METHODS OF KEEPING CITIZENS IN PROTECTIVE FACILITIES RADIATION PROTECTION FACILITIES

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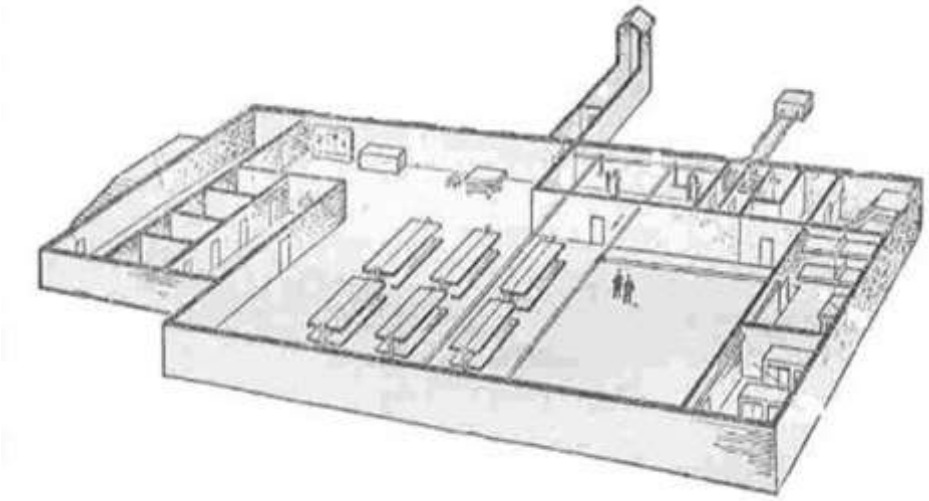
Annotation: *Protective structures are shelters designed to protect citizens from natural disasters, accidents, destruction and the effects of weapons of mass destruction.).*
Key words: *Defense construction, citizens, shahabchas, shafts*

Shelter plays an important role in protecting people from almost all harmful effects high temperature, radiation, explosives and strong toxic substances**.**



Picture-1.1. Shelter scheme designed to protect the population from the harmful factors of weapons of mass destruction for a long time.

Shelters are divided into 5 classes according to the number of people they receive. These are shelters that can accommodate: small - 150-300 people, medium - 300-600 people, large - 600 and more people.

The following requirements are set for the construction of the shelter:

- it is possible to keep the population for a period of not less than 3 days;
- construction in flood-proof areas;
- build in places far from open water bodies, sewage networks and construction communications;
- having special entry and exit doors.

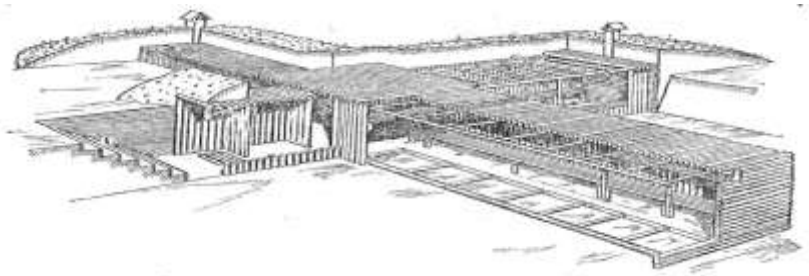
Shelters should be equipped with special ventilators, sanitary-technical equipment, equipment for cleaning toxic substances, radioactive compounds and biological agents in the air. Shelters should have main and additional rooms. People,

control systems, medical service personnel are placed in the main rooms. equipment, tools, food, water and other necessary tools are placed in additional rooms. The shelters should be very solidly built and have high hermeticity. There should also be places where people sleep, eat and move. in short, each person should have 0.5 m2 of space. The shelter should have at least two doors that enter from opposite sides and a safety door. The doors should be double-layered and hermetically closed in the drum type. The outer side of the door is made of very strong material, because it has to withstand the shock wave generated when the nuclear explodes. Shelters should be equipped with filtering, air exchange equipment, electricity, communication, water and sewerage and heating networks. Shelters must have dosimeter devices, chemical search equipment, protective equipment, fire extinguishers, food, water supply and medicines.

If emergency shelters are not available, they should be quickly built and equipped. In such cases, it is possible to re-equip subways, underground roads, basements of buildings for use as a shelter.

A radiation shelter is a non-hermetic protective structure, a place where citizens are kept in emergency situations. Such shelters can be specially built or adapted and re-equipped with other buildings. In addition to these, pits used for household purposes, warehouses where vegetable products are stored, and ordinary basements can also be used as shelters against radiation.The radiation protection property of radiation shelters is determined by the radiation attenuation coefficient, and it depends on the material it is made of and its thickness.

For example, basements of wooden houses reduce radiation by 7-12 times, and brick houses by 200-300 times. Shelters protecting more than 50 people from radiation should have at least two doors on opposite sides. In shelters that are not equipped with a weather forecast, people can survive for a maximum of 4-6 hours. Food and water are kept in hermetic containers as much as possible. Radiation protection shelters should also have main and additional rooms. People are kept in the main rooms, and sanitary-hygienic equipment and air exchangers are located in the additional rooms. In such shelters, each person should have 0.4 - 0.5 m2 of space. Radiation protection shelters are also equipped with 2-3 tier seats.



Picture-1.2. Scheme of radiation protection.

