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# Elimination of the accident at the Chernobyl nuclear power plant. The role of the armed forces in eliminating the consequences of the disaster at the Chernobyl nuclear power plant was decisive

ADVICE 12.05.2021



ChNPP and the liquidation of the accident at the 4th unit

There is a widespread opinion that the elimination of the consequences of the accident at the Chernobyl nuclear power plant consisted mainly in the creation of a protective shell over the destroyed reactor. Without a doubt, the construction of the Shelter object over the 4th block **Chernobyl**- this is the main stage on the way to eliminate the nuclear and environmental threat to the world caused by the accident. The complex of factors (radiation conditions, technical installation solutions, time frames for the creation of the facility, etc.), in which the Shelter was created, rightfully makes the facility unique, unparalleled in the world

At the same time, now little is remembered about the enormous amount of work to eliminate the consequences of the destruction of the reactor, which was carried out directly in the first months after

the accident (before the start of the construction of the Shelter), as well as about the work carried out in the near zone of the Chernobyl nuclear power plant. To a large extent, these works are also unique, both in the non-standardization of the implemented solutions, and in the volume and timing of the work.

The technical side of the liquidation of the accident deserves special attention. Since the accident was of colossal proportions, the best scientific and technical potential of the former USSR was thrown into the elimination of the consequences. The work required the use of unique **technical means**, such as robots, military and construction special equipment, as well as special vehicles, modernized for working conditions in high radiation fields.

The resource site offers to get acquainted with the unique measures to eliminate the accident, which were implemented in the near zone of the Chernobyl nuclear power plant in 1986 and subsequent years. Also presented is an assessment of the environmental impact of these works - their effectiveness for the environment (it was not always positive). Get to know the technique used by the liquidators to work in the exclusion zone.

Installation of a wall in the ground around the Chernobyl nuclear power plant

One of the most significant, both in terms of the resources spent and the amount of work performed at the ChNPP industrial site, is the creation of a deep reinforced concrete wall in the ground to the east of the station. A wall up to 100 meters deep and about three kilometers long was created in compressed lines. On the page of the site "Protective wall in the soil around the Chernobyl NPP" there is a description of the Casagrande methods and techniques that were applied to minimize the **radioactive substances** the industrial site of the Chernobyl nuclear power plant through the groundwater into the Pripjat River.

Work to reduce precipitation over the territory of the Chernobyl zone

From May to December 1986, in the sky above the exclusion zone and at the distant approaches to these territories, a unique set of works was implemented to prevent precipitation from falling on radioactively contaminated lands. In a short time, the entire technical and scientific potential of the country in the field of meteorology was mobilized to suppress rain clouds and actively prevent their appearance over the Chernobyl zone. The work involved aircraft, which in the early 80s were modernized under the Cyclone program.

Details on the page Controlling the clouds over Chernobyl in 1986.

## Installation of a slab under the destroyed reactor

In the first days of the accident, when the scale of the catastrophe became obvious, many experts believed that the lower tier of building structures would not withstand the temperature loads and additional pressure from the 5 thousand tons of materials poured by helicopters. Experts expressed concern that if the fuel falls down, it will cause groundwater pollution.

Such assumptions served as a rationale for the creation of a kind of barrier that would block the path of movement of fuel masses from a molten nuclear reactor into groundwater.

It was decided to create a huge reinforced concrete monolith under the destroyed reactor of the 4th power unit. The uniqueness of this structure was that the slab under the reactor had to be not only a foundation, but also have the property of a refrigerator. Inside this monolith, it was planned to arrange a system of pipelines for supplying water in order to cool the space under the reactor.

In addition, during the construction of a reinforced concrete slab, it was planned to mount measuring equipment for various purposes.

Work on the creation of the protective plate was started already on May 3, 1986. On this day, the first group of miners arrived at the Chernobyl nuclear power plant. In total, 388 miners took part in the construction of the tunnel under the reactor, as well as in the extraction of soil from under the

reactor. 234 and 154 miners from the Moscow coal basin arrived from Donbass.

These people performed unique jobs in extremely hazardous conditions. An adit was pierced under the foundation of the 4th power unit with a diameter of 1.8 meters. A 136-meter tunnel was created, through which communications and railway rails were laid. Soil was selected from under the reactor slab and reinforcement was laid for further concreting. The very first, most difficult and most dangerous meters then passed through the complex team of N. Shvets.

The former deputy chief of staff, head of Ukrshakhtstroy R. Tyurkian recalls: "The work was carried out around the clock. Dressed in white hats and suits, the miners drove up to the pit in an armored personnel carrier. The adit was fastened with a special reinforced concrete "jacket" made of tubing. The rock taken out by hand in trolleys was taken to the pit, and there the sandstone was turned away with a bulldozer and an excavator, protected from above with lead ...

Following the miners was G. Pulov's team of concrete workers, which had arrived from the construction of Rogup State District Power Plant ...

## Cleaning the roof of the Chernobyl NPP

During the accident at the 4th block of the Chernobyl nuclear power plant, highly active fragments of the reactor core, nuclear fuel, structural debris, and highly radioactive dust fell on the roof of the third block. These fragments created extremely unfavorable conditions for the construction of a protective structure over the destroyed reactor. In this regard, it was decided to clean (decontaminate) the roof. This, in fact, was one of the most dangerous and difficult types of work.

To implement this work, a special technical solution was prepared (Technical solution for decontamination of the roof of the "N" zones of the ChNPP unit No. 3), which provided for:

**Mechanical removal of the remains of the roofing felt-bitumen coating with high-level emissions on the surface and inside in the form of fragments, elements, inclusions and others.**

**Application of an insulating "silicate-aluminophosphate coating" to the cleaned roof.**

**For the implementation of work on the roof, such funds were provided technical equipment works:**

- mine scrapers, winch;
- robotic devices;
- manipulator-loader "Foresteri" and gripper-loader;
- Demag crane;
- manipulator MG-3;
- TV cameras;
- lighting.

**The "Technical solution" also provided for "Additional means of technical support":**

- a vacuum cleaner;
- devices for the manufacture and supply of the insulating coating;
- means for transporting containers with waste to the repository.

**To carry out the work, technical regulations were prepared. The document**

**was developed by the VNII NPP, the Kurchatov Institute of Atomic Energy and the Chernobyl NPP.**

## Burial of the "Red Forest"

The burial of dead trees, forest undergrowth and the topsoil was carried out by felling, raking with bulldozers and laying in trenches, followed by backfilling with a layer of soil about 1 meter thick. In total, more than 4 thousand cubic meters of radioactive materials were buried.

Removal of dead trees of the Red Forest using military special equipment (Engineering vehicle clearing IMR-2).

The author of the documentary photo is A.P. Yakubchik.

As a result of the measures taken, the exposure dose rate of gamma radiation decreased by 4-50 times, and in the second half of 1987 (after the completion of the decontamination work) the maximum dose rate levels were 180 mR / h. Documentary Photos about these works are presented on the Red Forest Elimination page.

## Decontamination of the territories of the near zone of the Chernobyl NPP

The main equipment that was used for this was serial earth-moving and road-building machines (bulldozers, scrapers, graders) and special equipment of engineering troops and civil defense units. These mechanisms did not meet the basic requirements for technical means of decontamination due to the lack of an appropriate system for protecting personnel from the action **ionizing radiation** (except for military equipment) and technical means of tracking the microrelief.

During the decontamination, powerful construction equipment was used: bulldozers, concrete trucks, truck cranes, panel trucks, etc. In a number of cases, manual labor was used. In the course of the work, carried out both with the help of bulldozers and by hand, a layer of earth with a thickness of about 20 cm was practically removed, which, naturally, led to huge volumes of soil transported for burial. It was found that after the removal of the top soil layer by bulldozers, the EDR at the ground surface decreased by only 3-5 times.

Dust bonding with synthetic products

In the first weeks of the Chernobyl accident, the main source of air pollution with radionuclides was the destroyed reactor, but over time (after the termination of the release from the reactor), the formation of radioactive pollution of the atmosphere began to take place due to the formation of dust and wind transport of radionuclides from the adjacent territories of the radioactive trace zone.

The problem required a prompt solution. To fix dust in areas of intense dust formation, scientists proposed to use the technology of applying polymer compositions. The uniqueness of this situation was that, despite the knowledge of the use of localizing coatings, there was no experience in reliable fixation of radioactive contamination in large areas of territories with high levels of ionizing radiation. The solution to this problem was possible only with the involvement of existing industrially produced means with the ability to form dust-suppressing coatings, and on the military and road equipment available or adopted for service (helicopters, vehicles of the ARS- 12 or ARS- 14 type, fire engines, etc. .).

In accordance with the decision of the Government Commission dated 05/07/86, extensive work was carried out on dust suppression of aerosol pollution in the indicated territories. The work was

carried out by the forces of the USSR Ministry of Defense using filling stations (ARS), helicopters MI-2, MI-8, MI-26, special installations of the UMP- 1 type, mounted on the BELAZ chassis.

## Planting forests (afforestation) and grasses (turfing) the territory of the near zone

After the completion of the burial of the "Red Forest", large areas of the near zone of the Chernobyl nuclear power plant lost their vegetation cover, which significantly increased the rise of radioactive dust and increased the exposure of personnel working at the station and in the zone.

In this regard, it was decided to restore the vegetation cover. Restoration (reclamation) was carried out in stages, as the radiation situation improved. At the initial stage, reclamation work was carried out to create a grass cover. Subsequently, after scientists analyzed the prospects for reclamation, the concept of afforestation of decontaminated areas was developed. This path was identified as the only one that can lead to stabilization of the situation.

The final stage included directly carrying out forest planting works using scientifically based technologies for remediation of the territory.

Reclamation work began in the fall of 1987 at the Staraya Stroybaza, Stella Fakei, and Sandy Plateau sites. Initially, the work was carried out according to the methodology of the INFOUAS of the Ukrainian SSR. The uniqueness of the applied technique was the use of polymer coatings. According to scientists, these coatings should have prevented dusting and would help create vegetation (using the greenhouse effect to speed up the turf process). Latex was used as a polymer fixer for sands, which created a durable waterproof film.

At the stage of forest planting, scientists faced the problem of the impossibility of using technical means. The upper soil horizon contained a large number of inclusions (tree trunks, twigs, roots, debris) that did not allow the use of forest planting techniques. Therefore, the main part of the roadside area, on which reforestation work was carried out (and this is 500 hectares of forest!), Was planted by hand - under Kolesov's sword and an ordinary shovel.

In the area of the liquidated village of Kopachi, technological operations were carried out in full in the spring of 1991. The creation of forest plantations was carried out on an area of 4 hectares.

Planting was carried out in a mechanized way - automatic forest planting machine MIA- 1A.

### Literature on liquidation of the Chernobyl accident:

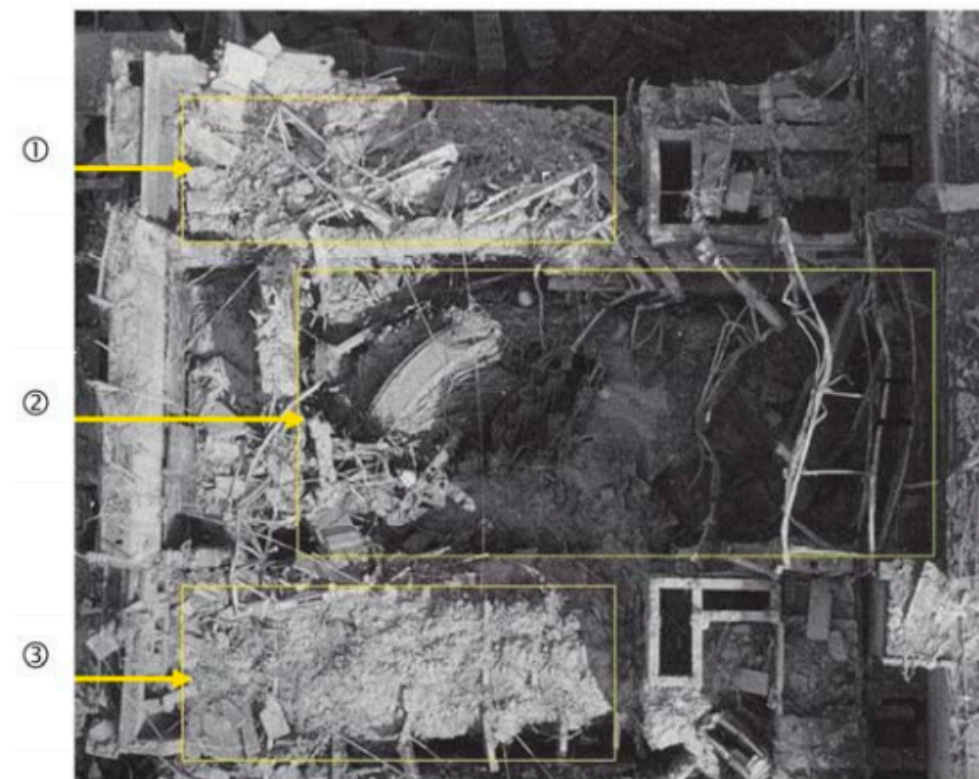
- **Aleshin A.M., B.N.Egorov, I.Ya.Simanovskaya Application of protective polymer coatings to improve the radiation environment during the liquidation of consequences at the Chernobyl NPP (1986-1991). Materials of the 5th International Scientific and technical conference "Chernobyl-96" Results of 10 years of work to eliminate the consequences of the accident at the Chernobyl nuclear power plant. Cape Verde - 1996 .-- From 191.**

Today, for the accident at the Chernobyl nuclear power plant (NB! This post is about the first days after the accident, the very moment of the explosion and its causes are described) the title of the largest radiation catastrophe in the history of mankind is firmly entrenched. However, the big is seen from afar. The kaleidoscope of events gave a completely different feeling and understanding to the station personnel, who entered the struggle with the consequences of the accident, than we have

today. Let's try to look at the first day of the struggle with the opening of hell through the eyes of people who found themselves there.

