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Chernobyl remains a state secret

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The program "Results of the week" is Dmitry Volchek. Participate physicist, employee of the Kurchatov Institute, Konstantin Checherov and chairman of the Children of Chernobyl Foundation, Gennady Grusheva.

Dmitry Volchek: What caused the accident? What is the condition of the fourth unit sarcophagus? What are the lessons learned from nuclear power? How do people live in a disaster zone? Here are just a few questions that we will discuss today. Guests of the "Results of the Week" program: Russian physicist, employee of the Kurchatov Institute Konstantin Checherov, who from 86 studied 4 power units of the Chernobyl nuclear power plant and by phone from Minsk the chairman of the Chernobyl Children Fund Gennady Grushyova.

Konstantin Pavlovich, good evening. Your research began 20 years ago. Please tell us about the directions of your work, what are the main tasks that your group set for itself, what and how did you find?

Konstantin Checherov: It would be more correct to say that this is not my group - it was a group of employees of the Atomic Energy Institute and employees of other institutions. In particular, researchers were faced with the task of understanding what had happened, where the fuel had gone, what form it was in, what troubles the situation was fraught with. And in fact, immediately after the accident, an inspection of 4 post-accident units began. It was a difficult job, because the background was very large. In the summer of '86 we managed to reach the regions with a dose rate level of about 9 thousand roentgens per hour, we didn't want to move further, because the dose is growing very fast. But, nevertheless, we approached at a distance of about 10 meters from the reactor shaft. Of course, we were looking for fuel and, to be honest, we did not find it then, but all the time we hoped that we would find it - not in one room, so in the other, not in the other, so in the third. This work has been delayed and it can be said that it has continued for decades.

In the year 88, it was possible to drill research wells into the reactor shaft, look at it first with periscopes, then with video cameras and see that the reactor shaft is empty, just completely empty: air, no masonry of the reactor core. There are reinforced concrete slabs that have fallen on top, on which paint is preserved, which have not been melted, which have not scattered from temperature. The reactor shaft was not filled with any helicopter bedding, and there was also no filtering layer above the reactor shaft, as they said in the year 86. That is, there were many such surprises. Since the paint turned out to be intact, it became clear that there was no burning inside the reactor shaft, and studies of nuclear graphite showed that it does not burn, strictly speaking. That is, it is necessary to create exceptional special conditions in order to make it not even that which burns, but to sublimate. There was no such process in the reactor mine, judging by the preserved structures.

Dmitry Volchek: So, there was no fuel in the reactor, it was all in the atmosphere?

Konstantin Checherov: By my estimation, some part of about 9% turned out to be in melts and in lower rooms, and everything else in the upper rooms. That is, generally speaking, everything flew out of the reactor shaft, it is absolutely empty, and from the building of the power unit, I believe that 90% flew out.

Dmitry Volchek: So now the reactor poses no danger?

Konstantin Checherov: He presented no danger immediately after the event.

Dmitry Volchek: Thus, the construction of a protective sarcophagus was generally unnecessary?

Konstantin Checherov: I would not say that, I would say it in another way. In psychological terms, of course, it was necessary to create some kind of scenery that would not irritate the eye from the side - I am absolutely convinced of this. But you had to do it at that pace or did it have

to be done a little later? - This is another question. The fact that psychologically needed a sarcophagus, I have no doubt.

Dmitry Volchek: How to understand this: the experts are sounding the alarm that the old sarcophagus is being destroyed, such messages are constantly coming in, there is a plan to build a new sarcophagus. Do I need it? And why are your discoveries not taken into account?

Konstantin Checherov: First, there is no evidence that the old sarcophagus is destroyed, no. There are suggestions that sooner or later it will collapse, no one has any doubts about this. Any constructions will collapse sooner or later. But these are hypothetical assumptions. They are taken into account and on the basis of these assumptions, work is underway inside the shelter object to stabilize building structures. They are being conducted for the second year and will be kept for some time. That is, it is done so. But what concerns the new safe sarcophagus, whether it is needed, whether it is needed — it is the owner who must decide whether it is needed or not.

Dmitry Volchek: What do you think?

Konstantin Checherov: I believe that it is necessary to build on the dangers that we associate with this object. Any new designs should build on this. For example, if the probability of a structural failure of one thousandth is a hypothetical danger, it is somehow taken into account, as a result of which stabilization measures are taken. Suppose thermal danger has zero probability, and it does not require any measures. In the same way, nuclear danger does not exist for this object and it is not necessary to break your head above it. But what constitutes a real danger, not hypothetical, but actual, reliable, is the theft of nuclear fuel from the central halls of the fourth emergency block.

According to the radiation safety standards of Ukraine, the loss of control over the source of ionizing radiation, in particular, over the fuel, is classified as a radiation accident. That is, theft is a radiation accident. And such accidents occur on this site. And of course, first of all, in my opinion, it is necessary to solve these problems. Whether this will be a safe sarcophagus or some other form is another matter, it is important what tasks this new design will solve. She solves the

main task - well. But if it solves only secondary, third-level tasks, then the question arises - what to do with the main, with the main, more important tasks?

