

# ***ENVIRONMENTAL EMERGENCIES IN ENTERPRISES AND THEIR IMPACT ON THE STATE OF THE ENVIRONMENT***

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***Annotation:*** *this article discusses the formation of an emergency situation that occurs not only in the event of an accident, but also in the conditions of stationary operation of enterprises. A phenomenon at a production facility usually means a failure or damage to technical devices or a deviation from the technological process. An accident is understood as the destruction of structures or technical devices, uncontrolled explosion or the release of hazardous substances. An emergency accident is considered a major accident involving damage to people's health, large-scale loss of material goods, and severe damage to the natural environment.*

***Keywords:*** *emergency, environmental monitoring, environment data storage.*

***Аннотация:*** *В данной статье рассматривается формирование чрезвычайной ситуации, возникающей не только при аварии, но и в условиях стационарной работы предприятий. Явление на производственном объекте обычно означает выход из строя или повреждение технических устройств или отклонение от технологического процесса. Под аварией понимается разрушение конструкций или технических устройств, неконтролируемый взрыв или*

*выброс опасных веществ. Чрезвычайная авария считается крупным несчастным случаем, связанным с причинением вреда здоровью людей, крупномасштабной гибелью материальных ценностей и нанесением серьезного ущерба природной среде.*

***Ключевые слова:** чрезвычайная ситуация, мониторинг окружающей среды, окружающая среда хранение данных.*

Currently, emergencies in different shells of the biosphere are becoming more and more environmental problems. According to statistics, over the past 20 years, the number of emergencies has doubled, and together with this, environmental problems are increasing at a very high speed. This means that the number of victims and material damage in industry, transport and other industries is increasing accordingly. Environmental problems in the world have become a pressing problem today. The occurrence of various diseases among the population, negative changes in the genotype of mankind indicate a sharp change in Ecology. The aggravation of ecology is caused by factors such as the construction of many industrial enterprises, the increased availability of chemicals in the needs of the population, the disorganized and uncontrolled nature of landfills and the lack of rational use of Natural Resources.

The greatest danger is natural and environmental disasters, as well as large accidents, industrial facilities and transport disasters. Accidents and disasters do not have a national border, they lead to environmental damage, the death of living organisms and people, and, in turn, to socio-political and economic tension. Today, thousands of potentially dangerous objects on all continents of the Earth work with reserves of such a volume of radioactive, explosive and toxic substances that, in case of emergency, can cause irreparable losses to the environment or even destroy life on Earth.

Let's consider the conditions for the formation of emergency situations. Before each emergency event, there are certain problems from the usual process of any process. The nature of the development of the phenomenon and its

consequences are determined by destabilizing factors of various origins. It can be a natural, anthropogenic, social or other effect that disrupts the functioning of the system.

Five stages of the development of emergency situations can be distinguished:

- accumulation of problems;
- the beginning of an emergency;
- emergency process;
- effects of residual factors;
- acting in emergency situations.

Emergencies can be classified according to several criteria: by the scope of possible consequences, by departmental affiliation, by the nature of the underlying phenomena.

Man-made emergencies include accidents, fires, explosions, etc. caused by human economic activity. As the production and service sector is provided with modern technology and technologies, the number of such disasters is sharply increasing, under the influence of such situations, there is an increase in environmental problems.

Natural disasters and man-made emergencies can occur independently of each other or together: one of them can lead to the other. All causes of emergency situations can exist separately or be related to each other and complement each other.

Emergencies associated with the release of strong toxic substances occur not only as a result of accidents or natural disasters in industrial enterprises. Such cases can occur during the stationary operation of enterprises in certain weather conditions or under the influence of factors that increase the concentration of harmful impurities in the atmosphere. Atmospheric pollution includes saturated and unsaturated hydrocarbons, containing 1 to 13 carbon

atoms. They undergo various changes, oxidation, polymerization, interaction with other atmospheric contaminants after being triggered by exposure to solar radiation. As a result of these reactions, hydrocarbon compounds with peroxide compounds, free radicals, nitrogen and sulfur oxides are often formed in the form of aerosol particles. In some weather conditions, especially large accumulations can occur.

All harmful emissions from industrial enterprises and vehicles contribute to the pollution of atmospheric air. In order to monitor emergency situations in the conditions of stationary operation of enterprises, a calculation of the total impact from all sources is carried out for each harmful substance, and a graph is drawn up that clearly shows the composition of a particular mixture in the air.

Information support for Environmental Research is primarily through two information streams:

1. Information that occurs in the process of studying the environment;
2. Scientific and technical data on the world experience in the development of environmental problems in various fields.

The general purpose of information support for Environmental Research is to study information flows and prepare materials for making decisions on Environmental Research at all levels of management, basing individual research projects and distributing funding.

In emergency assessment, the preparation of information takes 30-60% of the time and ensures that information systems provide quick data and find effective ways to solve it. It is impossible to accurately model decisions in an emergency, but the basis for their adoption can be a large amount of different data stored and transmitted in the database. Based on the results presented, management personnel make specific decisions based on their experience and intuition.

Environmental monitoring of emergencies involves the creation of a separate data repository containing information summarized in a convenient

form. The purpose of building a data warehouse is to combine, update and harmonize fast data from various sources in order to form a single coherent picture of the formation of emergency situations in the conditions of the stationary operation of enterprises as a whole. At the same time, the concept of a data warehouse is based on the recognition of the need to allocate data sets used for transaction processing and data sets used in Decision Support Systems. Such separation is possible in various data processing systems and external sources by combining separated detailed data into a single repository, coordinating them, and in some cases collecting them.

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