When talking about historical events, we tend to arrange their elements on the shelves and rationalize the behavior of their participants. However, from the inside, the accident was not just chaos, but chaos spiced with psychological selection of what was happening and denial of the obvious (to us). It is known, for example, that the station management in the first 12 hours could not believe in the fact of the complete destruction of the reactor. Then the heads of the government commission will be occupied for a long time with the idea of the danger of burning through the foundation of the 4th power unit with molten fuel from the Chernobyl nuclear power plant. However, from the height of unhurried long-term exploration and research, it is easy to judge which decisions were correct and which were not. Under the conditions of the accident, with a lack of information and understanding, a monstrous burden of responsibility, this was impossible to do.

Another, not unimportant, it seems to me, quality was the presence at the station and among the liquidators of many former employees of the Ministry of Medium Machine Building (the Militarized Ministry, which dealt with the entire nuclear industry of the USSR). The Chernobyl nuclear power plant was the first power plant given away by the Ministry of Energy, but it was staffed by the mighty nuclear ministry. In Minsredmash, which has been waging a long-term imperceptible war for the production of plutonium, it was decided to deal with nuclear and radiation problems regardless of health and costs, in a mode of minimal information dissemination and without any help from other organizations of the USSR. This mentality left its mark on the decisions made.



*View of the destroyed reactor compartment 5th day after the accident, the number "2" marks the central hall, a piece of the reactor lid, called "scheme E", is visible.*

One way or another, for the workers of the Chernobyl nuclear power plant at 1.24 a.m. on April 26, 1986, there was, first of all, not a radiation accident, but an explosion that lifted multi-hundred-ton

building structures into the sky (even "scheme E", weighing 2800 tons), tore communications, cables, pipelines, and noticeably damaged the building of the Chernobyl nuclear power plant.

Within a few seconds, the fourth power unit was de-energized, deprived of some communication and control, and was immersed in numerous fires. At the moment of the explosion, two people will die, and the rest of the personnel rushes to fight for survivability and prevent the spread of fires. In the first hour after the accident, the turbinists drained the oil and displaced hydrogen from the turbine generators (remember that each RBMK has 2 of them). Turbine operators do not know that during the explosion, part of the irradiated fuel and ubiquitous graphite was thrown onto the roof of the turbine hall, and, having broken it, down to the turbines. Many of those who saved the station from hydrogen explosions and oil fires will be overexposed, several people will die from radiation sickness.

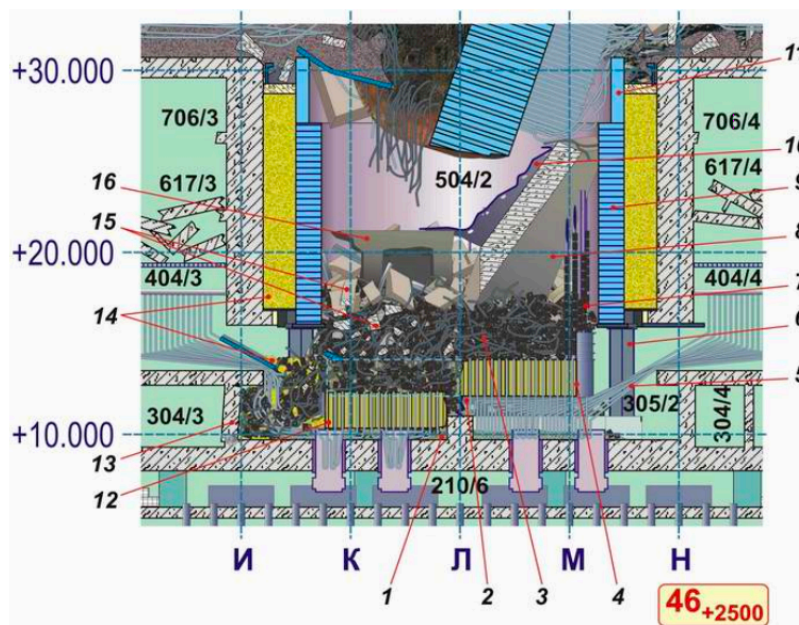


Рис. 15. Шахта реактора и пом. 305/2 через полчаса после взрыва. 1 - серпентинит схемы «ОР» и меж-компенсаторного зазора; 2 - смятая схема «С» («крест»); 3 - топливо, топливные сборки, ТВЭЛ-ы, ТК, графитовые блоки, раздробленный бетон; 4 - ¼ «ОР»; 5 - трубы НВК; 6 - дополнительная опора; 7 - отражатель (каналы и графитовые блоки); 8 - ж/б плита (фрагмент стены бокса сепараторов); 9 - бак «Л»; 10 - облицовка теплозащиты стены бокса сепараторов; 11 - бак «Д»; 12 - ¼ «ОР».

The next victims will be firefighters from the ChNPP fire department, who are thrown to extinguish fires that have arisen for various reasons. Some of them will go to the roof of the third power unit, the deaerator stack, which is thrown with fragments of the core (the deaerator stack often found in descriptions is a multi-story building structure located between the turbine hall and the reactor buildings, in some way a connecting building with a corridor running along the entire nuclear power plant). The characteristic radiation fields in these places were hundreds of roentgens / hour with spots up to many thousands of roentgens / hour, i.e. the lethal dose was recruited in a few tens of minutes, or even just minutes. Not knowing this and not feeling anything (except, perhaps, the smell of ozone and mild nausea), the station employees quickly burned out, eliminating the consequences of the explosion.

In the very first hours of the accident, the personnel of the reactor department are trying to conduct some kind of reconnaissance of what happened (fortunately, the reconnaissance groups did not reach the central hall through the rubble - otherwise they would have remained there) and, most

importantly, to supply water to the reactor. Cooling a shutdown reactor is the first commandment of the nuclear industry, because just a couple of hours is enough for the energy from the decay of uranium fission products to melt the fuel, breaking the non-proliferation barriers, complicating and aggravating the situation (as will happen in 2011 at the Fukushima nuclear power plant). Water began to be supplied somewhere between 2 and 3 am, having spent a lot of effort manually opening the valves (it was finally possible to do this in a dilapidated building only by 4 am).

The presence of a high level of radiation was reliably established only by 3:30 (and even then the level of fields was underestimated tens of times), since at the beginning of the accident, of the two dosimeters available on the 4th unit for 1000 R/h, one was out of order, and the other was inaccessible. - for the arisen blockages. Following (and in parallel) after the liquidation of the accident, the electricians of the Chernobyl NPP begin to reassemble the power supply circuit **own needs**, in order to provide the fourth power unit with electricity, incl. for filling the reactor. By 4 o'clock in the morning the fire was localized on the roof of the turbine hall, and by 6 o'clock in the morning it was extinguished. In total, 69 personnel and 14 pieces of equipment took part in extinguishing the fire.

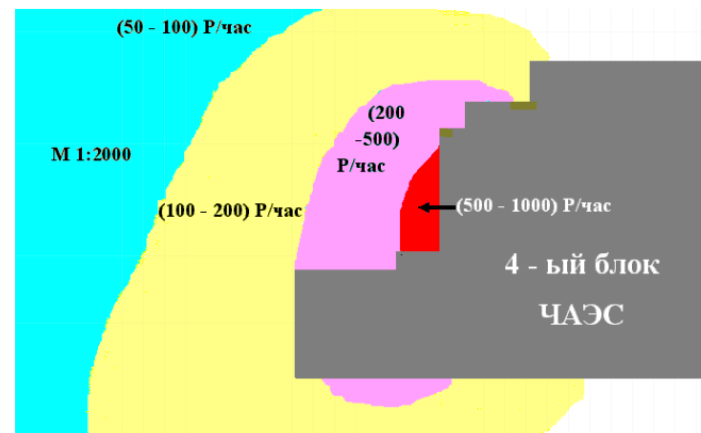


Рис. 2. Схема радиационных полей (величина МЭД) вокруг разрушенного 4-го блока ЧАЭС по состоянию на 26 апреля 1986 г.

The first evidence of the real scale of the accident will be night air samples, which will show the presence of short-lived isotopes of iodine and neptunium, which means that at least part of the fuel assemblies has been destroyed. Nevertheless, the NPP management did not believe in the fact of the destruction of the reactor for a very long time. For example, at 10 o'clock in the morning, the deputy chief engineer of the plant A.A. Sitnikov, who examined the reactor compartment of the 4th block and saw with his own eyes the state of the central hall and the destroyed reactor, reported this to the chief engineer and director of the Chernobyl nuclear power plant, they did not believe him.

Fulfilling the main commandment of the NPP personnel "to cool the reactor at all costs" over the night of April 26, first several hundred cubic meters of the unit's pure water reserves will be poured into the reactor, then several thousand cubic meters of the entire station's water reserves. In addition to running out of clean water, a problem will arise with the flooding of the basement cable corridors along the station with radioactive water, which removes radionuclides from the remains of the reactor. As a result, people themselves begin to aggravate the accident, because three other working blocks of the



station are without emergency water supplies and with flooding with radioactive water. The situation becomes dangerous for the entire station, and at 5 am the operating personnel stops Unit 3.



*In 25 years, it will become the main problem in another severe radiation accident.*

In the following days, by the way, you will have to spend a lot of effort on pumping out water and cutting communications (including those restored on the first night) with emergency block 4.

At night, the first medical evacuations of over-exposed firefighters and Chernobyl NPP workers begin. This evacuation will go to the now famous medical unit of the city of Pripyat, where clothes from the same injured workers are dumped in the basement - and after 30 years these clothes have a dose rate 10,000 times higher than the background. One can imagine the working conditions of doctors at dawn on April 26, practically comparable to a nuclear war in terms of the radiation situation and injuries ...

However, until dawn, the real radiation situation will be unknown not only to doctors, but also to everyone at the NPP site. Only in the afternoon does dose control begin to be established. Dose control detects not only monstrous radionuclide contamination, but also such "wonderful" things as "shots" of gamma radiation from the unit along the surrounding area, which in turn leads to the fact that it is now possible to move in some rooms and corridors of the Chernobyl nuclear power plant just running. These "corridor runs" will become another difficult and memorable symbol of the liquidation of the consequences of the accident.

In the afternoon of April 26, people gradually begin to realize the severity. It seems that the most acute problems have been resolved - the 4 power unit has been flooded with water, and the contaminated water is pumped out into the cooling reservoir of the Chernobyl nuclear power plant (due to which the water activity in it will increase over time to  $10^{-6}$  curie / l - a value characteristic

of the primary circuit water of RBMK ), a backup power supply was established, fires were extinguished. However, aerosol emissions from the remains of the power unit are rapidly aggravating the situation both on the territory of the nuclear power plant and around. These aerosol emissions are associated with active oxidation of graphite heated by fuel assembly residues. The resulting carbon dioxide actively carries up the particles of fuel and activated structures. At the beginning of the accident, graphite will burn at a rate of ~ 1 ton per hour, carrying out several million curies (roughly speaking, the ingress of 1 curie of radionuclides inside is enough for guaranteed death from internal radiation) every day.

*Recording of conversations between fire dispatchers in the first hours of the accident.*

In the afternoon, the first specialists of the Ministry of Medium Machine Building and the Radiation Chemical and Biological Defense Troops (RCBZ) arrive at the emergency station. In the afternoon, a government commission headed by the deputy. Chairman of the Council of Ministers of the USSR, and Academician Legasov (and 10 more officials at the level of deputy minister).

The main issue of the day on April 26 is the evacuation of the satellite city of the Pripyat station and the Yanov station. The city is gradually falling asleep with aerosols and the radiation background on the street grows to units of roentgen per hour (!) By the 27th, despite attempts to clean the streets with sweepers.

*Radiation reconnaissance in Prip'yat after evacuation. "People will come back here soon" ...*

On the night of April 27, the decision to evacuate is still being made. Temporary the evacuation of the entire population of Prip'yat will begin at 14:00 on April 27, for which the Ministry of Internal Affairs of Ukraine will send more than 1, 100 buses. Let me remind you that the population of Prip'yat at the time of the disaster was about 48,000 people.

*Evacuation of prip'yat*

By 7 pm on April 26, the station finally runs out of water supplies for cooling, and the basement cable corridors are flooded with radioactive water. The radiation situation at the site is becoming extremely difficult. The government commission decides to stop the 1st and 2nd blocks, to reduce the number of personnel at the station.

