

From Archives of VUChK-GPU-NKVD-KGB Chernobyl Tragedy in Documents and Materials

(Summary)

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General overview of the book

The book "**From archives of VUChK-GPU-NKVD-KGB. Chernobyl tragedy in documents and materials**" (*Z arhiviv VUCHK-GPU-NKVD-KGB. Chornobylska tragedia v dokumentakh ta materialakh*, №1(16) 2001) was published by the Security Service of Ukraine (SSU) in 2001. SSU is a natural continuation of the Soviet *KGB* (Committee of the State Security of the USSR), so SSU inherited KGB archives and disclosed some documents when the appropriate legislation was passed by the Parliament of Ukraine beginning in 1994 with the Law "On State Secrets". It is essential to note that on 10 December 2005 the book was also posted on the web-site of the SSU (http://www.sbu.gov.ua/sbu/control/uk/publish/article?art_id=39296&cat_id=46616).

KGB is a unique source of information, because it worked "across the lines": it was subordinated neither to nuclear industry nor to army generals; it supervised activities of industry, government and municipal authorities, construction companies and cooperative shops alike. KGB officers collected information from all sources they deemed reliable, they often were able to cross-check it and then to present to higher levels of hierarchy - in KGB, Communist Party, Government of Ukrainian Soviet Socialist Republic. So, this information contained quite reliable facts, which were formulated without flatter - moreover, it was either "secret" or "top secret". Unfortunately, this does not mean that their reports were given any special attention - the system had its own inertia, and KGB was an integral part of the system. This is especially well illustrated by the case of Chernobyl nuclear accident of 9 September 1982, which is well represented in the published documents.

In fact, the book is an encyclopedia of everyday technical, professional, social life of Chernobyl NPP before and after the accident of 1986, and that is why it is difficult to make a summary of it. The book perhaps deserves a careful translation with necessary comments, to serve as a source of very important lessons. It should be remembered, however, that the selection of documents was made by KGB itself and thus they might not represent a whole picture.

The book (400 pages with 17 photographs) consists of Introduction, Preface, 121 documents (mainly information communications) of different KGB units and 5 memoirs of participants of the liquidation of Chernobyl catastrophe. Of 121 published documents, 20 are of pre-disaster period, and 101 cover period from 26 April 1986 - 6 December 1988. Original KGB documents are in Russian, while other materials and comments in the book are in Ukrainian.

This summary is based on internet version of the book. For convenience, documents were grouped according to their dates and main topics. Two most representative documents were translated to give a reader first-hand feeling of wording and style.

Summary of Introduction and Preface

Chernobyl Nuclear Power Plant named after V.I.Lenin, as an industrial object of strategic importance, was under the permanent supervision of KGB organs from the first day of its construction. In the process of regular investigations by the KGB personnel in the pre-disaster period numerous facts were revealed of bad construction work quality, supply of faulty equipment, violation of technical rules of operation, violation of fire and radiation protection rules. Reports on these cases were presented to the management of the Chernobyl NPP and highest party (Communist Party - VT) and government authorities of the Ukrainian SSR and former USSR.

Already at 2:30 am on 26 April 1986, after the message about explosion and subsequent fire on Chernobyl NPP was received, investigators from KGB of Ukrainian SSR were dispatched to the city of Pripjat and Chernobyl NPP. On the same day the accident on the NPP was reported to the high command of KGB of USSR.

During first five years after the accident 1,500 officers of KGB of Ukrainian SSR and hundreds of KGB officers from other republics of USSR participated in investigation of causes and the work on liquidation of the consequences of the disaster.

Specific feature of the documents of the soviet secret services related to the Chernobyl catastrophe is that they present a complex picture, unlike materials of other government agencies that are concentrated on narrow special issues. This allows for producing a rather full and systematic analysis of all spectrum of Chernobyl problems.

In preparation of this special edition (of Archives of KGB - VT), the most characteristic and informational deep documents were selected. They provide integral picture not only about pre-conditions, circumstances and consequences of the accident, but also about problems and mistakes during localization and liquidation of the consequences of the accident.

