

ENVIRONMENTAL PROBLEMS OF CHEMICAL PRODUCTION FACILITIES

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Abstract. As various fields of production are developing, for many years, the release of various chemicals into the environment has increased in quantity, and the possibility of endangering the environment is increasing. The main goal of man-made protection of the population and territories is to save people's lives and health from the negative consequences of accidents that may occur in potentially dangerous objects, to determine the causes of accidents, and to prevent environmental pollution and poisoning.

Keywords. Ecology, poisoning, sanitary protection zone, chemically dangerous objects, chemical elements, ions, substances.

As various fields of production are developing, for many years, the release of various chemicals into the environment has increased in quantity, and the possibility of endangering the environment is increasing. Chemical elements, ions and substances important for the human body all have a certain quantity limit, and if the concentration exceeds the limit, it causes poisoning. For example, an increase in hydrochloric acid, which creates an acidic environment in the human body, causes pathological conditions. In production conditions, inhalation of its vapors, skin spillage can even cause death. An excess of such biologically important elements, cobalt and nickel, also leads to toxic consequences, and it is necessary to take precautionary measures in the industry.

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The main goal of man-made protection of the population and territories is to save people's lives and health from the negative consequences of accidents that may occur in potentially dangerous objects, to determine the causes of accidents, and to prevent environmental pollution and poisoning. As a result of accidents at the Chemical hazardous objects (CHO), disruption of technological processes, damage to pipelines, containers for

storing toxic substances, vehicles, as a result of the accidental release of toxic substances into the atmosphere, mass injuries of people and animals, as well as poisoning of water and soil are observed. This creates a zone of chemical poisoning. [2].

In such emergency situations, the formation of a cloud of poisoned air is observed due to the spread of highly toxic substances into the environment. A cloud of poisoned air is caused by the dispersion of strongly acting toxic substances or the evaporation of a spilled substance or the spread of toxic gases from damaged volumes and pipes. For this reason, it is necessary to fully assess the consequences caused by their burning in the facilities where such substances are present, as well as to correctly determine the area of the poisoning zone. Then, it will be possible to correctly determine their chemical danger and classification according to the specified levels, and to accurately calculate the border of the sanitary protection zone around it [3]. Currently, assessing the probability of emergency situations opens up a wide range of opportunities for accident prevention. Accident prevention measures have been developed and implemented in every chemical production facility, but accidents still occur. In addition to the above reasons, the following factors also increase the likelihood of chemical accidents:

1. that the performance of most enterprises is not at the same standard;
2. obsolescence of production capital;
3. the decrease in the discipline of production and technological order, the low fulfillment of the requirements of legal and regulatory documents;
4. Unplanned increase in the volume of production in chemical facilities, transfer of large chemical complexes to full-scale operation, increase in the amount of storage and transportation of emergency toxic substances will have a sharp effect.

In order to prevent chemical accidents at chemically hazardous facilities, it is recommended to implement the following measures: determine the causes of accidents at chemically hazardous facilities based on the activity and state of the enterprise; in the event of a chemical accident, determining the possible poisoning zone with the help of special computer programs and determining the place and directions of moving the population and workers to a safe area; Predicting the number of people who may be affected by a chemical accident in the vicinity of CHO and ensuring their safety in the process of developing protection plans.

By improving measures to prevent chemical accidents at chemically hazardous facilities, reducing the risk of accidents and eliminating them in time if they occur are achieved.

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