On the same night of April 27, the risk of a resumption of a self-sustaining chain reaction in the remains of the reactor is discussed. Its renewal is considered possible due to the poisoning of the fuel (decay of iodine and xenon). The multiplication factors for different remnants of the masonry are calculated, and the readings of neutron detectors are taken. The resumption of SCR would greatly aggravate the already hellish situation with an uncontrolled increase in heat release and radioactive radiation, which is why this issue raises such anxiety.

And as a result of these discussions and measurements, a decision was made to throw the remains of the reactor with various materials - boron carbide to absorb neutrons, dolomite, clay, sand for extinguishing burning graphite, lead to dilute and lower the temperature of fuel lava. Over the next week, 5200 (!) Tons of various materials will be dropped onto the reactor block from helicopters,

mainly past the central hall. Theoretically, a good solution to reduce the radiation and nuclear danger from fuel residues will be difficult to implement - helicopter pilots will be afraid of a column of radioactive smoke, a 150-meter ventilation pipe, and the reactor shaft itself will be blocked by the upper reactor cover lying on it.

*Quite a jerkvgeneral understanding of the accidenta film about liquidation from the point of view of helicopter pilots.*

By the way, in his memoirs Legasov says that there was no urgent need to throw the reactor from helicopters: "... the first thing that worried us all was the question of whether the reactor or part of it was working or not, that is, is the process production of short-lived radioactive isotopes. herThe first attempt to find out was made by the military. In specialized armored personnel carriers belonging to the chemical forces, sensors are mounted that have both gamma and neutron measuring channels. The very first measurements with a neutron channel showed that, supposedly, there are powerful neutron radiation. This could mean that the reactor is working, and I had to use this armored personnel carrier to approach the reactor, figure it out and make sure that in the conditions of very powerful gamma fields, whichrye exist on the object, the neutron channel, as a neutron channel, of course, does not work, because it "senses" powerful gamma fields, not neutrons. [ *this is due to the fact that neutron sensors most often register not the neutrons themselves, but a gamma quantum - the result of the nuclear reaction of an arriving neutron with a target substance helium-3 or boron - tenergy*] Therefore, the most reliable information on the state of the reactor could be obtained from the ratio of short and relatively long-lived isotopes of iodine. They took the ratio of iodine- 134 and iodine- 131 as a basis and, by means of radiochemical measurements, they quickly became convinced that the production of short-lived isotopes of iodine does not occur, and, therefore, the reactor does not work and is in a subcritical state.Subsequently, over the course of several days, the repeated corresponding analysis of the gaseous components showed the absence of volatile short-lived isotopes, and this was for us the main evidence of the subcriticality of the fuel mass that remained after the destruction of the reactor " .

Nevertheless, there was a risk of criticality gain by some AZ fragments. By the way, according to modern models, the melting and spreading of the fuel masses lasted for the first 3-4 days, and then the corium (an alloy of fuel and structure) was diluted with silicates from concrete, and the reduced energy release led to the solidification of lava fuel-containing masses (LFCM).

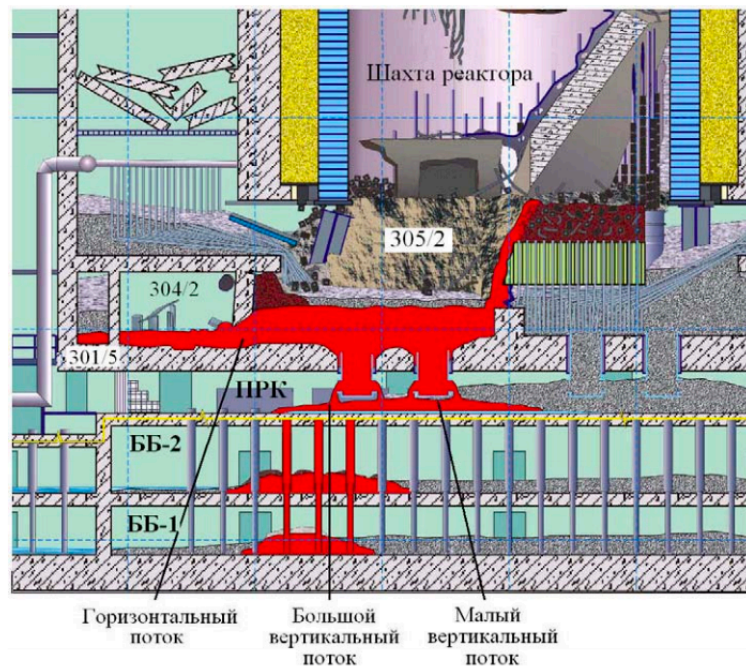


Рис.23. Вертикальное распространение лавы по паросбросным клапанам и трубам (фрагмент сечения объекта «Укрытие» по оси 46+<sub>2500</sub>). Большой вертикальный поток: пом.305/2→ пом.210/7→пом.012/15→пом.012/7. Малый вертикальный поток: пом.305/2→пом.210/6

Modern understanding of the spreading of fuel lava. The bottom concrete in the picture is the foundation slab of the block, burning of which will cause a lot of anxiety.

The next most important chain reaction was the need to prevent corium from burning through the foundation with the release of radioactivity into the groundwater. To combat this scenario decided at the very beginning of May, dig an adit under the reactor building, lay water-cooled pipes there and pour concrete. The furious round-the-clock work of 400 miners began on May 3 and will end in nothing - by the second half of May it will become clear that there will be no burn-through. This water-cooled cooker will remain unfinished.

A very atmospheric video about the miners digging an adit to create a water-cooled foundation. Another important work within the framework of limiting the possible weighting of the accident will be the descent of water from the bubbler pool (BB- 1 and BB-2 in the diagram above) - a special room under the reactor for steam condensation in case **emergency stop** reactor. Since the bubbler pool is located directly under the reactor and is filled with water, then we again have the risk of fuel getting into this water, with the subsequent spread of activity to the limit - creating conditions for a chain reaction. On May 3-4, the bubbler pool was lowered (and this work again led to a significant overexposure of people), and a liquid nitrogen supply system was installed in it. Nitrogen was even subsequently supplied, but like the water-cooled stove it turned out to be irrelevant.

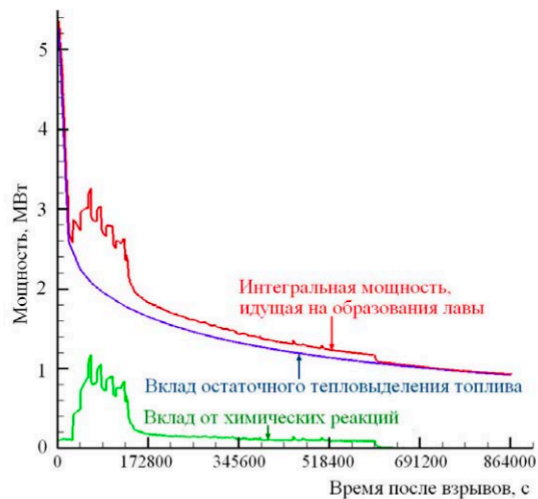
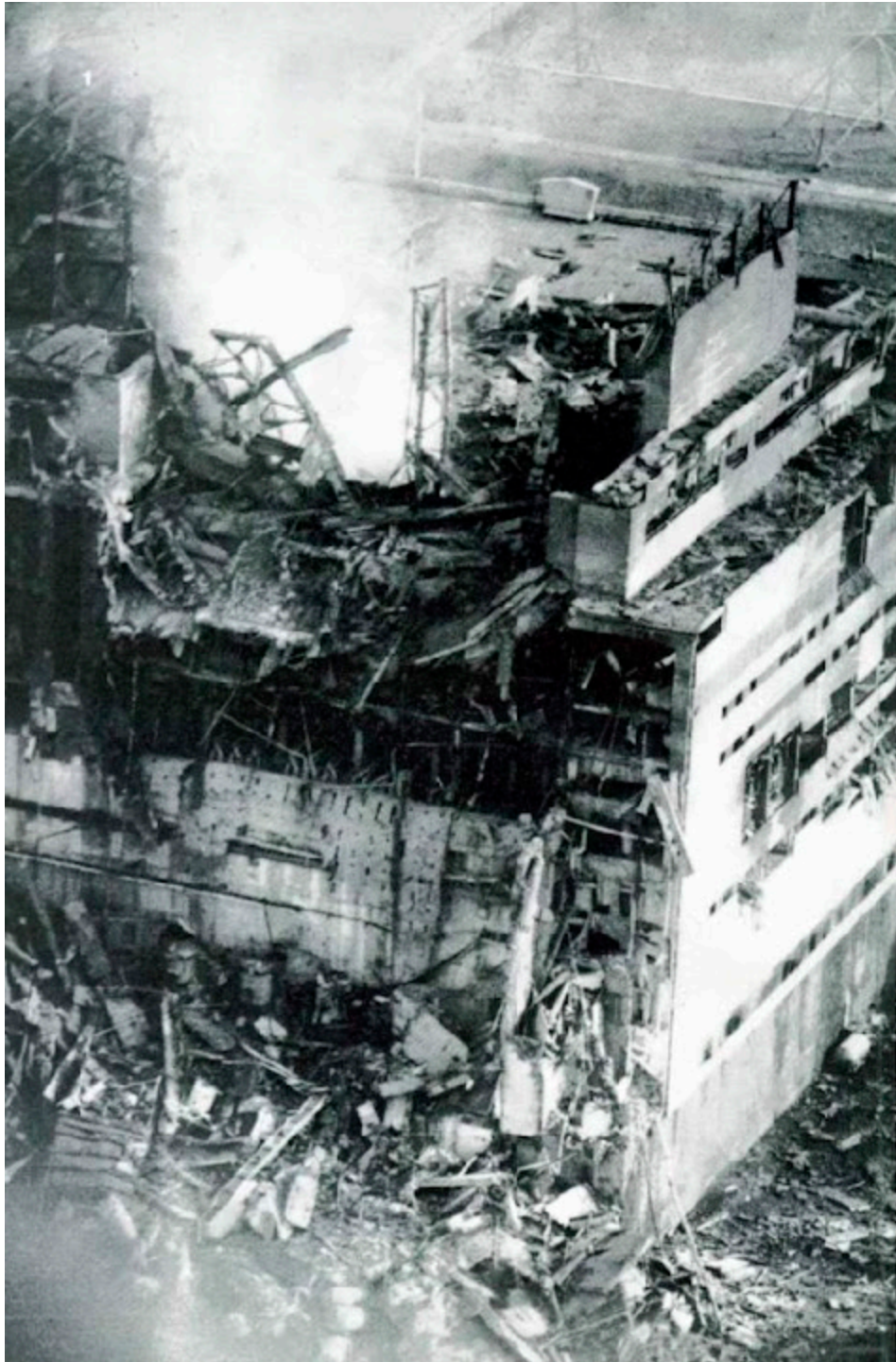


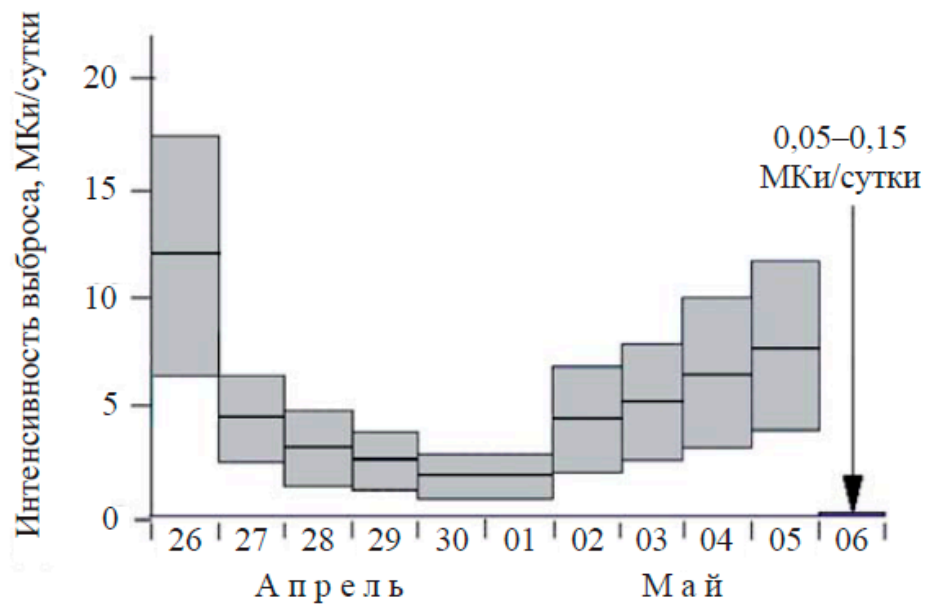
Рис. 20. Вклад в полную тепловую мощность, идущую на образование лавы, от различных источников тепла (для одного из сценариев образования лавы).