Documents are presented in chronological order covering the period from 1971 to 1988.

Summary of documents: Pre-disaster period

Technical characteristics and faults of the design of RBMK reactor

In September 1971, when the decision to build the Chernobyl NPP with two units was made, KGB prepared information memo on the design of the plant and reactors (Document 1). Information was based on materials of the Ministry of Energy of Ukraine, however, it is not clear to whom this memo was submitted.

Apart from providing general technical data, the document tried to analyze the safety issues of reactors, and mentioned several drawbacks and weak points (like accidents with break of main pipelines).

Concluding paragraphs of the document are very important because they show that Ukrainian authorities did not have necessary information and capacity to control the situation:

"This is a brief summary (based on the experience of use of Soviet reactors and found in open published materials) of the radiation safety issues of NPP. More detailed information, including safety regulations, organization of operation and requirements to the personnel is in the disposition of *Glavatomenergo* of the Ministry of Energy of the USSR and other specialized organizations. The

Ministry of Energy of Ukraine does not have other information and does not have experience of operation of nuclear power plants".

After four years of operation, insufficient reliability of control equipment became clear. The summary was presented by Kyiv oblast KGB Department to KGB of Ukraine in the memo of 16 October 1981 (Document 8).

"During the period of operation 1977-1981 there were 29 emergency shut downs, for 8 of them personnel was responsible, and other were due to technical reasons... Investigation shows that control equipment does not meet the requirements for reliability due at the nuclear power plant... The issue was several times brought to the attention of "Soyuzatomenergo" and design institute "Hydroproekt", but it is not resolved yet... In the system of control rods logical schemes, as well as relay and contactors are of low reliability, and this caused emergency shutdowns in 1979 and 1981".

In a special information of October 1984 (Document 17, entitled "Main engineering and technical faults of Chernobyl NPP units, resulting from design"), a summary of problems was reported to the KGB of Ukrainian SSR.

"In the process of counterintelligence measures... we conducted analysis of the reliability of the work of Chernobyl NPP... The first and second units are less reliable in terms of environmental safety, because in case of the break of main pipelines with diameter more than 300 mm, the systems of emergency shutdown and safety will not secure localization of cooler, and this will lead to radioactive contamination of the area...

The system of cooling of main circulation pumps is insufficient (lower than norms by approximately 39 %)... The designer (Hydroproekt Institute) was notified on this after the analysis of experience with unit 1, but even on units 5 and 6 that are now under construction, these comments are not taken into account...

Because these and similar problems can lead to emergency situations, we officially notified the management of the Chernobyl NPP in August, with a recommendation to tackle these faults. Until now, necessary measures have not been implemented".

Problems encountered during construction period of Chernobyl NPP

There were numerous reports by different KGB departments on unsatisfactory quality of design of Chernobyl NPP units, as well as the quality of construction works. Altogether, 7 documents from 1976 - 1986 are published. These reports were submitted to higher levels of KGB and to the Ukrainian State and Party authorities. Often the reported faults were howling.

KGB reported of the bad quality of welding on main pipelines, which anyway were accepted and installed (Document 2, 1976), of faulty equipment supplied by numerous factories from all over the USSR. There were permanent violations of technical rules during concrete works, roofing, welding. On 17 January 1979, a special memo on violations during construction works was submitted to the Central Committee of the Communist Party of Ukraine (Document 3). Not only Soviet, but also other suppliers shipped faulty equipment, like Yugoslav companies which supplied pipes and steam separators (Document 15, 9 January 1984).

Some violation demonstrated negligence of technical requirements: during construction of unit 5, instead of small rock fraction 5-20 mm, a fraction 20-40 mm was used, and this did not allow filling of reinforcement of the floor/ceiling (which had to carry 1000 tons of equipment - steam separators). The

problem was uncovered in time, but hundreds of square meters of concrete had to be replaced (Document 20, 26 February 1986).

Nuclear accident of 9 September 1982 at reactor # 1

On 10 September 1982, a report of KGB Department in Kyiv and Kyiv oblast was submitted to KGB of Ukraine and USSR about the nuclear accident at reactor # 1 of Chernobyl NPP: rupture of one of 1640 technological channels. KGB reported that there was no contamination of the plant and that estimated 5 days are needed for repair (Document 9).

