

Counterintelligence support for the activities of the Chernobyl NPP and the exclusion zone

October 16, 1987

Secret

Reference note regarding the situation at the Chernobyl Nuclear Power Plant and the 30-km zone

1. Counterintelligence support for the Chernobyl Nuclear Power Plant and the zone is entrusted to the KGB Department for the Chernobyl Nuclear Power Plant, consisting of: the department head, the deputy department head, nine employees, two active reserve officers, and six seconded (rotated every three months) employees from other KGB departments. The department is located in Zeleny Mys, Chernobyl. After 5-8 days of work in the zone, employees are sent to Kiev for a 2-3-day break.
2. The unit utilizes 96 agents, 3 residents, and 120 trusted individuals to carry out counterintelligence missions. This year, 30 agents have been recruited and 34 trusted individuals acquired.

The operational situation at the Chernobyl Nuclear Power Plant and in the zone is characterised as follows.

1. Chernobyl Nuclear Power Plant

Construction of the facility began in 1970. Unit 1 was launched in 1977, Unit 2 in 1978, Unit 3 in 1981, and Unit 4 in 1983. Units 5 and 6 were under construction.

The plant uses four RBMK-1000 reactors. The total electrical capacity before the accident was 4 million kWh.

After the accident, construction of the Shelter facility was completed on November 29, 1986; the first unit was launched on October 2, 1986, and the second on November 5, 1986.

The third unit is scheduled to begin operation on November 15, 1987.

Currently, 4,142 people are employed at the facility. Work is organised on a rotational basis. Shift personnel reside in the village of Zeleny Mys.

2. The Production Association "Combine" is the lead organization for organising and conducting all work in the zone. It comprises 12 departments. It coordinates all research work conducted in the zone by representatives of the USSR Academy of Sciences, the Ukrainian SSR Academy of Sciences, and other agencies. Employs 4,400 people.

3. Units of the USSR Ministry of Defence are participating in the liquidation of the consequences of the accident, carrying out decontamination work, and constructing individual engineering structures in the village of Slavutich.

The total number of military personnel deployed in the zone is 20,200. They are operationally supported by the KGB of the USSR.

4. Construction of the settlement of Slavutych is being carried out by the newly created Slavutychatomenergostroy trust. The total number of employees is 8,710.

Radiation situation

The radiation situation in Kiev, the settlement of Slavutych, and the 30-km zone is characterised by the following data.

Kiev

The gamma radiation level is:

in the air from 0.2 to 0.4 $\mu\text{Sv/hr}$;

at the soil surface from 0.3 to 0.4 $\mu\text{Sv/hr}$.

– the beta decay rate is 50–100 particles/ cm^2 per minute.

– the radioactivity of drinking water from the Desnyanskaya and Dneprovskaya water intake stations is 0.37 Bq/L.

The concentration of radionuclides in food products does not exceed the temporarily permissible limits.

Slavutych city

– the gamma radiation level is up to 0.2 $\mu\text{Sv/hr}$;

– the beta decay rate within the city is 10–50 particles/ cm^2 per minute, in the surrounding area (in the forest) up to 2000 particles/ cm^2 per minute.

Chernobyl Nuclear Power Plant

–the gamma background radioactivity level inside the plant ranges from 1 to 2.5 $\mu\text{Sv/hr}$;

–on the plant grounds, from 20 to 50 $\mu\text{Sv/hr}$.

The temperature at the surface of the wreckage of Unit 4 is 55°C, with radioactivity levels up to 10,460,000 $\mu\text{Sv/hr}$.

Chernobyl City

–the gamma background radioactivity level ranges from 3 to 6 $\mu\text{Sv/hr}$.

Water activity in water sources within the 30-km zone does not exceed temporarily permissible limits and is 0.37 Bq/L.

The radionuclides that contribute most to the radiation environment are caesium, plutonium, strontium, and ruthenium.

Within the 30-km zone, there are 11 radioactive waste disposal sites (RWDS) located in the settlements of Podlesny, Buryakovka, Chistoganovka, the 3rd stage of the Chernobyl Nuclear Power Plant, Kopachi, Tolsty Les, Bychki, Rozsokha, Savichi, Zapolye, Opachichi, and within the plant's perimeter.

The areas that are most vulnerable to radiation are the plant's industrial base and the "red forest."

Within the zone and at its boundaries, there are four dosimetric monitoring stations and four sanitary treatment stations (PUSO). In addition, a network of automatic radiation monitoring stations has been installed, data from which is sent to the operational group of the USSR State Hydrometeorological Committee.