In general, I wonder where this concentration on this thermal hazard suddenly comes from. The fact is that from April 27-28, the Kurchatov Institute was able to simulate various scenarios for the spreading of fuel masses, and the probability of burning through the foundation and getting into their soil. A few days later, scientists gave the answer - yes, there is a high probability of this. After that, as we can see, great efforts were made to stop this likely aggravation of the accident. In fact, KI's calculations underestimated the chemistry of interaction between LFCM and concrete, and overestimated the risk of burn-through. This moment later, after the accident, will give an impetus to the development of specialized software for modeling such severe accidents: too blindly you have to act without it.



*April 27, 1986, aerosol release from the reactor.*

Meanwhile, in early May, the growth of the release of radioactive aerosols from the reactor resumed. By the way, there is still no clear explanation for such dynamics of the release of radioactive aerosols. The most plausible version is that the part of the fuel filled up on April 30-2.05, having lost contact with the air, warmed up again and set fire to the unaffected part of the graphite, which burned out by May 6. The radiation hazard becomes dominant and various new methods are invented - filling with foam, putting on an aluminum cap on the reactor shaft, etc. None of them manage to realize until the end - on May 6, the release, and in place with it, the active phase of the accident will end.



Together with the greenery in May, the Chernobyl disaster takes on a finished form - a severe accident that resulted in the pollution of hundreds of thousands of square kilometers, the evacuation of 116,000 people and the loss of an expensive energy facility. The main task of the liquidators is to immobilize radionuclides and, if possible, decontaminate the ChNPP site:

Removal of ejected core fragments from roofs.

Decontamination of roofs and external surfaces of buildings.

Cleaning of contaminated waste and equipment from the territory.

Removal of soil (5 ÷ 10 cm) and its removal to temporary burial sites.

Adding clean soil (sand, gravel, etc.).

Laying concrete slabs on the ground.

Covering the territory with film-forming compounds.

In addition, in mid-May, a decision was made to convert the fourth power unit into a burial place by erecting a sarcophagus - the Shelter Object. This work will be completed in 206 days by November 30, 1986. I will talk about it and many other related activities in the second part of the article. In the meantime, another atmospheric video about what the exclusion zone looks like today.

Continuation of the story in the text

The tragedy occurred at 01:23 o'clock on April 26, 1986. At the 4th power unit of the Chernobyl nuclear power plant, an explosion thundered, completely destroying the reactor. **V environment** a huge amount of radioactive material was thrown out. In total, 45 civil defense regiments from all over the USSR took part in eliminating the consequences of the Chernobyl explosion. Liquidators were sent

from Lithuania, Latvia, Belarus, Georgia, Armenia, Tajikistan. The last regiment left the danger zone in 1989. Over 600 thousand people worked to eliminate the consequences of the disaster, of whom 360 thousand were residents of Russia.

Now, hearing the phrase "Chernobyl nuclear power plant", everyone imagines a terrible tragedy, and in 1986, after the accident, the world did not turn upside down. Many went to the mysterious zone in Ukraine, not even knowing what awaited them there.

Treatment of the territory of the Chernobyl nuclear power plant with a decontamination solution.  
Photo: RIA Novosti

While the mobilization was going on, there were no changes in the life of the Soviet state: the TV showed reports from the congresses and news from the harvest fields.

In addition to conscripts, men over 35 years old, who had two children, were sent to fight radiation. Probably to save those who have not yet acquired a large family from possible childlessness.

## "We learned about radiation when the leaves on the trees turned yellow in the summer."

This year April 26 **Rauf Garafutdinov** is going to celebrate the same as always: to come to the memorial in memory of the victims of the disaster at the Chernobyl nuclear power plant. He often visits the monument.



Rauf Garafutdinov is looking for the names of friends in the list of victims. Photo: AiF / Aliya Sharafutdinova

Here he recalls 10 days spent in Ukraine and peers at the list of the names of the participants in the liquidation of the accident at the memorial.

"Every year I come to events dedicated to Chernobyl, but last year I did not see any acquaintances," he admits, embarrassed to show his reddened eyes.





When men can't hold back their tears Photo: AiF / Aliya Sharafutdinova

"In the year of the disaster, I turned 24. I and two fellow students immediately after graduation went to the officer's training camp in the city of Chernigov. A helicopter regiment was based not far from us. The concrete that we prepared was taken by helicopters and dropped on the fourth unit of the Chernobyl nuclear power plant, - says Rauf Garafutdinov. - We were not told that there was a high background radiation around. We realized this only when all the leaves on the trees turned yellow in the summer. "

In 1986, those working on the elimination of the consequences of the Chernobyl nuclear power plant were not detained in the dangerous territory for a long time. Having received twenty-five rem (the biological equivalent of an X-ray) in 30 days, a person had to leave the danger zone. Only years later, the liquidators learned that 25 rem is the limit of admissible exposure for a year, and not for a month, as they were taught.



On April 26, in Kazan, the "Chernobyl victims" meet to remember their dead comrades. Photo: AiF / Aliya Sharafutdinova

## "They gave a lot of condensed milk"

"35 degrees of heat, and we are in overalls and respirators. And they didn't even take them off in the car, " recalls **Rinat Nizamov** who got into Chernobyl at the age of 19. - We were told that radiation enters the body through dust, so they tried not to breathe it. And it's stuffy outside. And it was impossible to swim ".



Rinat Nizamov took part in the liquidation of the consequences of the accident in the summer of 1986. Photo: AiF / Aliya Sharafutdinova

The Latvian regiment, which consisted of about 800 people and in which Rinat served, was engaged in decontamination. From 8:00 to 17:00, the soldiers washed buildings, multi-storey residential buildings.

"Before the disaster in 1986, he served in the Baltic navy," says Rinat Nizamov. - After the "training" was sent to the city of Lipy, and in June, since I had a license, the only one from the garrison was sent to Chernobyl. We needed drivers for fire trucks. I found out that I was in a lost place a week later, "Rinat admits.



Dosimetrists check the level of radiation from cars leaving the city of Chernobyl. Photo: RIA Novosti

A special powder was added to the water. In order for the radiation to escape, the structures were rinsed under pressure from the outside. We cleaned the wells: removed the soil. We washed the streets and sidewalks.

"Abandoned settlements then were not as frightening as they are shown now. There were many soldiers, work was in full swing. We lived outside a 30-kilometer zone in the field, in tents, "Rinat explains. There were few young guys like me. Mostly "partisans". So we called those who were called from the reserve. Food and water were brought in. And they also gave one can of condensed milk for two, which seemed to us like paradise. Later I read that it helps with radiation. "

## Yellow puddles and peaches, as in the advertisement

43 year old **Sergey Ochertyany** the military album is viewed only once a year, in April. One of the old shots shows the military against the background of the huge letters "Pripyat", on the other - near the fourth power unit. All photos seem to be highlighted. "Even the film deteriorated from radiation. Color photographs turned out to be muddy and black-and-white, - comments the Chernobyl survivor. "Yes, and it was forbidden to take pictures."



Sergei Ochertyany is looking through a military album. Photo: AiF / Aliya Sharafudinova

"I was drafted to Dnepropetrovsk. Then we were offered to go to Kiev. I agreed. But instead of Kiev, he ended up in Chernobyl in January 1988 and served until August 1990," recalls the liquidator of the accident.

Four companies guarded the Chernobyl nuclear power plant. Some of the posts were only a few meters away from the ill-fated reactor. From time to time the soldiers were taken out to "clean territory", and two weeks later they were returned to the station.



Sergei Ochertyany taking the oath. Photo: From personal archive

"On the first day I noticed red spots on the road. The streets were always washed, but when the puddles dried out a little, they turned orange," says Sergei. - Peaches grew like they are now shown

in advertisements. The cherry was the size of a plum. The strawberries were filled with sweetness and shone so that it seemed that you could look like in a mirror. "

Upon returning home, the doctors told Sergei Ochertyaniy that he would either not have children, or they would be born with disabilities. "I came to the register to become, and the nurse pulled away from me. Until now, having learned that I am a Chernobyl survivor, people shy away. They think that I am emitting radiation, "admits Sergei and adds that, contrary to forecasts, he became a father.



Near the post at the entrance to the Chernobyl nuclear power plant. Photo: From the personal archive of Sergei Ochertyany

Sergei, his wife Natalya and daughter Yulia now live on 18 square meters. By law, the same amount relies on each of them separately.

As a "Chernobyl", a man is entitled to both benefits and housing. Here are just improvements **housing conditions** the family has been waiting since 1995. Since then, Ochertyany's little daughter managed to finish school and go to college.



Doctors told Sergei that he would not have children. Contrary to forecasts, a daughter was born.  
Photo: AiF / Aliya Sharafutdinova

Two years ago, Sergei was removed from his disability, he was told that he was "healthy." His pension and individual benefits have disappeared. But they are in no hurry to take a healthy man to work: as soon as they find out that there is a "Chernobyl", they immediately refuse.

"For health reasons, we need to be treated 2-3 times a year. What employer needs such employees?"



Memorial in memory of the victims of the Chernobyl accident. Photo: AiF / Aliya Sharafutdinova

Having built the first nuclear power plant in the USSR in 1954 and forcing the atom to serve peaceful purposes, mankind believed in the acquisition of the cheapest electricity. In the 80s of the XX century, there were already 360 nuclear power plants in the countries. On April 26, 1986, the world community found out its real price: tens of thousands **human lives**, who died from radiation and its

consequences, 300 thousand left homeless, abandoned cities and villages. But the victims could have been even more, if not for the people, the real heroes of Chernobyl, who averted an even greater catastrophe at the cost of their lives.

## Chernobyl accident

On the night of April 26, residents of the Ukrainian cities of Pripyat and Chernobyl, located 4 and 18 km from, respectively, where most of the adult population worked, were sleeping peacefully. In the control room of the 4th block, where the tests of the reactor No. 4 were carried out, their tragic fate was decided for many years. As the government commission will later determine, during the tests, the permissible parameters were violated, which caused uncontrolled processes that led to the explosion of the reactor. 50 tons of nuclear fuel burst out, which is 10 times more than the infamous Hiroshima.

Punishment will be borne by the management of the Chernobyl NPP: the deputy chief engineer A. Dyatlov and the director of the Chernobyl nuclear power plant V. Bryukhanov will receive a term of 10 years. The first will die from the effects of radiation in 1995. The chief engineer will lose his mind. Only in the nineties did the government commission recognize that a fatal mistake in the design of the reactor itself was the main culprit of the accident. Be that as it may, the first participants in the Chernobyl accident were the station employees. When the building of the power unit was destroyed, two died, all the rest (134 people) fell ill with radiation sickness, of which 24 died soon (28 along with the firefighters).



## Standing in the way of further disasters

After two explosions with a difference of two seconds (at 1 hour 23 minutes), the reactor was completely destroyed, causing about 30 fires. Station operators were the first to rush with fire extinguishers to eliminate them without hesitation. While the director V. Bryukhanov, who arrived at the station at 2 o'clock, was in a state of shock, in the electrical shop they fought to prevent a hydrogen explosion, which could cover Minsk, which was more than 300 km away.

The country should know the names of the heroes of Chernobyl. Aleksandr Lelechenko, 47, deputy shift supervisor, personally cut off the hydrogen supply to the turbine room, on the roof of which there was already a fire.

For four days he remained at his workplace, eliminating the consequences of the Chernobyl accident and ensuring the safe operation of the first three units of the nuclear power plant. Oleksandr Lelechenko died from an incompatible life on May 7, already in the two thousandth he received the posthumous title of Hero of Ukraine.

## The true heroes are the firefighters of Chernobyl

The combat alert raised the guard of firefighters from Chernobyl and Pripyat, the first of which arrived at the station 7 minutes after the start of the disaster. 28 people rushed to fight the fire under the leadership of lieutenants Vladimir Pravik and Viktor Kabenk. Both are 23 years old, but by their example they led the fighters, giving clear commands and being where it is most difficult. General management was carried out by Major Telyatnikov, under whose command there were 69 people and 14 pieces of equipment. Practically without protective equipment, having only gloves, helmets and canvas robes, not using due to **high temperatures** gas masks KIP-5, until three in the morning the firefighters were unaware of the deadly radiation level.

By four o'clock in the morning, the fire was localized, by six it was completely extinguished. Losing consciousness during the fight against the fire, many firefighters received and were sent for treatment to Moscow and Kiev. Of the 13 people who were treated in the 6th clinical hospital of the capital, 11 died. Among them are Viktor Kabenok and Vladimir Pravik, who became a father a month before the tragedy. Doctors say that the chosen method of treatment of Dr. Gale turned out to be wrong. Professor Leonid Kindzelsky in Kiev, using his own method of treatment, managed to save all patients. Three firemen, Vladimir Pravik, Viktor Kabenk and Leonid Telyatnikov, were awarded the title of Hero of the Soviet Union. Only the last one, who rose to the rank of general, managed to survive.

## Firefighters - Heroes of Ukraine

Three firefighters from among the first to find themselves at the crash site received the title of Hero of Ukraine. Among them, Vasily Ignatenko, 25, At the cost of his life, a young man pulled three of his comrades, who had lost consciousness from radiation, from the fire. His pregnant wife was unable to save her daughter, having received radiation while visiting her husband in a Moscow hospital. The dose was fatal for the newborn.