In the next document more full and severe picture of the accident appears. Already on 13 September (Document 10) detailed technical information was presented: channel's stainless steel pipe, diameter 88 mm with walls 4 mm broke up at the depth 9.6 m from the top, and graphite blocks near the rupture were washed out by water and steam, to the diameter of 170 mm and surface area 660-670 mm. Fuel was washed into this hole. Estimated time needed for repair - 10 days.

"According to the statement of Director of NPP Briukhanov and Chief Engineer Akinfiev, zirconium casing of the fuel was not destroyed, so there was no radioactive contamination of technological chambers".

High levels of radioactive contamination inside the reactor building and around it were reported 14 September (Document 11, 12). It was also reported that fuel was sucked into the washed out hole during repair works. Gamma-level in some chambers of gas contour and drainage systems was 1000 microrentgens/sec. Radioactive aerosols were also released through ventilation stack, and gamma-levels on the surface near the station in some point were 0.01-0.02 microrem/sec. "Administration of the NPP started decontamination measures (concrete and asphalt surfaces are covered with soil, leaves etc.)"

The full picture of the consequences of the accident was reported to the Head of the KGB of Ukraine on 30 October 1982 (Documents 13), and subsequently to the First Secretary of the Communist Party of Ukraine. These reports were based on the findings of commissions, organized by the nuclear industry (including specialists from Chernobyl and Pripjat, as well as from Moscow institutes) and of Academy of Science of Ukrainian SSR, created by the decision of the Minister of Energy of UkrSSR V.Skliarov.

Commission of nuclear industry investigated radioactive contamination near the plant itself and in sanitary protection zone of NPP (3 km radius) and observed zone (35 km radius). The distance of pollution reached 5 km from the stack of the plant in S-SW direction and 14 km in the N-NE direction. As of 10 September, levels of radiation in the sanitary-protection zone varied between 0-03 microrem/sec. By 25 October, the levels of radiation dropped by 1.8 times. Various fission nuclides were detected in samples, and iodine was detected in the air at the levels of 10-14 Ci/l.

The conclusion of the Commission states, that

"the radioactivity of air and the density of radioactive depositions as of 25 October does not differ from parameters, characteristic for the normal regime of exploitation of NPP (during repair works on unit 1 and operation of two other units at full capacity). Radionuclides were not detected in discharge water and in cooling lagoon".

On contaminated territory in S-SW direction "hot" particles were detected, with activity between $5 \cdot 10^{-8}$ and $2 \cdot 10^{-7}$ Ci. Uranium was identified in these particles.

The Commission concluded that there is no need for implementation of measures, envisaged by the "Temporary guidelines... for protection of population in case of nuclear accidents" approved 18.12.80.

The group of scientists from the laboratory of biophysics of the Institute of Nuclear Research of the Academy of Science of UkrSSR came to somewhat different conclusions. They measured the beta-activities of soil samples, which was between $2.6 \cdot 10^{-9}$ to $2.23 \cdot 10^{-7}$. Fission radionuclides, as well as products of activation were detected in these same samples. Near Chistogalovka village, located at 5 km from NPP in S-SW direction hot particles were registered, with activities up to 10^{-7} Ci, which is hundred of times higher than permissible levels. Radioactivity caused by the accident and the following desactivation was registered in the cooling lagoon and bottom sediments. In the opinion of this commission, hot particles could lead to serious, even lethal consequences. This requires further analysis and decisions regarding liquidation of "hot" particles, and this decision depends on the 3rd Main Directorate of the Ministry of Health of the USSR.

Members of the Commission reported that their findings would be presented through the Minister of Energy and the President of the Academy to the Central Committee of CP of Ukraine and the Council of Ministers of Ukraine.

Similar report was indeed submitted to the First Secretary of the Central Committee of CP Ukraine V.Scherbytsky on 5 November 1982 as "top secret", "personally". It was added that "situation at the power plant and the vicinity is normal, no facts of panic and rumors".

