The paper entitled Protection of the Open Cast Mine Raskovac against Surface and Groundwater during the Floods by Mirjana Djurovic, Aleksandra Mitrovic and Boban Bozic stresses that the Raskovac open cast mine deposit, in view of the structural geological and hydrogeological characteristics of its environment, and the fact that several natural watercourses flow over the mining area, belongs to the group of deposits with complex operating conditions owing to high water levels.

In order to create conditions for optimal mining machinery and equipment operation, as well as to reach their optimal overburden removal and coal mining capacities, it is necessary to drain the water from the operating environment.

The operating area must therefore be protected against surface and groundwater in a reliable but also economical way. Water is present in the porous environments above and below the coal seam. The smooth running of the overburden removal and coal mining operations and development of the inside dump in the residual pit, is optimal only if penetration of external water into the operating area is prevented and if groundwater levels are maintained 2 to 3 m below the coal floor. In addition, the issue of watercourse diversion should also be resolved throughout mining operations, reclamation activities and afterwards.

To ensure prevention and timely response during natural disasters, all relevant climate, hydrogeological and hydrological monitoring data need to be collected and properly processed.

Based on the previous experience with Raskovac dewatering, and taking into account the structural – geological, hydrogeological characteristics of its environment, and the fact that several natural watercourses flow over the mining area, it may be concluded that Raskovac belongs to the group of deposits with complex operating conditions due to high water levels. All the planned and implemented measures must primarily prevent any possibility of bringing the mine equipment into danger of sinking. Continuous measurements of hydrological profiles, precipitation and pumped water amounts help us to identify the actual situation at the site, which can later inform the future technical documentation designing dewatering measures to be implemented throughout the future mine operations and its development.

The role of the main water collector, with additional overflow sedimentation tanks has demonstrated positive effects under the most unfavourable working conditions with large rainwater inflows, when the entire main water collector and sedimentation tanks had sufficient capacity to receive incoming water. Main pumps were placed on safe footings at a safe distance from the maximum water collector levels thanks to the solution involving the

installation of submersible pumps in a series with the high capacity centrifugal pump thus resolving the issue of the intake height.
Sufficient number of stand-by pumps was supplied with adequate technical characteristics, facilitating the replacement of the main pumps in the event of hazards. Furthermore, additional pipelines and spare materials for pumping plants should also be supplied and the required minimum warehouse stock maintained.