Sergeant Nikolai Vashchuk, 26, and Nikolai Tytenok, 23, were among those saved by Ignatenko. But they all have the same fate - to die in the hospital. Both worked at the highest altitude, preventing the spread of fire to the third power unit. It was there that the radiation level was highest. The heroes of Chernobyl left behind a grateful memory, and also two sons.





## Firefighter - Hero of Russia

The head of the department of the Main Directorate of Fire Protection of the USSR Ministry of Internal Affairs, Lieutenant Colonel Vladimir Maksimchuk, arrived at the Chernobyl nuclear power plant as part of a government commission. It fell to him to lead the extinguishing of the fire on the night of May 23rd. This story was kept silent for a long time: the threat of a new explosion of the 4th reactor arose after the ignition of circular pumps and high voltage cables. Not allowing fire brigades, with a reconnaissance group, the lieutenant colonel entered the scene of the fire. Having established the degree of danger and identifying the level of radiation (250 roentgens per hour), Vladimir Maksimchuk personally organized **rescue work**, having determined the maximum time spent on the territory of the fire ten minutes.

Special equipment was introduced into the fire fighting zone, and combat crews were constantly changing, informing each other about the changes taking place. The commander himself, with each group, again and again found himself in the most dangerous point, serving as an example of personal courage. This is the most "secret" feat for the country for many years to come. Heroes of Chernobyl were presented for awards, and forty firefighters led by the commander will be unknown in a hospital bed. In 1994, at the age of 46 and the rank of Major General of the Internal Service of the Ministry of Internal Affairs, Vladimir Maksimchuk died, being posthumously awarded the title of Hero of Russia in 2003.



## Who are the liquidators

One of the first eyewitnesses to photograph the reactor after the accident was news agency operator Igor Kostin. He saw a picture of complete defeat, as if after an atomic war. The consequences of the Chernobyl accident are not only a release but also the strongest radioactive contamination on an area of 200 thousand square kilometers. The smoldering reactor continued to emit radioactive gas and dust into the atmosphere, this had to be stopped. The possibility of a second explosion was not ruled out due to the danger that a concrete slab would crack under the reactor, and magma would combine with water.

At the same time, the authorities kept silent about the consequences of the disaster, and the first publications in the press appeared only 36 hours later. The radiation cloud was recorded in Europe, and the full-scale evacuation of the population from the nearby area, which went down in history as an exclusion zone, has not yet begun. People began to be taken out of a radius of thirty kilometers after measurements made by the military of Colonel Grebenyuk's group in Pripyat. They not only showed a catastrophic increase in radiation during the day, but also shocked the Institute of Atomic Energy with absolute numbers. The background radiation exceeded the permissible norms by 600 thousand times!



From the first hours of the accident, specialists and military units entered the place of the evacuated residents who left the contaminated area during the week. Later they were called liquidators. 600 thousand people were involved in eliminating the consequences of the disaster after President Gorbachev's appeal on television 18 days after the beginning of the tragic events.

## Army feat

Each of those who came to eliminate the consequences of the accident had a good idea of what Chernobyl was. Hero-liquidators after years do not regret at all that they had to stand up against an invisible enemy - penetrating radiation. Despite the health problems and the death of friends from serious illnesses. 100 thousand of them are representatives of the army, including 600 helicopter pilots who did everything to silence the emergency reactor. Academician V.A. Legasov was a member of the government commission for eliminating the consequences of the accident, who developed the composition of the mixture for throwing into the reactor zone: sand, boric acid and lead. Within 48 hours, work began, for which the best helicopter pilots were attracted, including those recalled from Afghanistan.



The radiation level over the reactor was 9 times higher than the lethal dose, the air temperature at an altitude of 200 meters was 120- 180 degrees. In conditions of hot radioactive air and danger to life, soldiers practically with their bare hands dropped bags weighing 80 kg, and the pilots made up to 33 sorties a day, immediately receiving radiation of 5-6 roentgens. It took 6 thousand tons of mixture to reduce fatal emissions by 35% **hazardous substances**... Among the helicopter pilots there is one of them - Nikolai Melnik, who lowered a six-kilogram pipe with measuring instruments into the reactor from a height in order to find out the nature of the processes inside in order to avoid repeated explosions. This filigree operation went down in history under the name "Needle".

## Stock warriors

The liquidators of the Chernobyl accident are not only professional specialists, but also former soldiers and officers between the ages of twenty and thirty who were involved in army training. All around the fourth reactor was littered with radiation fuel. The most difficult thing was to remove graphite and radioactive debris from the roof, where they used robotics. But the overwhelming level of radiation put it out of action, so it became necessary to attract people. These heroes of Chernobyl went down in history as "biorobots". He supervised the operation to remove radioactive elements, calculating that even in a protective suit, a person cannot be in the radiation zone with 7000 roentgens for more than forty seconds.

In order to dump radioactive debris into two shovels, young men with a protection weight of 26-30 kg climbed to the roof for 2.5 weeks, risking their lives and health. Igor Kostin and Konstantin Fedotov had to repeat their little feat five times. As a reward, the "biorobots" received an army certificate of a liquidator and a prize of one hundred rubles. According to medical forecasts, every fifth of these children will die before they reach 40 years of age. The war with an invisible enemy did not end with the completion of work to eliminate the Chernobyl accident.



## Construction of the sarcophagus

Most of all, the emergency station needed professionals. Firefighters prevented a new explosion by pumping out water under the concrete slab of the reactor, miners dug a 150-meter-long tunnel from the third power unit to install a cooling chamber on liquid nitrogen, and engineers of the Kurchatov Institute cut through the surviving walls with autogenes to determine the degree of danger. The whole country was mobilized to provide assistance to the affected areas, and in fact a front-line situation was created. An account for donations was opened, to which 520 million rubles were received within six months. The final stage of the work on taming nuclear energy was to be the construction of a protective sarcophagus for the burial of the "smoking" reactor. There was no analogue to such an object in the world, therefore those who designed and built it in conditions close to combat are real heroes of Chernobyl.

It took 206 days to build a concrete shell of the reactor weighing 150 tons and 170 meters high. Lev Bocharov, one of the developers of the object, admits that the most difficult thing was that each detail had to be designed separately to avoid unnecessary sacrifices. Remote construction led to the fact that, despite the labor costs of 90 thousand people, the use of a huge amount of metal structures and cement, after 28 years there was a collapse of the suspended slabs of several hundred meters. More helicopter flights in 2007 and radiation measurements showed that the power unit is still dangerous. Therefore, today a new project "Shelter-2" is being implemented with the participation of European countries and the United States of America.

The 30-kilometer territory around the nuclear power plant is still an exclusion zone, where the presence of people is fraught with danger due to radioactive contamination. Pripyat has become a preserved monument to the 1986 tragedy.

## Dedicated to the heroes of Chernobyl

The tragedy at the Chernobyl nuclear power plant showed the whole world what can happen if nuclear energy gets out of control. It intensified the process of nuclear disarmament and became, in

fact, the beginning of the end of the USSR. But she also demonstrated to the world community the courage and heroism of ordinary people of different nationalities who stood shoulder to shoulder in the name of saving European civilization. The leader of the Communist Party of Ukraine V.V.Shcherbitsky, who helps to conceal the true scale of the Chernobyl accident, will not be able to survive the tragedy, scientist V.A.Legasov, feeling the guilt of the scientific community for what happened. But there is nothing to be ashamed of those who will forever live in bronze and our memory. On the 25th anniversary of the tragedy in Ukraine, Vyacheslav Kokuba composed the song "Glory to the Heroes of Chernobyl", which speaks of gratitude to "those who saved the world from the tragedy, those who saved their honor and uniform."

In Ukraine, the medal "Hero of Chernobyl" was established, which is still awarded to liquidators who showed special courage in a difficult period for the country. Three years ago, the award found in Kyrgyzstan a doctor, Iskender Shayakhmetov, who works a hundred meters from the block, which saved the lives of dozens of people. And at the Kiev Institute of Radiation Medicine there is still an unequal struggle with an invisible enemy for the life of the former liquidators. People come to Professor Anatoly Chumak from all over the former USSR. Monuments to the courageous Chernobyl heroes have been erected in many cities, many of whom died years later from the consequences of radiation sickness.

Marking the date of the tragedy at the Chernobyl nuclear power plant, we publish the story of a person who, in the same year, 1986, visited the Exclusion Zone as a liquidator of the consequences of the accident.

## Liquidator's Notes

I will try to write about the elimination of the accident on **Chernobyl** as a participant in it. I write only what I myself was a witness, if from hearsay - so I will write. Sorry for a lot of words, it just happened.

## Background

About myself: we had a military department at the university and we, biologists, were trained as officers-chemists. Upon graduation, he was awarded the rank of lieutenant of the reserve, after 10 years he received the rank of Art. lieutenant, and my entire period of service in the army was 75 days - the time that I participated in the LPA (liquidation of the consequences of the accident) at the Chernobyl nuclear power plant.

Hearing about the accident, I realized that sooner or later I would be there, in a military specialty. I read a lot on the available literature (no one heard about the Internet then, and it did not exist). I wondered why in Japan people who survived the radiation from the nuclear bombings of Hiroshima and Nagasaki are still alive, and I realized that one of the main reasons is the traditional tea drinking since childhood.

He began to "rummage" in the properties of tea and read somewhere that it removes radiation. True, in Japan they traditionally drink green tea, while we have black tea, but the essence is the same. I loved him before and drank a lot. In part, they drank at least a liter daily. There is an opinion that alcohol also removes radiation, yes, this is true, but the nuance is that you need to drink alcohol BEFORE irradiation, and after that it is completely useless, unlike tea.

## Path to the Zone

At the beginning of November 1986, I was summoned to the district military registration and enlistment office and was told that I might have to go to a special training camp for the LPA, and I was sent to a medical examination in the district polyclinic.

It so happened that I became the only person among the liquidators of the district who has a medical examination before the trip. Those who had been called up before me were raised at 2 am, at 4 am and immediately sent through the military registration and enlistment office to the zone, they were given 10 minutes to get ready. Those who were sent after me were not examined, because the Central Administration came not to carry out any examinations.

I was declared absolutely healthy. I remember the head of the polyclinic said: "Maybe I should write you some kind of illness? We will treat you later." To which I replied (I was young, ideological): "I took an oath to defend the Motherland." He sighed and signed: "Good without restrictions."

On November 28, I was summoned to the regional military registration and enlistment office and was told that I was being drafted for special gatherings, and that I would be sent to the regional military registration and enlistment office tomorrow, at 4 am. On the 29th, we, 10 reserve officers from different parts of the region, were sitting in the hall. The deputy regional military commissar spoke in front of us and said that we are being called up for special gatherings to eliminate the Chernobyl accident. He added that we can refuse to travel, but ...

**|| "... Here next to me is the regional prosecutor, against all those who refused according to the law" On conscription "A criminal case will be initiated" (!!!). For reference: this is from 3 to 5 years in prison.**

Naturally, there were no people who refused.

The head of the group was appointed. It turned out to be the only member of the CPSU among us, the head of one of the regional center restaurants. We were taken by bus to Krasnoznamenka, military unit, where they changed clothes for all conscripts going to the Zone. There they talked to us and announced appointments.

It turned out that it took eight people, and there were ten of us. That is, two were "superfluous". One was screened out at once, he had three children. It so happened that one of the two had to be sent home - me or a guy from my own village. They asked questions: the communists? - no, Komsomol members? - both who want to go voluntarily? - silence. Then they threw a coin. Dropped to go home to me. Then it instantly flashed through my head: "When I return, how can I prove that I did not get scared, that they sent him to the Zone, and not me?" And he said, let me go. They asked the second: "Do you mind?" The guy, of course, didn't mind. That's how I got on the list.

(By the way, when I returned home, I had to tell people that the guy was not "scared" by his parents, and that he did not shy away, but simply turned out to be superfluous).

In general, the next morning they changed us into a soldier's uniform, gave us dry rations, issued travel documents and sent us to Odessa, saying that a representative of the regional military registration and enlistment office would meet us there and help us with train tickets.

Have arrived. Nobody meets us, two hours later they decided that there was nothing to wait and took the tickets themselves. About 15 minutes before the train left, a panting lieutenant colonel flew in, found out that we had already taken tickets, said good fellows and ran away. On the morning of the 1st morning we arrived in Fastov, then by train to Belaya Tserkov, where they learned from the

demobels, the "partisans," where to go to the transit point.

We got there. In a large 2-storey barracks there were 2-storey bunks everywhere, there were a lot of "partisans", both soldiers and officers. Our senior found us some nook, said to wait and went to look for the authorities. He returned about an hour later, said that no one was waiting for us here, no one needed us, but in an hour a convoy would go to the 25th brigade (also a transit one), we would go with them.

**Formation, we are in the ranks, but in a separate group. There is a group of officers, checking the papers, checking the teams. When you reach us - and who are you, you are not on our list, you looked at the documents - to hell with you, if you want to go - go, but we are not responsible for you.**

At about 5 pm we arrived at 25, everyone was dismantled, and we were sitting. Hour, second, third, fifth ... Nobody fed us either in Belaya Tserkov or in the brigade, they ate what they took from home. They threw everything into the common table, and when they ate, dry rations were used. The senior went to the headquarters to get in touch with the regiment, he was told that for communication he needed a call sign, which we did not know. They said they didn't know either. They lied, of course.