Another report of October 1984 (Document 17) provided still more details:

"The reason for disaster was an overheating of the channel due to insufficient flow of cooling water. During the accident a large volume of water (more than 200 tons) permeated the graphite core of the reactor".

Summary of documents: Post-disaster period

Catastrophe of 26 April 1986 and it's immediate consequences

First report about the explosion was filed already on 26 April (Document 21). Other reports describe radiological situation around the stricken power plant, in nearby towns and villages, inform about evacuation measures:

Several reports mention radioactive contamination of food products, recommendations for handling contaminated food and other practical problems. In Kyiv, 4 samples of bread baked on two bakeries (#2 and #7) were contaminated to the levels of $5.9 \cdot 10^{-8}$ Ci/kg - $8.8 \cdot 10^{-8}$ Ci/kg. This happened apparently due to use of whey in leaven (Document 39, 28 May 1986). Document 30 reports about the absence of reliable dosimetric devices in civil defense system, and ignorance of population on radiation protection issues.

During all period represented in the book, reports provide detailed information on the levels of radiation, like

"Situation with radioactivity levels remains stable. The level of radiation at the site of NPP is 0.5-1000 roentgen/hour, in the zone of lean-up 1.4-200 roentgen/hour, in the city of Prypiat 0.2 roentgen/hour, in Chernobyl 6 miliroentgen/hour, at the boundary of the 30-km zone 8 miliroentgen/hour" (Document 34, 15 May 1986).

In later reports the data on levels of radiation become more detailed - obviously because the number and accuracy of measurements improved.

Reports on liquidation measures and encountered problems

Already on 5 May emergency works for protection of river Pripiat from contamination were started - construction of 6 dikes. 120,000 sq.m of film and liquid glass for desactivation were received. 100 miners started digging the tunnel under the damaged reactor (Document 28).

Many documents provide evidence of the bad organization of work in the exclusion zone. Stations of sanitary treatment of wastes and contaminated clothes were not operational, personnel not trained, wastewater discharged in surface water without treatment (Document 32, 12 May 1986). Workers drafted for work in the zone were not informed about radiation levels, terms and conditions of their work, transportation and living conditions were bad. This led to complaints from the workers (Document 33, 13 May 1986).

Tens of reports mention cases of negligent and irresponsible behavior of workers. "Miners and military men do not use individual protection measures, they receive exposure that is not caused by work need, they rest near contaminated machinery and inside of it, do not keep up to hygiene rules. This leads to early overexposure" (Document 37, 22 May 1986). But there were also problems with supply: "... plutonium concentrations exceed the permissible level by 1000 times. This requires use of gas masks, but until now responsible ministries have not provided their personnel with necessary protective equipment" (Document 41, 1 June 1986).

"For liquidation of the consequences of the Chernobyl NPP disaster, by the order of the Minister of Defense of the USSR 94 military units were mobilized and stationed in the area... These include regular military, civil defense, chemical defense, medical, engineering units, land-forces and aviation, with total number of 32,329 men" (Document 46, June 1986).

These troops and servicemen not always were used efficiently. Many were drafted without explanations and consent, were not told they will serve in Chernobyl zone. Some appeared to be unfit for the work, some were over 45 years old, some were ill. Hundreds had to be sent back home. Many received doses higher than permissible. There were cases of short hunger strikes (Document 51, 4 July 1986 and other documents).

Some decisions by the State Commission were highly controversial, like the decision to restart unit 3 of the NPP. Many specialists express their objections (see translated Document 75, 1 February 1987 in the Annex). By the end of May 1987, desactivation of the Unit 3 was not completed, e.g. "radiation levels at where cables need to be replaced are quite high - up to 1 Roentgen/hour, on the other hand, it is necessary to remove by hacking about 1000 m3 of contaminated concrete..." (Document 83, 4 June 1987).

