



## **Lessons learnt from recent mining tailing dam failures and integration in the national legislation of Romania, following the NATECH accident from Baia Mare**

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In Europe, the development of new technologies for mining extraction (especially for precious metals exploitation) lead to new exploitation operations, which emphasize the need for better safer requirements to be adopted at the whole level of EU and candidates countries (including Spain, Turkey and Romania where this activity is developed due to existence of the gold mines).

The risk management involving Tailing dams operation, are difficult to assess, not only for any dams owners (exploitation) but also for local authorities, population and economical units from the exposed areas. The protection measures to be undertaken in order to minimise the effect of a possible accident are very expensive because of the detailed analyses and evaluation of the safety exploitation situation, in order to minimise a possible accident.

The hydraulic structures, and particularly for dams, including the Tailing dams, are compared with other industrial installations from the point of view of risk management. The damages in case of accidents at hydraulic structures, both due to NATECH or exclusively human causes (as: terrorist sabotage, etc.) could be compared with those of a great natural disasters, with great damages. The lessons learnt depicted from the

detailed analyses of past accident at mining tailing dams, for example the last one occurred in Romania, on 30 January 2000, at “Aurul” Mine Tailings Recovery Plant near Baia Mare in north-western Romania, are very important for the improving of the safety measures or this type of hydraulic structures. The achieving of a steady safety operational conditions, through a proper dam risk management, is supported by a great interest of the authorities and public, considering the great number of losses and great damages at the worldwide level in case of dam accidents.

Therefore the achievement of the safe exploitation conditions includes the following requirements:

1. The observance of the exploitation programs;
2. The existence of the protection and security system;
3. The appliance of the security and protection measures for assuring a proper land management in the dam’s area or in its proximity;
4. The installation of the measuring and control equipment for the control of the dams behavior in time;
5. The existence of the permitting procedure for the safety functioning authorization;
6. The informational system of alarm-alert of the downstream population and economical units, in case of failure;
7. The implementation of the interruption, re-utilization or abandonment procedure.

Because of the new requirements of the new Seveso II amended directive, the competent authorities from Romania have to adapt the implementation requirements to the new safety approaches related with the tailing dam operation.

It has to be specified that the Directive 96/82/EC has been transposed into the Romanian legislation by GD 95/2003, which translates almost literally the content of the directive.

The paper resumes the most important activities and measures undertaken by the Romanian authorities responsible for the environmental management activity, both at the national and local level, in order to avoid any further technical accidents triggered by natural events and for the effectiveness of the measures implementation, at the tailing dams from the mining industry.