Radiation Risks and Radionuclide Contamination

Keeping Memory of the Great Heroic Deed of the Participants in the Liquidation of the Consequences of the Chernobyl Nuclear Power Station Disaster

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ABSTRACT

34 years ago, on April 26, 1986, an explosion took place at the 4th power unit of the Chernobyl nuclear power station, which completely destroyed the reactor. The building of the power unit had been partially collapsed. A fire started in various rooms and on the roof. Subsequently, the remains of the core melted. A mixture of molten metal, sand, concrete, and fuel particles spread through the sub-reactor rooms. In the destroyed nuclear reactor, uncontrolled nuclear and chemical reactions (from the burning of graphite reserves) continued with the release of heat and the eruption from the break for many days of products of combustion of highly radioactive elements and their contamination of large areas. It had become possible to stop the active eruption of radioactive substances from the destroyed reactor, only in the end of May 1986, by the mobilization of all the resources of the USSR and by the cost of thousands of lives of the participants of liquidation of consequences of the disaster.

On November 30, 1986, the Government Commission signed an act on the termination of the construction of the unique Shelter object, which buried the remains of the exploded ChNPP block 4. The Shelter object is a unique engineering and technical structure created in the shortest possible time under the most difficult radiation conditions in the absence of pre-developed documentation and information necessary for the construction. Currently, a new high-tech facility has been built over it. More than 600 thousand people, representatives of all nationalities and regions of the USSR, almost all branches of the armed forces and people of many professions took part in the liquidation of the consequences of the Chernobyl disaster. This feat is worthy of deep respect for the living participants and perpetuation of the memory of the deceased liquidators.

On December 17, 2003, the UN General Assembly supported the decision to declare April 26 as the international day of remembrance of the victims of radiation accidents and catastrophes. In accordance with the Federal law of the Russian Federation of 01.04.2012 No. 24-FZ, a memorial date was introduced - The day of participants in the elimination of the consequences of radiation accidents and catastrophes and the memory of the victims of these accidents and catastrophes. In post-Soviet countries, various social benefits have been established (or not established) for this category. In the Russian Federation, the law of 15.05.1991 No. 1244-1 "on social protection of those citizens exposed to radiation as a result of the Chernobyl disaster" was adopted, with subsequent amendments. A fairly extensive research program has been implemented to study the effect of radiation exposure on the body of liquidators and long-term consequences in the next generations.

For 34 years, a large number of literary production on the Chernobyl disaster have been published. These are scientific publications that analyze the causes of the accident, personnel errors, and system problems. Books published by the relevant ministries and agencies: the state Corporation "Rosatom" national research centre "Kurchatov Institute", Ministry of energy etc. Memoirs by the participants of liquidation of



consequences of the disaster are being published, besides the memorial book "The memory candle which doesn't go out...", the biographies of outstanding scientists, firemen, military men who contributed to the elimination.

Memory Lessons and radiation safety classes have been developed and conducted in the educational institutions. Several schools have folk museums. Since 2007, the international award ceremony "Star of Chernobyl" and the children's heroic and Patriotic festival "Chernobyl star" have annually been held. The Commission and the creative community have been composed with the writers, publicists and poets whose works are dedicated to the feat of participants in the liquidation of the Chernobyl accident.

With the support of Rosenergoatom concern, a series of 5 documentaries "Soldiers of Chernobyl" was created. On April 26, there is a traditional supplementary sheet in the newspaper "Evening Moscow" with the edition of 266 thousand copies, which contains information about the feat of the participants in liquidation of consequences of accident on Chernobyl NPP, the role of the Muscovites in the creation of the object "Shelter" and safe nuclear power.

Moscow is currently a home for about 18,000 people-participants in the elimination of the consequences of radiation accidents and catastrophes, veterans of special risk units, and family members of deceased Chernobyl victims. Many of them are United in public organizations on a territorial and departmental basis. Public organizations have been the initiators of socially significant events and the creation of memorial sites. In 1993, a memorial to the victims of the Chernobyl disaster has been unveiled at the Mitinsky cemetery in Moscow, where memorial events are annually held on April 26. On December 13, 2017, a monument of glory has been unveiled on Poklonnaya hill for participants in the Chernobyl disaster response. Both monuments were erected by people's artist of the Russian Federation Andrey Kovalchuk. The monument on Poklonnaya hill has become a symbol of heroism, a place of paying homage and holding mass processions "Overshadowed". In addition to these two memorial complexes, fourteen memorials have been erected in the administrative districts of the city of Moscow, and two memorials have now been approved for the construction. The book "In the name of life on Earth" is dedicated to the history of creating monuments and memorials. It is planned to continue the work on perpetuating the memory of the feat of participants in the liquidation of the consequences of the Chernobyl disaster.

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