KGB was also concerned with technical problems of the "Shelter". Many details were unclear, e.g. specialists of the Academy of Science of Ukraine estimated that 6 % of fuel were released from the damaged reactor, while specialists of the *Minsredmash* opined for release of 30 to 50 %. This made decisions difficult (Document 108, 2 April 1988). The problem of radioactive waste remained serious as well:

" - there are two operational *PZRO* (repositories for radioactive wastes):

1. "*Buriakovka*" for wastes up to 5 Roentgen/hour. Design capacity 450,000 m3. There are altogether 30 trenches, of which 14 filled.
2. "*Podlesnyi*" - for radioactive wastes 5-250 Roentgen/hour. Altogether 8 vaults 50x28x8 meters... Vaults 1 and 2 are partially filled.

- there are 8 temporary repositories, where radioactive wastes were stored during first months after the accident;
 - more that 200 sites where various buildings, materials, contaminated soil etc. are buried.
- Some specialists express opinion that temporary repositories are below critic from the point of view of construction norms. Clay lining on some of these storages can fail to work long before the guaranteed term, and that will lead to filtration of radioactively contaminated water into natural aquifers" (Document 120, 9 November 1988)".

Technical problems of nuclear industry in Ukraine

Chernobyl nuclear accident highlighted many problems of insufficient safety of nuclear industry. KGB paid a lot of attention to this - tens of published documents deal with these issues.

Investigation of preparedness for nuclear accidents revealed big gaps. At Zaporizha NPP:

"...the stock of iodine medicines was sufficient only for personnel of NPP (for two days instead of 10, as required), and there was no such stock of medicines for NPP construction workers, citizens of Energodar city and the 30 km zone. As of beginning of July, the stock of iodine preparations for population of Zaporizha oblast was about 20 % of needs? and in Mykolaiv oblast - about 22 %. The procedure of delivering these preparations to users is not in place." (Document 56, 27 July 1986).

Confinements of some reactor units at Rivne NPP and South Ukrainian NPP were built and are used despite of significant faults. "At Rivne 3 uptightness is 2.44 % while design requirement is 0.1 %. Similar problems at South-Ukrainian 1 and 2. This may lead to serious consequences in emergency situation. The reason is in the absence of unified requirements to designing, construction and operation of such systems." Control equipment was often uncertified and unoperational:

"At South Ukrainian NPP, of 811 control devices, including equipment for radiation measurements, tested by organs of State Standards Committee of the USSR, 469 appeared to be unusable" (Document 72, December 1986).

KGB informed the Central Committee of CP of Ukraine that there are numerous problems with water use for nuclear industry needs. Problem existed on all NPPs. In Chernobyl, very high filtration of water from cooling lagoon due to the absence of special antifiltration measures. In spite of the decision of the Council of Ministers of Ukraine of 1982, similar problem exists at Zaporizka NPP. At Rivne NPP and South-Ukrainian NPP discharges of water from plants lead and will lead to river contamination (Document 62, August 1986).

Spent fuel storage was a persistent problem:

"At South-Ukrainian NPP, the Ministry of Energy of the USSR did not reconstruct the basin for spent fuel assemblies, so instead of 162 (design capacity) currently 171 are stored at Unit 1. In 1987, 73 assemblies will have to be unloaded, and it is not possible to store them without violations. Similar situation exists at Unit 2" (Document 71, 14 November 1986).

"At Chernobyl NPP, radiation situation in central halls of Units 1 and 2 is very unfavorable. Gamma-radiation level exceeds permissible level by 10-15 times, and it leads to additional exposure of personnel. The reason is storing of unacceptable high numbers of spent fuel assemblies in basins... At unit 1, there are 2803, while the design capacity is 1728, at Unit 2 - 2414 and 1568 respectively" (Document 87, 29 June 1987).

There were continuous problems with reloading of fuel. At Chernobyl NPP, reloading of technological channel 50-21 failed, because the fuel assembly could not be pulled out neither at regular pull 500 kg, nor

3000 and 4000 kg (maximum permitted). Later it was reported that personnel applied 5000 kg without any permission. Reload was delayed by 10 days until the scheduled shutdown of the unit. Similar problems occurred on 26 and 30 April at unit 1. (Document 84, 7 June 1987). On 17 June 1988, there appeared problem with hermetization of channel 57-37 after reloading (Document 113, 9 July 1988)

Factors that influence the safety of NPP operation were summed up in the report of 16 July 1987, which was prepared with participation of KGB department in several oblasts:

"During the current year, there were 66 emergency shutdowns at NPPs, located in Ukrainian SSR. Of them 41 at Rivne NPP, 19 at Zaporizha NPP, 5 at South Ukrainian NPP and 1 at Chernobyl NPP.