Dmitry Volchek: At a press conference devoted to the 20th anniversary of Chernobyl, Academician Velikhov said that the consequences of the disaster are exaggerated by tens of thousands of times. “The population lives in the setting of mythology about this accident. A lot of scientifically unfounded myths are being spread, and most people do not understand where truth is and where fiction is. If you look at the mortality statistics in Russia, the impact on the mortality rate of the Chernobyl accident will be almost imperceptible. ”

Gennady Vladimirovich, good evening. How would you comment on the words of Academician Velikhov?

Gennady Grusheva: We met Academician Velikhov in the year 89, he just came to us, and on September 30, I was the organizer of our first Chernobyl Way. This is now very famous, I think, and in Russia, the well-known and the world-famous action, which is held annually. I then received the first criminal record after this action and lost my job at the university. Yes, there is such a point of view. Indeed, then, and after, and for many years, there were very competent opinions that science does not yet have objective data on the serious impact on human health of Chernobyl radiation, and it is difficult to predict what the effect will be in a longer time. Incidentally, I didn’t know anything about what Konstantin Pavlovich was talking about now.

In '86, like millions of citizens of our country, I was in the dark about what happened there. And in Belarus, we generally thought that this did not concern us much. And for about three years this blissful ignorance continued, I must say, not because it is not interesting for us, in principle, in Belarus there was nowhere to be found out about it. Now we know that Belarus received more than 70% of the radioactive substances that the reactor threw out after the explosion. We know that a third of the population somehow ended up in the zone of action of this radiation. But the fact is that three years later, when I had to drive dozens of villages, cities (by the way, there was no political speculation about Chernobyl at that time, as is now fashionable to say), they simply did not know anything, and I did not know anything. And I was going to just see with my own eyes and listen to people what was happening on the spot. And then after the trip, in essence, fate turned.

I am a professor of history of philosophy by profession. I worked at the Department of History of Philosophy for 20 years, but I was so struck by what I saw there, what I saw in the Chernobyl regions of Belarus, that after that there was no other task for me. I understand that there is such a scientific paradigm: prove it, and then we will do something, but find solid scientific evidence. I proposed to turn this paradigm in the opposite direction to Velikhov: prove today in '89 that people are not in danger. Science, prove that for 10, 20 or 50 years the health of people living in these Chernobyl regions will not be affected by the action of radiation. But prove it, efficiently and seriously. Is there any evidence? Not. Oh no? Well then, excuse me, we cannot wait for science to understand this phenomenon, until it comes to this or that opinion, it will take decades or many years, and what will happen to people's health is not indifferent to me. And then a completely new one appeared, I would not call it a mythological one, but some new civilizational model of attitude to what is happening to us in the world, where science, scientific progress, in essence, defines everything.

And this is how I would comment on Velikhov's statement today. I respect this person very much, but he remains in the same paradigm, in the same pre-Chernobyl state of civilization, he still considers only what can be described, calculated in a positivist way. We need to think a little further.

For me, for example, it is obvious that this is still just a forerunner, but a catastrophe of this nature, it does not fall under the category of usual industrial or natural catastrophes, it is closer to biological catastrophes, such as a result of which hundreds of people died out million years ago dinosaurs. Here is something similar. If a powerful release of radioactivity occurs quite massively, then we may well say that humankind's prospects are no longer there. There is such a threat, and it cannot but be in any place where a person is engaged in the creation of technical structures, always this or that percentage is present. There must always be a public one, there always must be a civilian point of view, a critical point of view, from which people who are engaged in exact, rigorous science must always be considered, because we live in such a time.

Dmitry Volchek: The environmental organization Greenpeace believes that the health consequences of the Chernobyl accident are underestimated. The Greens released a report prepared by scientists from six countries, claiming that the number of people affected by the accident at the Chernobyl nuclear power plant is tens of times more than official figures say. Konstantin Pavlovich, who is right - Velikhov, who says that the consequences are exaggerated, or Greenpeace?

Konstantin Checherov: You know, I would look at this position with the eyes of people who worked inside the fourth block of the accident. I had to participate in conferences where it was about the dangers of small and ultra-low doses, and there was such a massive feeling among the speakers that life was already meaningless, it should end in connection with these small and ultra-small doses. People who worked in the reactor shaft, in the reactor hall, in the reactor rooms, they worked under conditions of thousands of x-rays per hour, they worked under conditions of tens, hundreds of thousands of maximum allowable concentrations of plutonium and cesium, they lived for many years in Chernobyl, working on the fourth block.

It would seem that these people should be of interest in terms of their ability to survive in these strange conditions. For example, for astronauts who fly to Mars, it is of interest how people survive in conditions of long-term exposure and significant. But for the survival of the earth, something our radiation biologists are not interested in this question. And it seemed to me that maybe there are some peculiarities in people who no one has studied, positive, which allow them to live in these conditions. We must understand that the living conditions are the same for us to live in these conditions. Why not explore this aspect? The people who worked inside, they did not all die, many and most did not die, they continue to live and work. Is it really uninteresting side?