Post-Accident Measures

Following the accident at Unit 4 on April 26, 1986, 100,000 people were evacuated from the city of Pripyat and settlements within a 30-km zone, as well as areas with elevated levels of radioactive contamination.

The majority of residents were evacuated between April 27 and May 7, 1986.

Evacuees were housed in the Ivankovsky, Borodyansky, Makarovsky, Vasylkovskyi, and Yagotinsky (now Zgurovsky) districts of the region, as well as in the cities of Kiev and Chernigov.

Currently, the situation is most critical among the residents of the urban-type settlement of Poleskoye. Due to the elevated level of radioactive contamination in the settlement (in some places up to 40 $\mu\text{Sv/hr}$), residents are raising the issue of evacuation.

A letter was sent to the authorities on this matter, and a commission from the Central Committee of the Communist Party of the Soviet Union, including representatives from the USSR Ministry of Health, visited the site. However, no final conclusions have yet been reached.

In 1987, a problem arose related to the voluntary re-evacuation of the population, primarily the elderly, to settlements within the 30-kilometer zone. Currently, more than 500 such individuals live in the zone.

A certain number of evacuees living in the Ivankov and Borodyanka districts are dissatisfied with the resolution of the compensation issue for lost property. In this regard, there have also been instances of complaints being filed with the authorities.

Overall, the situation among the evacuees has stabilized, and no preconditions for the emergence of widespread negative events have been identified.

In connection with the construction of the Slavutych settlement and the upcoming decision on the relocation of station personnel from Kiev to Slavutych, a study was conducted on this issue.

Relocation:

- securing the assigned housing in Kiev;
- familiarising them with data on the radiation situation in the village and obtaining an official conclusion from the USSR Ministry of Health regarding the safety of children's stay in the village.

However, no specific decisions on these conditions have yet been made.

In connection with the evacuation of the population from the zone, the public has raised the issue of preserving cultural valuables left at their former places of residence.

Regarding foreigners' desires for the facility and the zone

Following instructions from the Centre and the KGB of the Ukrainian SSR, the enemy is making persistent attempts to obtain reliable information about the situation in the zone and at the facility.

In 1986, the main possible channel for obtaining this information was through contacts between foreigners and individuals working in the zone and through attempts to illegally enter the facility area.

Fourteen attempts to illegally enter the zone were prevented, along with four attempts to remove soil, water, and plant samples.

Data was obtained through a survey of Soviet citizens regarding the situation in the zone through the entry-exit channel.

In 1986, 18 foreigners (IAEA staff, Professor Gale) travelled directly to the zone.

Due to changes in the situation, as well as in the interests of objective coverage of the situation at the facility by representatives of foreign media, the number of foreigners entering the zone increased significantly in 1987.

As of October 15th of this year, a total of 208 foreigners, including media representatives, IAEA staff, and organizations working in the nuclear energy field, had visited the zone.

More than 15 films and videos were shot.

Two telephone bridges were established with correspondents accredited in Moscow.

Among the foreigners were 24 suspected of involvement in enemy intelligence services.

These foreigners included 31 US citizens, 30 British citizens, 11 French citizens, 7 German citizens, 8 Italian citizens, and 16 Japanese citizens.

Persistent attempts by individual foreigners to obtain information were uncovered and prevented:

- about the prospects for economic use of land in the zone, methods and technology for decontamination;
- about technical and organisational measures to improve reactor reliability and personnel vigilance, and the prospects for using RBMK-type reactors;
- about the health consequences of radioactive contamination of the area, and the results of ongoing research in this area;
- regarding the political and moral situation within the team and other issues.

Five attempts to collect soil and water samples were prevented.

Regarding the Shelter Facility

A comprehensive program has been developed to improve the reliability of monitoring the condition of the Shelter Facility. This program includes:

- developing methods and techniques for monitoring the condition of the Shelter's building structures;
- introducing additional sensors into the debris to monitor temperature, neutron flux density, and other physical parameters, and establishing a computer-based data processing system;
- conducting additional studies of the remaining reactor mass with the aim of classifying it into one of the following categories: radioactive waste repository, subcritical assembly, or new type of nuclear hazardous facility.

The facility's condition is currently monitored using a system of sensors located primarily along the surface of the collapsed structure. The data is processed by the "Shater" diagnostic system.

Regarding Unit 3

The launch of Unit 3 is scheduled for November 15, 1987.

Repairs to the primary and auxiliary equipment are nearing completion. Decontamination of 1,048 rooms within the unit has been completed.