... main causes of emergency shutdowns are:

- faults of design and construction works - 37%;
- faulty equipment - 43%);
- unskilled actions of NPP personnel -20%.

There exist substantial design defects in the design of VVER-1000 (approved by the Order of the Ministry of Energy of the USSR on 30 December 1985). Faulty decisions and mistakes continue to be copied in documentation for construction, assembling and start-up works, as well as designs for suppliers of equipment. These designs are provided to the NPPs of Ukraine, as well as abroad (to Bulgaria, Hungary, GDR and Czechoslovakia)". (Document 88, 16 July 1987)

Secrecy and foreign visitors

Secrecy was an essential feature of all Soviet nuclear program, and Chernobyl disaster was no difference. All ministries and other government agencies working in the 30-km zone were obliged to keep secrecy. "Upon the directive of the Head of the Government Commission, requirements regarding secrecy were presented to the heads of organizations by the representative of the KGB of USSR". When it became known that transmission of radiometric data by radio would be organized, KGB was on alert: "Some specialist admit that digital code might be deciphered, and this would make possible leakage of information to an enemy. Department 6 of the KGB of Ukrainian SSR supervises these works". (Document 57, 10 August 1986).

Violations of secrecy were apparently quite common. "In the 30-km zone, groups of specialists from over 70 research and design institutes work on permanent or temporary basis. Most of them violate rules of work with secret documents prescribed by the Instruction 0166-72." (Document 85, 22 June 1987).

The secrecy hindered the work on liquidation of the consequences. The Minister of Water Resources of Ukraine V.N.Tkach complained that to protect water resources, detailed information on radioactive contamination of territory is needed. However, it is possible to obtain such a map only in the State Committee of Hydrometeorology of the USSR and *Minsredmash* of USSR. The Minister raised this issue several times after 10 May at the meetings of different commissions, but there was no positive decision so far. (Document 42, 3 June 1986).

Since autumn of 1986, there are numerous reports on visits of foreign journalists, scientists, other delegations to the 30-km zone (Documents 73, 77, 80, 81, 96, 98, 110). Usually the conclusion was "there were no hostile intentions from foreigners; information passed to their agencies was objective". Sometimes, however, incidents did occur: journalist of NHK telecompany Yamayghi Toshihiro tried to collect samples near Chernobyl NPP and used dosimeter with automatic recording of data. These attempts were, of course, suppressed. (Document 96, 6 October 1987). In November 1987 KGB reported:

"We obtained direct evidence of intelligence efforts by foreigners who visited Pripjat and Chernobyl in 1986-1987. There were attempts to acquire secret data on liquidation of the consequences of the disaster, on technical condition of reactors, radiation situation in the zone, new methods of desactivation of territory, industrial buildings and equipment, chemicals that are used for these purpose and so on. Attempts to collect and export samples of soil, water and biomass were disclosed and suppressed" (Document 98, 14 November 1987).

Health, social and other impacts

As it was already mentioned, KGB reported about cases when patients evacuated from the 30-km zone and NPP workers were delivered to hospitals in Kyiv or Moscow. Later there appeared controversy between Ukrainian and Moscow doctors. KGB reported, that according to obtained information, Ukrainian scientists headed by Academician K.S.Ternov achieved good results when treating patients with their methods. Professor Gail (USA) noted successful treatment in Kyiv clinics. But use of these methods was banned by Academician L.N.Ilyin and Major-General E.E.Gogin without explanations, and the state of patients worsened.