Dmitry Volchek: What, really no one ever studied?

Konstantin Checherov: Let's just say, occasionally a few people undergo a long, long-term examination, they just take blood, look at chromosome aberrations, but by and large, probably, the interest should be broader biological. Nobody has ever conducted such research.

Dmitry Volchek: Let's give the floor to our listeners. Sergey from Ryazan, good evening.

Listener: Good evening, dear participants of the program. I have a question for Konstantin Pavlovich: are the objectively specific reasons for the catastrophe finally established, the sad jubilee of which was celebrated the other day or is it the sum of some factors?

Konstantin Checherov: In fact, of course, this is an extremely unlikely overlap of events, but events are different and can be analyzed. In short, we can say this: the program was bad, it was not coordinated with the nuclear safety department of the station, no one even knew anything. On the other hand, during the implementation of this program, deviations began from it, which, in principle, have already condemned the emergency situation. Speaking personally, very often we hear that the operational staff is to blame, in fact, the operating personnel on the fourth block were at the level of the best operational personnel of nuclear power plants with RBMK rectors, say, with Smolensk when compared. But operating personnel are required to follow orders from administrative staff. The tests were supervised by the deputy chief engineer, he gave orders, the operating personnel were obliged to carry out. The main mistake here was that it was decided to suddenly increase power when the reactor was shut off. This can not be done, then go unpredictable, uncontrollable events. If you go into the further technical side, you can consider it, but maybe this is not for today's broadcast.

Dmitry Volchek: Gennady Vladimirovich, you have already said that you received a criminal record and were dismissed. As far as I know, your foundation “Children of Chernobyl” faces considerable problems in Belarus, the authorities do not really welcome its activities. Why?

Gennady Grusheva: At first, I would like, in the line of what Konstantin Pavlovich spoke about biological research, just to remind you that after all, Chernobyl in our country fell into the category of state secrets almost immediately. What is a state secret in the Soviet Union - we all understand. So, I would not so confidently assert that there are not enough lengthy studies, that there are not enough serious observations, that there is no register. We have, for example, such a register going. And suddenly, in the year 90, when serious advances began in terms of a change of power, for some reason he disappeared, all the diskettes disappeared. Radioactive fuel disappeared at the station, and in Minsk all the diskettes disappeared from the scientific research institute that conducted these studies. This, probably, can be estimated at the level of the Chernobyl accident of the second level.

The first thing we needed was complete information. Whoever said that the unexpected happened, the unknown happened, few understood what to do and it was pointless to search for any reasons in the behavior and actions of scientists or administration or government officials, because it was a surprise for everyone. But, excuse me, this is not a professional conversation. For example, what should be done in the case of radioactive contamination with iodine was written in all civil defense textbooks. By the way, those dosimeters that were in Belarus in almost all schools were withdrawn from all schools within a week. So, it is simply registered

there: do not want a panic, do not want people to tell the truth? Well, there is a water supply in large cities, the required amount of iodine preparation. People, without knowing it, will consume iodine for several days, and then iodine will not accumulate on the thyroid gland. Everything, here to you a security measure. Was it done? Not.

When we say that there is a technical cut, there is a cut associated with certain constructive problems, and so on, for me it is not so interesting. It is interesting for me how people behave in this situation and how power behaves in this situation.And precisely because we did not agree with the behavior of that, the then authorities in that situation, which was generated by Chernobyl, we ended up in Belarus as outcasts. Yes, over the years it has been extremely difficult not only to receive information, but to engage in the most elementary, simplest, most obvious - to help children. I have already said why I help children. Here is another, by the way, example of talking about the relationship between science and power. Bragino, the nearest settlement to the station, the regional center of Belarus Nikitenko, the head of the local weather station, recorded a sharp jump in radioactivity, called back to all schools. I was friends with Natalia for many years, she helped us. She called back all schools, warned: be careful, do not take out children, I do not know why, but a very high level of radiation.They tried to imprison her for a year and a half for disclosing official information. It may be so, it may be much more important for the state to maintain a common serious approach, a general image, than to deal specifically with the fate of this small town or these hundreds or thousands of liquidators.

It’s good that not everyone died, I just pray that not everyone died, but Konstantin Pavlovich doesn’t inspire me. Even if 10% died, and 10% died, you know for sure that this is also something that cannot be bypassed by such tactful silence. But to whom is it to turn, to whom to appeal? When the war fell on us, when we had an enemy, when we knew that all this threat was coming from it, all these deaths, misfortunes, we mobilized, we fought, we won, we erected a million monuments in every village. Chernobyl has happened; somewhere, besides the cemetery, where the firefighters lie, is there a memorial sign dedicated to the people, to the memory of people who have prematurely died, who have become disabled? Is there such a monument, a memorial sign? Not. Why? Because the state is still both in Russia and in Belarus - I think that not everything is as it should be good in Ukraine either - they still leave Chernobyl for you with us a state secret.