At half past eleven in the night, a bobby came to pick us up. It turned out that the chief of the regiment's auto service was waiting for a replacement, and among us was his replacement, he called the brigade several times, they answered that there were no officers (although we had already been sitting there for several hours). Finally, he went to his colleague from the brigade and he told him that there were officers. He - on his "bobby", and behind us. In general, on the 1st at 12 at night we were in the unit. We were brought to the headquarters, assigned to positions, each took his replacement - to bring us up to date. On the 3rd they had already left for their homes.

## About the military unit

Military unit 44316, or, as it was called - the Odessa regiment, was located near the village of St. Falcons. In general, the Zone is a conditional concept: at the very beginning, the military circled a circle with a compass on the map (the center of the Chernobyl nuclear power plant) with a radius of 10 km, then a radius of 30 km, they were accordingly surrounded by barbed wire. Hence the names: "10-km zone", "30-km zone".

Along the perimeter, 30 km away, as I was told later, there were 30 regiments or special battalions with special equipment from all military districts of the USSR. In the first days after the accident, the "conscripts" were sent for liquidation, but then it occurred to someone that they would be ill and that later they would have to answer for them, so all the "conscripts" were returned back. Instead of them, they began to call for "partisans" ("the wisest decision": let the civilians have a headache later).

In fact, guys from Moldova, Crimea, Odessa, Nikolaev and Kherson regions were supposed to be drafted into our regiment, but for some reason they also came from other places. When I arrived, I found them from the North Caucasus (there were guys from Maikop in my platoon), in mid-December - replenishment from Donetsk and Lugansk (then Voroshilovgrad) regions, mainly miners, in mid-January - replenishment from the Sverdlovsk region. (Russia).

Replenishment was every 2 weeks, 250 people, the next day the same number went home. Called at



the age of 25 to 45 years (up to 25 - the body grows, there could be a replacement of calcium during bone growth with strontium, after 45 - the deposition of salts, the same strontium), those who in civilian life dealt with radiation were immediately returned ...

When I was in one of the replenishment was an X-ray technician, he was sent home the next morning, saying: "You won't be able to work in your specialty for a year later, you have nothing to do here!".



In general, the unit consisted of all normal people, from the regiment commander to the private (from the company commander and above - career officers, there were many who passed through Afghanistan, then - "partisans"). Nobody demanded to salute, they talked to each other on "you" ("partisans"). They did not pay attention to the cleanliness of the collars and the hairstyle, although the guys, as far as possible, kept themselves clean. If a slob came across, they quickly brought him back to normal. During all my time in the regiment there was not a single fight, if anything, anyone came to the rescue, despite the rank and position.

The unit had its own store where things unprecedented at that time were sold. At least by that time I had been on business trips to Kiev, Moscow, Leningrad, but the overwhelming majority of this had not been on sale. Vietnamese pineapples in syrup (800 g cans), Romanian cookies in 200 g packages (very tasty), Hungarian canned tomatoes, Bulgarian canned cucumbers, sprats, constantly Indian tea, Fanta, Pepsi-Cola, condensed milk, even a jar of black caviar lay , Soviet wrist watches "Electronics", Romanian leather sneakers, etc.

**Who remembers Soviet times, knows that at that time, even in regional centers, store shelves were half empty. And then there is such an abundance. If someone tried to skip the line, he, despite his rank, was immediately put in place.**

They were fed in part very well. The ration of a private and an officer differed only in that, respectively, 90 g and 120 g of butter, 1 and 2 boiled eggs were put on the day. Otherwise, everything is the same. Butter, sugar, grapes, apples lay on the tables in bulk, everyone took as much as he wanted, there was still left (grapes and apples in the form of patronage help were supplied by the Crimea), canned fish were only in oil, the stew was real and a lot, the borscht was very tasty, nobody even heard of mixed fat and bones instead of meat in borscht and soups, "shrapnel" (pearl

barley) never happened. Every day everyone was supposed (and given out) 200 g of juice (grape, apple, peach), cocoa or coffee, tea, hard cheese, the second courses were always with a bunch of meat or fish. Moreover, everyone is the same: both officers and privates. When I returned home after such a meal, the first time there was a feeling of hunger, the food was so good there. Yes, and they served in our regiment, unlike the others, for 2 months (in others it went up to 6 months).

## Service

I was appointed commander of a separate platoon, reporting directly to the chief of staff. Of course, it was more difficult than in a company: to keep track of the radiation doses of the platoon, to carry out political information, and to be present on the rise (after a month I gave up on this - chronic lack of sleep). In addition, my responsibilities included writing reports for work (in the evening at the headquarters, the order, how much and from whom to where to send, in the morning, until 7 am, hand over the surname list of those leaving for the headquarters), and presentation for encouragement, dismissal. But, at the same time, there was also a relative independence from others.

It was the fact that in the platoon all the adults who went through the urgent emergency kept order themselves and prompted me. There was only one emergency: two guys after a month of service imagined themselves to be "old people" and said that now they would not remove the snow, heat the stove and be on duty in the tent. I had to use the power: I told them that I did not mind that they were - yes, "old men", but they would also go to "civilian life" as "old men": not in 60 days, but at least 120 days later. As grandma whispered. No one else tried.

Submissions for replacement were written when a person gained 15 roentgens, usually it was in a month and a half, so everyone tried to get a "dose" as soon as possible, by the time of departure, 20-24 roentgens had been collected. We, the officers, were strictly warned that the maximum dose could be no more than 24.99 X-rays, if you put 25 or more, then the military prosecutor's office will deal with the set. So I had to "chew". The guys knew, but they understood and no one objected.

By the way, about the dose. When we were cutting down the "red" forest, the first to go were the medical dosimetrists (also "partisans"). At the site where they were supposed to work, the background was measured - above the snow (and it was 30-40 cm thick) using the envelope method: measurements at 5 points (along the edges and in the center). Then the average dose was taken (it was 0.45 X-rays per hour), worked in two shifts for 4 hours. Naturally, after felling trees and trampling snow, the background increased, but no one measured it. For 4 hours, a dose of 0.6 roentgens was set, it was impossible to do more (0.45x4 how much will it be?).

**About cars...** There was practically no service for them, as such, if something broke, the guys took a bottle of vodka, went to the "sump". The guard of the sump was from our regiment, and they removed the necessary from those cars

**For reference: the settling tank is the object where the contaminated equipment was driven, the burial ground is the property buried in the ground.**

**About burial grounds...** It is not known how many and where they are in the Zone. This was especially clearly seen in the example of our unit: the regiment commander went out, chose the place he liked (of course, without consulting the hydraulic engineers, etc.), there was dug a pit about 200x 100 m and a depth of 2 m. Everything that needed to be buried was taken there. sent a dozen

strong guys with sledgehammers - to break voluminous things. When the pit was filled up to 0.5 m from the surface, it was covered with earth. Its location was not plotted on the maps, and when one was filled, a new foundation pit was dug, etc.

## Work

It so happened that in addition to going out with my platoon, sometimes I had to be on a substitute, and it was interesting to see new things myself. My first trip was to Chernobyl, where they decided to prepare 2 five-story buildings for a hostel.

Have arrived. The entrance doors were sealed, they were opened by the police. We were told that only radiators and plumbing were to remain in the apartments, the rest should be thrown away, including wallpaper. A dump truck drove up to the window, everything was thrown away from the 1st to the 5th floors. The dump truck was full - another drove up, finished the opening - started another. Things were taken out to burial grounds.

I paid attention myself, then I specifically asked the guys - there were no valuable things in the apartments: fur hats, fur coats, color TVs, crystal, good carpets, and other valuables. But people were leaving in a hurry, they could not take it all out, and the entrances were sealed. Where did everything disappear is a rhetorical question. Some TVs (b / w), with a more or less large screen, the guys, first checking the background with the devices, took them to the unit, to the tents. Almost every one had a TV, and they watched it there.

Then there were trips to PUSO-2 (this is the PUSO of our regiment), to replace. There was practically no work there for me, the soldiers knew their job well, the role of an officer was, if necessary, to settle conflicts with those whose cars were laundered.

At the end of December I was "lucky" and I went to Pripyat for 4 days. Pripyat itself was fenced with a thorn with an alarm; when it was triggered, a special group was supposed to arrive, but there was no such thing in my presence. The only entrance was from the side of Yanov, 2 policemen were constantly on duty there, and 2 officers came for the day - a major and a lieutenant colonel.

Another small digression, so that later it would be clearer - then I was 34, I had been divorced for 7 years already, that is, I did not have to fear that my actions would be "recouped" on the family, sociable by nature, for a word in my pocket didn't climb. He could start a conversation on an equal footing with regular officers, both his own (chief of staff and regiment commander, major special officer, colonel and lieutenant colonel - permanent representatives of the district headquarters at the unit), and with strangers. Once, seeing a driving UAZ with the number "B" in the sign, he stopped him, a colonel was sitting there, began a conversation with him with the words "Hello, are you from the Belorussian district?" (I studied at the university in Minsk). I don't know if he was either taken aback by such an insolence of the elder, or just a normal person, but calmly replied that he was from Moscow, but what was the matter. I replied that I saw "B", and I studied there, apologized for stopping. He said it was okay and left.

**So about Pripyat...** The ministers of defense of the socialist countries, headed by the Minister of Defense of the USSR, were supposed to go there as an excursion, so we had to clear the snow from the streets of the route along which they would move. We sent 3 watering machines. There were no shovels at all, they dug through the entire vehicle fleet, and did not find a single one.

We put the cars on a ledge and brushed the snow off the side of the road. Cleared by the end of the day. And at night it snowed again. And so they cleaned for 3 days. On the 4th day we arrived in

Pripyat at 5 am, made two circles, suddenly a dozen cars with "partisans" appeared, they began to shovel the snow with shovels. Well, we drove into some nook, took a nap for an hour, then started cleaning again. Actually, all the work was done before us, we just cleaned it up.

Suddenly an UAZ car rushes and from it into a megaphone words, of which only "5 minutes" and "were not" were censored. Everyone jumped into the cars together, and we rushed off somewhere into the forest. An hour and a half later, they announced to us that we could return in parts.

**What is memorable: it was creepy. A beautiful modern city, lights are on in shops, a K-750 motorcycle (a huge shortage at that time), a bunch of bicycles, laundry is drying on balconies, fish are drying in some places, flowers on windowsills, curtains and a ringing silence. Not a single bird, not a single animal, not a single one at all.**

True, I did see the animals. Once we had dinner with the guys from the Baltic regiment (me and the drivers were also struck by their long hair and what they ate without taking off their hats and pea jackets). They cleaned the hotbeds, someone wanted to start them, secondly - with the guys from the Carpathian regiment (there was borscht with mixed fat for lunch in a finger thick, for me, as a guest, they put some kind of bone with bacon, pearl barley with fish in tomato sauce and compote, I remember because then I started having wild heartburn). So the entire living population of Pripyat came to the "canteen": 3 dogs (mongrel, German shepherd, collie) and a cat. We sat side by side, peacefully. When they were taken out to eat and laid out in piles, each ate only his own, without trying to take something from a neighbor, after eating, they ran away somewhere.

On the way to Pripyat we passed not far from the Chernobyl nuclear power plant (I was not at the Chernobyl nuclear power plant itself), I remember that the roof of the 3rd block was strewn with rocks, but not a single bird on the sarcophagus (it was finished in November, before my arrival).

A week before the new year, all trips were stopped, except for PUSO-2, "bad" work began in the part: snow removal, repairs, painting (in a 30-degree frost!). Unfamiliar guys came up to me (then it turned out miners) and said:

- Commander (somehow such an appeal stuck in the unit when the soldiers addressed the officers-"partisans"), we know you, talk to the leadership, why are we sitting here without sense? If there is no work, then let us go home, work awaits us there. Otherwise, we will start buzzing.

I asked, why don't they tell their commanders?

- Yes, we said, only they do not want to go.

Thank you guys for throwing me under the tank. But they "reassured":

- Do not be afraid, we, if anything, will help you out.

I don't know how they were going to do it, but I had to go. I went to the chief of staff, told. He first got into the "barrel" (they say, I will send them to the tribunal). I had to say that these are not conscripts, but adults, that 250 miners cannot be sent to court, and they are not afraid of anything after the mines. I don't know how they decided, but on the same day the whole regiment was gathered in the club, the unit commander spoke up and said that now there was no work in the Zone for anyone. And that they from the chief of staff go to the headquarters of the sector every day, knock out work, but for now they will have to be patient. People understood, the conversation stopped.

And on December 31, good news: again a gathering in the club and an announcement that there is

work - to cut down the "red" forest. All January fell, starting from the 1st. In two shifts of 4 hours, seven days a week. As much as 7 hectares were harvested in a month. Not because they did it, just because of the technology there was only 1 (one!) Chainsaw per part, the rest was two-handed saws and axes. Having felled a tree, it was necessary to chop off all the branches, cut the trunks by 3 meters, load the trunks and branches onto dump trucks - and all by hand (!).