According to some experts, restarting the unit is not advisable for the following reasons:

- despite the decontamination, gamma background levels in a number of rooms remain quite high (up to 400 $\mu\text{Sv/hr}$), which will lead to significant radiation exposure for personnel and may reduce the quality of equipment operation, primarily due to employees' reluctance to remain in rooms with high levels for extended periods;
- due to the lack of a 100% inspection of all equipment, especially welded joints in hard-to-reach areas, their guaranteed reliability cannot be ensured;
- the lack of any studies on the possible structural behaviour of Unit 3, which shares a foundation with Unit 4, under significant additional loads on the latter.

At the same time, the plant is experiencing difficulties staffing shifts for work at the unit due to a personnel shortage.

The plant administration is taking measures to restart the unit, which is, to a certain extent, caused by a shortage of generating capacity in the power system.

Situation at operating power units

Power units 1 and 2 are in normal operation. However, since their start-up in 1986, there have been nine emergency shutdowns and power reductions.

The main cause of these events is the insufficient reliability of both primary and auxiliary equipment, primarily in the control system and turbogenerators.

The nine-month plan was met in terms of all technical and economic indicators.

Despite the measures taken, violations of technological discipline, including nuclear-hazardous ones, continue to occur at operating power units.

All identified facts have been investigated, including with the participation of operational sources.

No evidence has been obtained of hostile intent on the part of personnel.

Plant and Zone Security of the Chernobyl Nuclear Power Plant is carried out by a separate unit of the USSR Ministry of Internal Affairs, subordinate to the Internal Troops Directorate of the Ministry of Internal Affairs for Ukraine and Moldova.

The unit has 55 personnel.

The first stage of the plant (power units 1 and 2) is equipped with the necessary perimeter engineering protection.

The installation of perimeter engineering protection for the second stage is currently being completed.

Completion of the engineering structures around the perimeter of Phase 2 will significantly streamline the entry procedures into the premises of Unit 3.

The perimeter of the 30-km zone is guarded and checkpoints are manned by units of the Internal Affairs Directorate.

A total of four checkpoints are located around the perimeter of the zone.

One of the problems is the lack of reliable engineering protection around the perimeter of the zone, which does not rule out the possibility of unauthorized entry, primarily for the purpose of stealing property left in the zone.

Not all persons entering the zone have had their passes checked.

The Department of Internal Affairs is regularly informed of any identified incidents.

Radiation Safety

The operational staff of the Chernobyl Nuclear Power Plant Department of the KGB is provided with personal protective equipment. Instructional documents on operational procedures have been developed.

Personnel traveling to the zone are equipped with individual dosimeters. According to the Nuclear Safety Department, the monthly external radiation dose for department employees is 2 mSv.

All machinery involved in the clean-up efforts undergoes dosimetric monitoring upon entering and exiting the zone.

Personnel involved in the clean-up efforts following the accident are provided with personal monitoring equipment. The Nuclear Safety Department processes data from the sensors monthly, with cumulative totals of external radiation doses received calculated.

In 1987, 11 plant and association personnel received doses exceeding 250 mSv.

At the same time, additional studies have revealed evidence of increased contamination of military personnel's clothing, personal belongings, tents, and vehicles with beta particles.

There are deficiencies in the equipment of radioactive material disposal sites within the 30-km zone. A number of these sites lack secure perimeter fencing. Groundwater sampling wells are not equipped.

These circumstances could lead to increased contamination of water sources with radionuclides, as well as the theft of contaminated items by hostile individuals.

Due to overloading of the spent fuel pools in the central halls of Units 1 and 2, the radiation situation in these areas has worsened.

Unloading of spent fuel into the solid nuclear waste storage facility is being delayed due to overloading and the limited capacity of specialised equipment.

There have been instances of materials and equipment being brought into the village of Slavutych from an area with elevated levels of radioactive contamination.

Residents of areas adjacent to the 30-km zone, despite ongoing outreach efforts, continued to pick berries and mushrooms in the forests.

Measures are being developed to remove radionuclides accumulated in the silt layer from the cooling pond.

Scientific research in the zone is being carried out by institutes of the USSR Academy of Sciences, the Ukrainian SSR Academy of Sciences, the USSR State Hydrometeorological Committee, and other organizations.

All work is coordinated by the Combine Production Association.

Ensuring Secrecy

Ensuring secrecy in the zone is the responsibility of the first departments of the Chernobyl Nuclear Power Plant and the Combine Production Association.

Measures are being taken to strengthen secrecy, primarily regarding work carried out in the zone by seconded personnel.

6th Department of the UKGB

As of 22.10.87, 9,639 people resided in the zone: 4,289 in the village of Zeleny Mys and 5,350 in Chernobyl.