses of radiation over many years by consuming agricultural products.

This raises the question of developing measures to reduce this radioactivity. A proposal has been made to establish research centres within the Academy of Sciences of the Ukrainian SSR to study the impact of radiation on the human body, agricultural products, and the entire population of Ukraine and its ecological system. The Institute of Postgraduate Education of the Academy of Sciences of the Ukrainian SSR will likely be involved in this work in relation to the oncological situation.

The commission understands that it is difficult for the government to address all these issues at this time.
However, with appropriate and proper organizational measures, some of these problems can be resolved. A major mistake was made when children aged 8–10 were not evacuated from the Kiev region between April 28–30. The greatest concern is for the health of children in rural areas, where dusty conditions and inadequate hygiene standards exacerbate the effects of radiation. In developing its forecast, the commission relies on data from Japanese scientists who studied the effects of the atomic bombings in Hiroshima and Nagasaki.
The situations are similar in a number of ways, which allows the commission to guide its forecast.

The commission believes that management underestimated the situation and, for some reason, kept silent about the accident from the very beginning, which has now led to a more serious situation than it otherwise would have been.

In a conversation with commission member Ya. I. Serkiz, the following was revealed: first of all, radiation doses in Kiev are being understated: for example, TV announced that in Kyiv on May 10-11 it was 3.5 µSv/hr, while before it was 5 µSv/hour. Overall, from April 30 to May 9, the radiation dose from gamma-irradiation was 5-23 µSv/hour. This applies only to external irradiation.

But in the current radiation environment, it has been calculated that the ratio of external to internal radiation is 1:9, meaning the internal radiation is nine times greater. This primarily relates to beta decay. In this situation, a Kiev resident received 30-50 mSv of radiation by May 12. It is generally accepted that a dose of 5 mSv/year is acceptable for pregnant women and newborns. Ya. I. Serkiz said that there is data from one kindergarten indicating that children there received up to 200 mSv of radiation on their thyroid glands.

There is evidence that 55% of radioactivity is I-131. According to the criteria of the International Committee on Nuclear Safety, a dose in excess of 500 mSv can cause radiation sickness.

The following data are interesting: if the radiation for gamma was 500 µSv/hr, then the soil 24 km from Kiev (Koncha-Zaspa) had 650 µSv/hr, and green onions had 650 µSv/hr; if the background radiation for beta radiation was 0 particles/cm^2 sec, but the soil from there had 70 particles/cm^2 sec, and green onions had 5 particles/cm^2 sec.

Ya. I. Serkiz stated that at the present time (May 12), it is prohibited to report such radiation doses, which is being done at the Institute of Post-Radiotherapy of the Academy of Sciences of the Ukrainian SSR.
[It is a very alarming note. This is a "top secret" document, which potentially means that the radiation levels in the documents with lower security levels, especially those "for official use" may contain the values that were artificially lowered; possibly significantly.]

According to Ya. I. Serkiz, there was a discrepancy in the information provided on TV by our announcers and then by the director of the IAEA. For example, our people said that 80% of the radioactive waste was I-131, while Blix said that I-131 constituted only 50%. Such discrepancies create distrust in our sources of information. Ya. I. Serkiz believes that Vice President of the USSR Academy of Medical Sciences Ilyin was incorrect in suggesting against the use of potassium iodide at this time. This may indicate a lack of consensus on appropriate and effective measures to prevent the consequences of radiation exposure.

Ya. I. Serkiz stated that physicists are not providing biologists and medical professionals with any information about doses, and most importantly, about isotopes, which is hindering the commission's work. Most of the data was obtained through leaks from various sources and individual efforts.
[This is another confirmation of the possibility of the artificial lowering the actual values in different reports].

From N. Druzhina's report, it was possible to establish the following data in foreign literature:
1 person per 10,000 population develops leukemia at a dose of 100 mSv.
In the US, a city resident receives 160 mSv of radiation over 65 years, of which 120 mSv is natural radiation and 40 mSv is from man-made radiation sources. Residents of Kiev received 30 to 50 mSv over 15–16 days. However, it is necessary to know precisely the types of radiation, which isotopes contributed to the exposure, and the proportion of internal exposure.

V.L. Sigal said that people who worked in the accident zone told him that management doesn't always heed the advice of Vice President Velikhov of the USSR Academy of Sciences, and that he is therefore working under difficult conditions.

Thus, the most important issues requiring resolution are:
1. The gene pool of the Ukrainian SSR population.
2. Agricultural products (nutrition).
3. Childhood population (cancer incidence, immunity, neuroses).

4. Cancer incidence in the population.

Based on conversations with commission members, the impression has emerged that the commission's opinions are not fully communicated to the relevant authorities, and that some information on the radiation situation is being concealed from the medical and biologists working for the commission. Under such conditions, the commission finds it difficult to work, and forecasts must be made based on inaccurate information. The commission is concerned that its work will not be taken into account by the relevant authorities when developing measures to address the consequences of the accident.
[And, once again, this is the confirmation that the vital information was possibly concealed, not only from the relevant personnel (i.e., Civil defence), but even from the scientists working for the government commission.]

3rd detachment 6th Directorate of the KGB of the Ukrainian SSR
Captain A.A. Kalashnikov