There were many urban people who did not hold saws and axes in their hands. Who knew how - taught others. Trees were felled only by those who could do it well, there were always a few people on a safety net, no one was allowed close to the possible fall site. And all this by ourselves, without teams of officers, if someone tried to give orders, they were "sent" away. In my presence, they sent a regiment in three letters, tk. he almost sent the soldiers where the tree was supposed to fall. And he was not offended, did not send it to the "lip", tk. realized I was wrong.

## Everyday life

As I said, there were TVs in every tent. In addition, there was billiards in the club with large balls made of bearings, every night there was a movie in the club. Moreover, the films are mostly new (at that time). Concert brigades came a couple of times and an amateur performance from St. Sokolov. There, the girl walked in the aisle in something like a nightgown. Whispers began, because the men had not seen living women for 2 months. So the regiment commander stood in the aisle with his back to the stage, crossed his arms and looked at the soldiers. There was complete silence.

**There was a hairdresser in the unit, a photographer, a shower tent, where everyone washed after work. Everything is free. I did not take a camera, although I have been taking pictures since I was 14 years old. We were first at the regional military registration and enlistment office, then at the regional military registration and enlistment office, and then - and in the unit were warned that it was impossible to take him. That if they notice someone filming, it will be regarded as espionage.**

Therefore, these photos (of the soldier) were taken by the photographer of the unit, and the photo of the sarcophagus was presented to me. By the way, some special concrete was used there and it is really black, I saw it on the way to Pripyat.

**About vodka...** We drank some vodka. A day later, a UAZ drove to Kiev for vodka, brought 5-6 boxes. The drivers said that although there was always a queue for alcohol, they were always allowed to skip the queue, because "The liquidators need vodka more." But they drank little vodka, mostly for birthdays: 1-2 bottles per platoon (30 people). Basically, everyone drank strong tea (not chifir!). Well, here I have already carried out the appropriate campaigning. Tea was brewed in a 3-liter bottle, water was boiled with a "people's" boiler: two blades from a "safe" razor at the bottom, a separate wire to each - and into an outlet. There is a regular eraser between the blades. Actually, as chemists will correct, it was not boiling, but hydrolysis of water, but at the same time a large amount of heat was released, which led to boiling. Tea was thrown into boiling water. Every day, everyone drank at least a liter of tea, tea drinking mostly took time. We did not change our outerwear (cotton tunic and trousers, boots, hat, pea jacket). What they received when changing clothes in Krasnoznamenka was what they worked in and what they returned from the Zone.

## Dembel

All were in the unit for 60 days, no more. Why do I have 75? When he filed a report for replacement (as well as for "his own", 2 weeks in advance), he got to the chief of staff, who signed all the reports: both for the soldiers and for the officers. He immediately called me, tore up the report in front of me and said that I would leave on the same day with him. I don't know what his business was, but he was also in prison for 75 days. So we went to Kiev in one car: he, me and 2 regular officers. There we got rid of him, or rather, he ran away about his business, and we went to the dining room, ate, drank 50 g of vodka at parting, their trains left earlier, mine - late at night, saw everyone off and began to wander around the station.

I met some sergeant-"partisan" from another unit. We wandered, talked. We look, some general is walking, drilling us with his eyes. We glanced at him and continued to walk on calmly, not saluting (why on earth?). We see he ran up to the patrol, proves something to them, they answer him something, but we went on.

We knew that the patrols had been given the strictest order from Moscow: under no circumstances to detain the "partisan" liquidators. An exception is if you are absolutely drunk. And then - take this, and, carefully, without offending, let him sleep it off, feed him in the morning and put him on the train. Therefore, when we passed the patrols, they turned away and began convulsively lighting a cigarette. Poor fellows, they probably smoked several packs a day because of us.

I got to Krasnoznamenka, took my things (the bag was completely flattened), but went home in uniform and boots. In Odessa I took a ticket for my bus. I'm going to doze. In Nikolaev came out. I stand, smoke, and suddenly a passenger from my bus, in civilian clothes, starts to find fault with me:

- Why not dressed according to the regulations ?!

I answer that it does not matter to him. He began to make noise:

- Now I will call the police and the patrol!

- Well, call.

He again:

- Show your documents!

- And who are you yourself, so that I show the documents?

In the end, he showed his own, it turned out to be some kind of major. I showed mine too, so that I could fall behind. The major seemed to have calmed down a little, but continued to mutter discontentedly: they say, why am I dressed like that, not according to the regulations. I had to "send" him to the Minister of Defense, and ask him why he dresses everyone in a soldier's uniform. Only then did the warrior finally calm down. Or maybe he just fizzled out ...

There were no more adventures on the way home.

## Fear

Was it scary? Yes it was. Everyone who just got into the unit. To me - twice, because, I repeat, we were trained in the military, as commanders of platoons of radiation-chemical reconnaissance and dosimetric control. Plus, during these 7 months from the moment of the accident and before my call, I had read a lot of things. But after a few days (maximum a week), everyone calmed down, especially since the radiation was not visible, and outwardly the landscape was no different from the usual, uninfected one. The only thing that could indicate the non-standard situation was that everyone in the unit was constantly coughing. Even in a dream. Yes, there was a metallic taste in my mouth that could

not get rid of. As the doctors said, this is from the radioactive isotope of iodine. As soon as I left the zone, the cough disappeared.

I don't know about the other platoon officers, but I mercilessly chased mine only for respirators. God forbid someone went to the zone without the "Petals": there were both mates and threats. True, this was only at the very beginning, with those who I inherited from the former platoon commander, but everyone quickly realized that this was for their own good. Already a week later, none of mine went without a respirator, and did not pay attention to the banter from the "heroes" who flaunted that they were not afraid of radiation and worked without "Petals".

The second rule that I introduced is that after work, before entering the tent, you must thoroughly shake out hats and pea jackets, wash your boots (before frost) and wipe them with snow (after frost). But then the guys did not resist: they realized that they would have to breathe less muck.

**There was a guy in my platoon who was terrified of radiation, but he also found a job: he became an eternal orderly at the headquarters. And he was very pleased with the fact that he did not go anywhere. Moreover, no one laughed at him, everyone understood that the guy had a phobia.**

## What is remembered

About ten to one and a half domestic geese have taken root in the unit, but no one tried to slaughter them. Firstly, they fed, as in a good restaurant, and secondly, as the dosimetrists said, the geese fonili. There was a dog, with me she gave birth to 6 puppies, they went on an excursion, looked for the effects of radiation, but found nothing. Regular puppies, no deviations from the norm, all survived, one puppy was later taken by some of their regular officers.

Somewhere at the end of January, a soldier from my platoon came up to me (I can't remember the last name) and said that he had no documents. He was from the Sverdlovsk region, when they were being transported through Sverdlovsk, there was a parking lot, they had to stand at 6 o'clock, he asked the accompanying officer for a couple of hours to see his father, whom he had not seen for 10 years. All documents were in that officer's bag. He returned an hour later, and the train had already left. So he (already in uniform and absolutely without documents) independently, at his own expense, on airplanes, trains, buses, hitchhiking, got to Kiev, from there to Bila Tserkva, the 25th brigade, to the unit. I found my way myself!

I arrived the next day after my friends, that is, I was only a day late. But the officer with his documents had already left. At first he was silent, then, having found out about me, he approached. I asked, why does he not want to go to the chief of staff himself? He hesitated, then said that he had been convicted three times and was afraid that the military prosecutor's office might take him away. And there **new term**, already as a repeat offender. What was to be done? I went to the chief of staff, who at first got furious, then calmed down and sent the decision to the special officer. First, I went to the special officer, told everything, then he called the soldier, without letting me out of the office, listened to him, asked who he was called up with, sent the orderly to call everyone, then questioned everyone, while not letting anyone out.

At the end of the conversation, there were more than a dozen of us in the office. After listening to everyone, he let go, he told me, go to the chief of staff, let him make a request for the return of

documents. And so they did. Three weeks later they made a second request, because no documents came. I don't know how it ended - I left earlier. But before leaving, he asked everyone - both his replacement, and the new chief of staff and the beginning. the political department, and clerks - so that if the documents do not come, they write out a separate certificate to the guy that he really was in the unit and took part in the LPA. These were the people! But he could quietly hide, sit out, make himself new documents in a different name, but the man went to fulfill his duty.

Once, after another replenishment, a purebred gypsy from the Saratsky district of the Odessa region came to me. I remembered it because at first all the time I was struggling with the Saratov district. Something atypical was a gypsy, not what they are presented in films and books - daring and reckless fellows. This one was timid, shy and executive. Then the whole platoon stood up to his defense, and everyone else realized that laughing and making fun of the gypsy was dangerous for them: not physically, but simply morally, they would kill him. But when he came shy, he left for demobilization.

## Conscripts

I had a chance to meet with them once. I don't remember why, but we stood outside the unit. The soldiers (not mine) and I, the only officer, talked, basked at the burning slope. The frost then reached 35. And suddenly we see that 5 very young people are skiing, in greatcoats (we were all in pea jackets), caps with earflaps are lowered, tied under the chin, in gloves (for some reason we cannot were freezing). We came closer, we look - they are all, judging by their appearance, from somewhere in Central Asia. Trembling, frozen. They saw me, got scared, began to salute, stutter. The guys really quickly reassured them. It turns out that part of them is guarding a 30-kilometer thorn, and they go to see if there are any gaps. And then they froze, saw a fire, decided to warm up. Then, so timidly, glancing at me, they asked me to smoke. Immediately everyone took out cigarettes, gave them everything we had. They warmed up and left. And we were sad and sorry for them. Well, we are adults, but why poison the youth?! And even more so to send out into the cold those who are not used to it ...

## Radiation

During my time, new part storage facilities were built (grocery and clothing). All building materials - bricks, cement, sand were brought to the unit from the construction sites of the fifth and sixth blocks of the Chernobyl nuclear power plant. A grocery storekeeper came up to me and said that the walls of the storehouse were fading, and that he told the chief product about it, but he dismissed it.

**I took DP 5-A from the guys and went to check. Indeed, phono, and very strong - about 0.3 X-rays per hour. I go to the chief of staff, I say, he waves it off, begins to threaten: they say, you will raise this topic, I will send you such a letter to work, not a single prison will accept.**

I had to go to the doctors. They understood perfectly, because we all eat from that warehouse. In order not to let me down, they arranged a radiation check on absolutely all the premises of the unit: tents, officer wagons, officers' barracks, a club, a canteen and the actual warehouses. In addition to the warehouses, they also revealed a bunch of all the radiation. Reported to the chief medical officer (career lieutenant colonel). In the evening at the meeting, he took the floor and gave it out. The



commanders of the companies (including myself) and the chief of food, and the chief of things, and the chief of staff received scolding. In general, the next day, a clean forest was brought to the unit, from somewhere from under Malin, a regimental sawmill started working in three shifts, the warehouses were sheathed inside with 50-mm boards. The background dropped sharply. The chief of staff then looked askance at me for a long time, but I made innocent eyes and replied that I had also received a scolding.

## About dosimeters

Somewhere in early December, we were given storage dosimeters. They had to be attached to the belt with a cord at the level ... In a word, you yourself know why. There were dosimeters, one per officer, and one for each group of working soldiers (5-7 people). They warned that one costs 70 rubles, and that the loss would have to be paid in 3 times the amount (the salary of an engineer was then at the level of 120 rubles). I also hung it.

Three days later I approached our chemist-dosimetrist (career lieutenant), I asked, but how do I find out the dose? It turns out that before giving it to us, each dosimeter (there is some kind of silicon plate in it that changes color depending on the irradiation) had to be inserted into a special device, the dose accumulated in it was recorded, in the log it was noted to whom and with how much the drive was dispensed. Before leaving, each device must again be inserted into the device and the actual dose received is thus determined. But since such a device is the only one and is located at the headquarters of the Zone, then no one has done such procedures and is not going to do it. Naturally, I immediately returned the device back, my guys did the same, and after them the whole regiment.

## About looting and marauders

There was such a thing. About two weeks before their demobilization, the command (regiment commander, chief of staff, nachPO and other "top") sent 2 "scows" each ("Kamaz" with a long trailer) to their units at the duty station. Everyone sent what they had accumulated. To Moldova - only with boards, to Crimea, Odessa - equipment (diesel power plants, generators, engines, televisions, refrigerators, washing powders, nets-string bags in bales, each bale of 1000 pieces, etc.). Moreover, all this was taken from those warehouses of the fifth and sixth blocks, i.e. decent phono. I am sitting in a room at the club, drinking tea with the guys, talking. Suddenly a lieutenant colonel bursts in, I have never seen him like that before or after: angry, continuous swearing, threats, and fled. I ask the guys what's wrong with him, and one says:

- So he saw the generator near the club.

- So what? - I ask.

"So he sent the scows today, and he's mad that this one didn't notice."