"One of Prof. Kindzelsky's patients, firefighter Miagkov visited in the clinic of the Institute of Biophysicss of the Ministry of Health of the USSR his colleagues, who participated with him in combating the fire at Chernobyl NPP. He found them in bad condition (loss of hair, "parchment" skin, hemorrhages and necrosis of tissues at burns etc.) They told Miagkov, that they receive practically no treatment, doctors only observe them". (Document 63, August 1986).

High committed doses were serious problem for works at Chernobyl NPP: "Effectiveness of organization of work is seriously deteriorated by the fact that of 124 senior specialist more than a half already received doses 25 rem and more. If these specialists are replaced, the stability of management can be seriously deteriorated". On the other hand, some workers try to hide committed zones because they can lose their jobs in the zone. In such cases it is very difficult to control radiation doses of personnel. There are 4925 employees at the NPP, 91.8 % of needed engineers and specialists, 88 % of needed workers. (Document 74, 20 January 1987).

"...analysis of individual doses of those who are controlled by the Dosimetry Directorate of "Kombinat" enterprise shows the following results as of 15 August 1987:

Subdivision	Period	Distribution of personnel according to their doses (rem)					
		0-5	5-10	10-15	15-20	20-25	25
All organisations, except ChNPP	1986	26471	1494	522	285	161	196
	1987	22706	154	41	21	12	27
Personnel of ChNPP	1986	3052	-	304	175	147	53
	1987	4150	-	14	7	5	3
Total	1986	31017	-	826	460	258	416
	1987	27010	-	55	28	17	30

According to official data of the Dosimetry Directorate, necessary investigations on the cases of excess exposure, materials of such investigations are not submitted to the Directorate, in spite of numerous requests to the managers of organizations... Since those who received more than 25 rem are entitled to 5 monthly salaries, this creates a certain incentive for artificial overexposure in expectation of remuneration. On the other hand, there are also cases when received high doses are concealed." (Document 93, 5 September 1987).

Due to various reasons, there were numerous conflicts at the Chernobyl NPP. People were nervous because of working and living conditions (families lived in Kyiv and Chernigiv, personnel worked on shift basis and stayed at Zelenyi Mys settlement), there were tensions about distribution of apartments in Kyiv, questions on possibilities of keeping these apartments etc. Thus, on 20 August 1986, in the dormitory of Polessky technical college, where about 800 construction workers of Chernobyl NPP were quartered, there was an appeal to go to Kyiv to clarify the issue of apartments allocation. Of 1400 workers 700 families received flats in Kyiv and Chernigiv, but remaining 680 were worried. (Document 61).

Personnel of ChNPP protested against changes in duration of shifts (the plan was to introduce 8 hour shifts instead of 12 hour). They argued that this will take much more time for transportation, condition for rest would be worse and so on. Active discussions among people were triggered by article in central newspapers and film "Chernobyl. Two colors of time".

"Main points of the discussions:

- real cause of the accident (whether it's faulty design or mistakes of the personnel) is not established;
- there was no analysis of the action of personnel - where sacrifices were justified, and where not;
- still there is no model for actions of the personnel in case of major accident, to avoid panic or "heroism";

it is not clear, what to do with those whose actions had led to the accident;

- Ministry of Health of the USSR is obviously hiding the effects of exposure both in low and high doses. This contradicts the policy of "glasnost" and leads to neglecting of radiation protection norms, which can damage the health of current and future generations. (Document 114, 8 August 1988)

Further problems appeared when it became necessary to relocate NPP personnel and their families to the new city of Slavutich. Many refused to leave their Kyiv and Chernigiv apartments. There were much protest because of information that Slavutich is located on contaminated site (Documents 93, 102). Investigation demonstrated that permissible limits in the city of Slavutich are not exceeded, but there are some "hot spots" in nearby forests. On the 2 October 1987, the decision to start settling the city of Slavutich was made, but additional measures like removal of contaminated soil and forest were recommended (Document 97).

According to the report of 28 June 1988, morbidity and mortality of population in Narodichi, Ovruch and Luginy district follow usual patterns. To normalize the situation, replacement of roofs and fences, improvement of dusty roads were started in these rayons. Special measures for additional supply of clean milk top these rayons during summer period were approved, but the request to provide additional food supply was refused (Document 111).

