

Open cast mining system is a set of organizationally structured and regulated business processes, which, by engaging of natural, technical – technological, material and human resources, with the constant influence of the external environment, should ensure rational deposit use, and economically and safe mineral resources obtaining.

If all this include its dynamism, we get a clear picture of the open cast mine system complexity.

With the increase of its complexity, also its risk exposure increases, enabling within business systems increasingly present management of accidents activities. Risk management is a process of business management system that will ensure that the system operates without the risks, or the limits of no risks situation through which business feasibility confirms itself.

Condition of surface mining system is changed, according to changes of conditions and manners of system existence, during which, the systems are affected by the influence of many external and internal factors. Such factors may lead to unwanted condition changes, and the final outcome would be a system failure.

State of system emergency is a state in which there is a chance of uncontrolled system behavior. It is always potentially present, and it is always the result of system operation.

The state risks system occurs when in area of risk factors, their unprotected elements of the system or environment appeared.

Risks, by the cause, can be biological, chemical, physical, technical – technological, and according to the scope – specific and general. There is a whole series of types according to the dynamics of development, according to the method of decision-making for risk-taking, according to the risk management possibilities, etc.

Given that the levels of business system management contained in all phases of the system life cycle, and that each of them can have failures and crises, risk management is more involved in the entire business system lifecycle. All the aforementioned, indicates that risk management is an essential element of the overall management of complex and dynamic system, such as the surface mining system.