And it must happen that while the scows were on their way, with **unscheduled inspection** the military prosecutor's office came to the unit. After checking a lot, they asked, where are the scows? They were told that they were carrying wood from Malin, now on the way, they showed fake orders. When the guys returned, they were not even allowed into the tents from the car park, they sent the attendants to collect and bring their things, immediately issued "demobilization" documents, put them in a UAZ and - to Kiev. But we were in the unit, and everything was in sight. So we found out. When I returned home, I immediately warned relatives and acquaintances not to buy anything in thrift stores, even the steepest deficit, because all this, most likely, will be brought from the Zone, by the phonies.

## From other people's stories

In February, a colonel came to our unit, who started right after the accident. We were all then gathered in the club to listen to his stories. In particular, he said that at first his unit was set up 500 meters from the station, at the edge of the "red" forest. But about a week later, some curious person took and measured his freshly laid out "heap": its background was 2 X-rays per hour. Within an hour after that, the unit moved to its current location. I can imagine what doses they grabbed during this time.

Two liquidators from my area were on the roof of the third block for two minutes, throwing pieces of graphite and uranium from the roof into the collapse. According to their stories, from the overalls they were given only the type of leaded swimming trunks (they were heavy), from the rest of the protection - "Petal" (cotton-gauze bandage) and a raincoat from the OZK (combined arms protective kit). Before that, in the photo, everyone was shown what he must do in order not to interfere with others. On the siren they jumped out onto the roof, managed to throw down 3 shovels, again the siren, running back from the roof.

**|| One liquidator in the summer of 1986 worked inside the third block of the station. They washed the walls of the premises from radiation with rags. He said that after work (shift 4 hours) full of showers, they go naked to the dosimetrist, he measures the body and again drives it into the shower. After the 4th shower he waved his hand: all the same to no purpose.**

In general, in my district, out of 35 liquidators in 1992, only 15 survived. Many did not live to see their retirement, even early, Chernobyl.

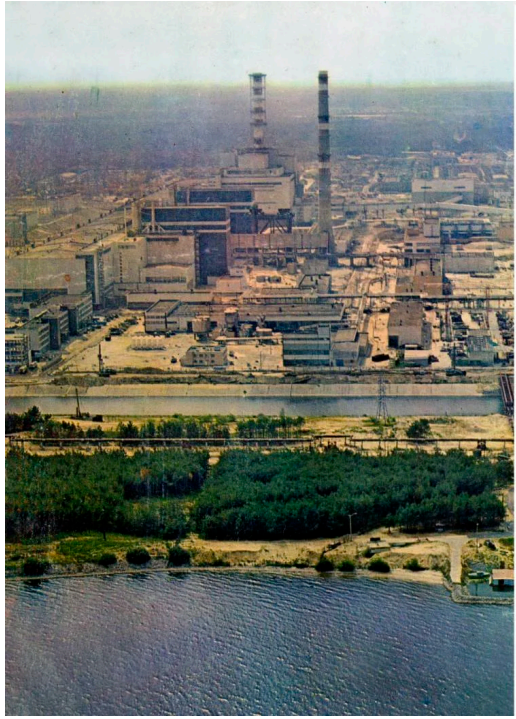
The biggest thing I did there was to turn off the ZAS (classified communication equipment) in the unit for an hour and a half. This connection should be round-the-clock and constant, its absence even for 5 minutes is an emergency. And here for an hour and a half and without consequences! And the point is that on that day for the first time in the USSR at 23 o'clock a documentary about Vysotsky was to be shown on TV. But that channel was jammed by a working ZAS, and in the entire part. And I myself wanted to see the guys, because about Vysotsky himself for the first time!

I had to use all the ingenuity and cunning. He began in three days, went from company commanders to the head of the political department, special officer, representatives of the district. That only I didn't tell them! Although they themselves knew him and loved his songs. In general, the most important - the colonel from the district representatives, together with the special officer, gave the command to stop the ZAS during the film. True, they insured themselves, each through their own channels - they told their colleagues that in case of something they would urgently call the phone, they put as many as 3 people next to the phone. And now the Lenkomnata is jam-packed, the TV is on, there are ripples and noise on it. And suddenly a clear picture, good sound. We looked to the end, just ended - they turned on the ZAS. Immediately they call their own, if there was anything. Fortunately for everyone, nothing happened in that hour and a half. There were other minor adventures, but they do not deserve special attention.

## Photo archive

## Gratitude





Товарищу ст. лейтенанту [REDACTED]

Выполняя задание Советского правительства в необычно сложной обстановке, Вы уверенно прошли испытание на мужество и стойкость, проявили высокие морально-политические и психологические качества. Глубокое понимание личной ответственности за порученное дело помогло Вам внести достойный вклад в дело ликвидации последствий аварии на Чернобыльской атомной электростанции.

Выражаем Вам сердечную благодарность за образцовое выполнение патриотического долга перед Родиной.

Командир войсковой части 44316  
 Подполковник [Signature] /БОРОНКОВ/  
 Заместитель командира  
 по политической части  
 Майор [Signature] /СОРОКОПУД/  
 20 декабря 1986 г.

At the end of each month, 200 people were awarded to the regiment on behalf of the district headquarters (there were about 1000 in the regiment). For another 150 people, letters of thanks were sent on behalf of the unit to work. So I had to do my best not to receive gratitude. But it was this one that was valued most of all, because of the photograph of the Chernobyl nuclear power plant (it was almost the only unclassified photo at that time. At least I have not seen anything like it). In my platoon, absolutely everyone received such thanks and letters to work. It's better not to tell me what it cost me, but I think that they all really deserve it. Normal commanders of other companies and platoons did the same.

Skip



To have such a pass was, as they would say now, prestigious, so I "made" it myself, and even with the seal "300". For which he paid. One evening, when everyone was resting, I was sent to a part of the Trans-Baikal District for some samples of documents. I copied them for two hours, and all because at that time only I from the "partisans" had such a pass. By the way, in that part I was amazed: winter, and the paths and parade ground were cleared of snow, there is a fungus, under it there is a sentry, everyone salutes, even the soldiers to the soldiers, when they took me to the headquarters, the soldiers jumped up and stood at attention ". It turns out that due to the fact that they are brought over several thousand kilometers, they are kept here for 6 (six!) Months, they receive their dose in 2 months, and then real drills, as in a regular unit with conscripts. And this is with adult "partisans"! How they envied us when I told about our life!

## Senior car help



It came in handy when I accompanied the "demobels" to Kiev three times and once met in Kiev a new regiment commander, our staff and several officers with them. The trip to Kiev was like a reward: to see people in civilian clothes, women, children, city transport - it was like a miracle.

## Radiation dose reference

1034 Радиоактивного места работы ду		Облучения составля	
№ п/п	Место работы	Эон в мдрг час	Доза за 10 час. работы в ренг.
1.	г. Дрипяты	50 + 63	0,5 ± 0,68
2.	г. Чернобыль	35 + 45	0,35 ± 0,45
3.	ДУ 00 - 2	40 + 45	0,4 ± 0,45
4.	ДУ 00 - 3	30 + 35	0,3 ± 0,35
5.	д. Дубняки /могиляник	30 + 30	0,3 ± 0,5
6.	дерево в/ч 44316	0,2 ± 0,4	0,01
7.	доспывал	25 + 35	0,25 ± 0,35
8.	Автоспарк	1 + 1,5	0,0025

It was given out so that we do not mistakenly set the dose more than the prescribed amount. From time to time it fell apart into 4 parts, and the paint burned out, but it is still possible to disassemble it.

2 more references

★  
Войсковая часть  
монинской части  
44316

Согласовано  
с Госкомтрудом СССР

13. 11. 1987 г.  
№ 818  
Ст. Службы  
II

### СПРАВКА

(фамилия, имя и отчество военнообязанного)  
находился на учебных сборах с «30» ноября по «16» декабря  
1986 г. и за ним согласно статье 72 Закона СССР о всеобщей воинской  
обязанности сохраняется по месту работы средний заработок.  
Кроме того, в соответствии с постановлением ЦК КПСС, Президи-  
ума Верховного Совета СССР, Совета Министров СССР и ВЦСПС  
от 7 мая 1986 г. ему надлежит выплатить по месту постоянной работы  
процентов тарифной ставки (должностного оклада) за  
(прописью) \_\_\_\_\_  
период с « > \_\_\_\_\_ по « > \_\_\_\_\_ 1986 г.

Место  
гербовой  
печати



Командир воинской части

44316

*И. И. К.* *Суряков*

Начальник финансовой службы

С.М. Н.Т.

*Ант* *Слободянин*

з. 1797

122617 \*





not my merit or my desire. Hope you can understand me.

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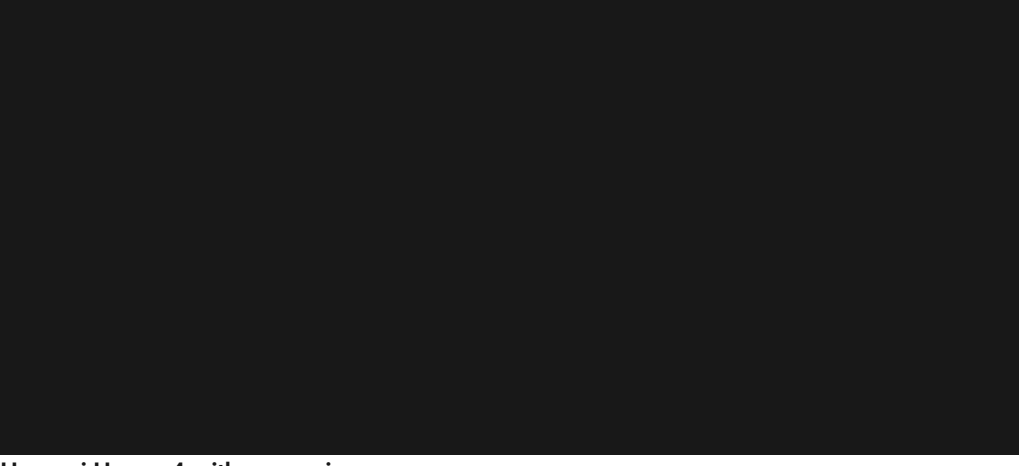
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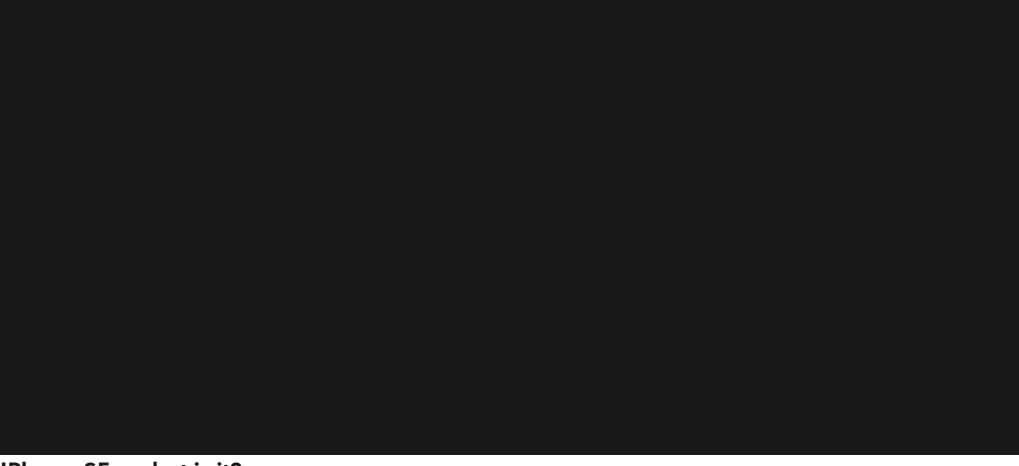
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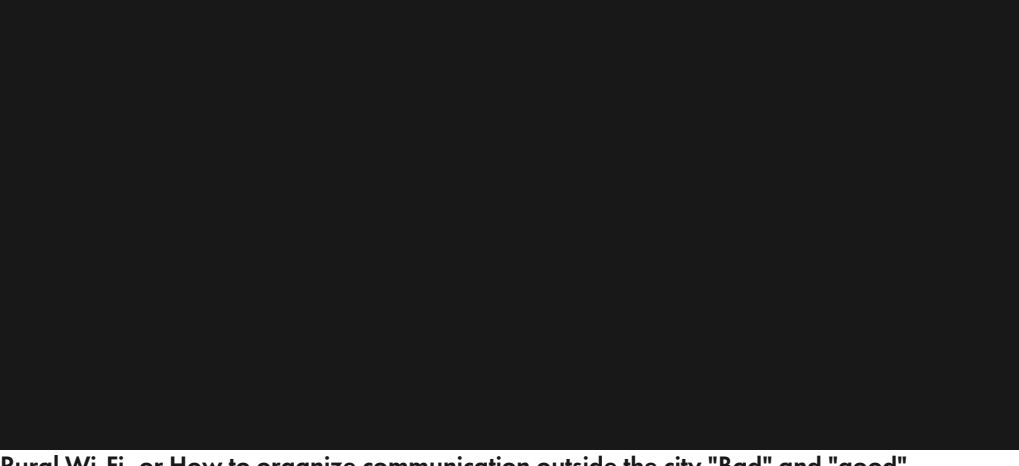
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