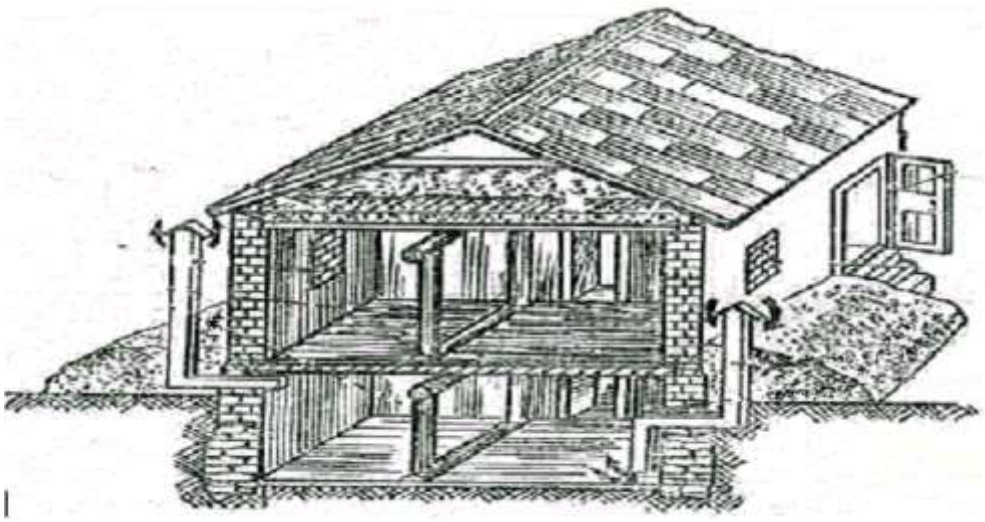
Outside the cities, basements of houses, warehouses where vegetables are stored, basements, brick, concrete, mud, wooden houses and other pits are used as shelters. In order to increase the reliable protection properties of such shelters, it is necessary to

make their walls thicker, to increase the hermeticity of doors and windows, and to fill their sides with soil.

Before admitting people evacuated from radioactively contaminated areas to shelters, their clothes and shoes should be cleaned of radioactive dust and then enter the shelter.

In the first 3 - 5 hours of radioactive damage, the shelter doors and ventilation holes are well closed. During this time period, the level of radiation outside is significantly reduced, and the main part of radioactive dust falls to the ground. After 4-6 hours, the shelter is ventilated. When it is necessary to go outside the shelter to measure the radiation force, you can definitely go out for 15-20 minutes wearing protective equipment. If the level of radiation outside is very high at this time, then when the shelter is being ventilated, people should wear respiratory protective equipment.

Common shelters are basements. Ordinary shelters (basements) have a special place in protecting citizens from emergency situations. According to the construction of the basement, it is included in the number of simple protective structures, because its construction is carried out in a very short time. They can be open or closed. In open basements, people are 2-3 times less affected by radioactive damage and receive up to 20 times less radiation dose. Closed basements reduce radioactive damage by 40-50 times. Cellars are made with a depth of 200 cm, a width of 120 cm, a lower part of 80 cm, and a length depending on the number of people.



Picture-1.3. Adapting the basement of the building to the shelter.

Citizens are kept in open basements using personal protective equipment. Closed basements serve to protect people from radioactive dust, biological fog, chemical weapons and to keep them from falling on clothes and open places of people.

Evacuation. Another way to protect citizens from the effects of weapons of mass destruction is to temporarily remove or completely relocate citizens from the place of disaster. Temporary removal means temporary relocation of working people outside the city or to other rural areas in the event of an emergency, and the workers temporarily leave the affected area. They can return to work and start their activities

after taking all precautionary measures to neutralize the damaged area. In other words, during temporary relocation, people stop their work for a certain period of time.

Evacuation means moving everyone from one place of residence to another place of residence for permanent residence at the same time. Mainly unemployed citizens, pensioners, children and sick people will be evacuated. Evacuees will live in that place until there is a special order. A safe area should be located at some distance from a dangerous area and should not pose any danger to the people. Also, the safe zone will be established in places close to railways and highways, where it is convenient for employees to go to work and return.

Temporary or complete resettlement to a safe area is carried out by the housing authorities according to the principle of production for working people, and according to the regional principle for people who do not participate in production. Events are planned and implemented at each production facility or residence.

All relocation work will be organized at the gathering place of the evacuees. Meeting places are called evacuation points, and they can be schools, clubs, and other public places. After receiving information about the relocation of the population, the population will be informed immediately by production enterprises, educational institutions, police bodies, radio and television. Gathered people were counted, divided into groups, distributed to vehicles and transported to a safe area within the specified time.

Those who will be evacuated randomly will be divided into groups of 50-100 people according to a previously known route, and group leaders will be assigned to them and they will move in columns. 500 - 1000 people move in each column. Until the column reaches the planned place, every 1 - 1.5 hours there is a 10 - 15 minute rest. Here they will be met by the reception committee. Each of the evacuees will undergo a medical examination. The composition of this commission includes the heads of local authorities, enterprise managers, food and medical workers. They receive people, take their account and help to settle each one. People are usually placed in schools, clubs, cinemas and similar public places, as well as families living there. Medical services are provided to every person who is placed, and they are provided with food.

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