Annex: translated documents

Document 4.

SECRET

TO THE CHAIRMAN OF THE COMMITTEE OF STATE
SECURITY OF UKRAINIAN SSR
Colonel-general
Comrade FEDORCHUK V.V.
Kiev

SPECIAL COMMUNICATION

**On emergency shutdown of unit 1
of the Chernobyl nuclear power plant**

According to information received on 19 February of 1979 by the KGB Department, at 23:40 18 February unit 1 of the Chernobyl nuclear power plant was shutdown by emergency activation of automatic safety system AZ-5. Investigation of the special technical commission, created by the administration of the NPP established that the cause of the shutdown was switching off of main circulation pumps, supplying cooling water in the reactor, due to permeation of air in hydrosystem. In accordance with technological norms, operating reactor is cooled by 4 main circulation pumps, of which one is permanently kept in reserve. During 18.02.79 the reserve pump was repaired and water from unit's hydrosystem was used for lifting pump's rotor. Upon completion of the reaper at 23:05, to avoid loss of desalinated water, workers discharged backwater through closed loop drainage device. During this process air penetrated in the hydrosystem, thus causing malfunctioning of pumps.

The Commission concluded that the cause of penetration of air in hydrosystem is technical imperfection of the drainage device laid down in the design. In connection with this, the nuclear power plant managers summoned representatives of the design institute from Leningrad, to prepare technical recommendation on the mentioned device.

After the liquidation of the emergency by 6 am of 20 February unit 1 was put into operation at prescribed power. As a result of its shutdown, the national economy have not received 11.5 million KWt of electricity. Chernobyl rayon Committee of the Communist Party of Ukraine and Oblast Committee of the Communist Party of Ukraine were notified on this fact.

Reported as information.

Head of the Department of KGB of Ukrainian SSR
for the city of Kiev and Kiev oblast
major-general

N.Vakulenko

«21» February 1979

Resolution on the document: «[omrade]. Zubatenko N.I. For consideration. Fedorchuk. 21.2.».

SA SSU. — F. 65. — File. 1. — V. 5. — Pages. 30–31.

Original. Typewritten.

Extract

From the report on the situation at the Chernobyl NPP region

[...] When interviewed, the Chief Engineer of Chernobyl NPP Shteinberg N.A. stated, that it is not advisable to put Unit 3 of Chernobyl NPP into operation, and that he proposed to the top management of "Minatomenergo" to put it up into conservation. He also informed that the top management of "Minatomenergo" and Chernobyl NPP studies a possibility of penetrating the sarcophagus of Unit 4, because 56 fuel assemblies 16 m long each loaded with uranium are buried in the used fuel storage. Under certain situation these circumstances can lead to explosion. In individual interviews scientist representing Kurchatov Institute and "Minatomenergo"'s Research and Design Institute also said that it is unwise to rehabilitate Unit 3 [...] Serious specialists motivated this opinion by the damage to health of many people who would be involved in rehabilitation, and huge material costs (taking into account the permissible dose loads it is planned to engage no less than 25 thousand people).

The dates of putting Unit 3 into operation appeared unrealistic due to extremely unsatisfactory organization of rehabilitation works, and even now the contractor for the work has not been approved.

In October 1986 the Director of the NPP signed a document that all chambers of Unit 3 building were deactivated by 95 %, while the investigation carried out in December 1986 determined that of 1180 chambers only 80 were deactivated, and no one even opened remaining chambers.

According to the reports of NPP management, in 1986 more than 390 tons of highly contaminated 4th reactor debris were thrown down from the roof of Unit 3, although, according to expert estimates, these figures are significantly exaggerated because the roofing could not sustain even one half of this mass.

There was an opinion expressed that due to unjustified involvement of military personnel into clean up of the roof of reactor 3, more than 3 thousand servicemen were irradiated, because the radiation levels on the roof of the reactor were not 500, but in some areas more than 10 thousand roentgens per hour [...].

The Chief of Special Department of KGB of USSR
for <acronym could not be deciphered>
Major-general Mironiuk

1 February 1987