



Cyanide. A safe technology.



Because gold is bonded to rock in very small mineral structures, mining companies must use chemicals to extract the gold. Cyanide is one of the few substances with the chemical properties needed to extract gold safely and efficiently. After more than 100 years of cyanide use in the mining industry, the best ways to protect both people and the environment from exposure to cyanide are well understood.

Up: Modern processing plant, the only place where cyanide is used

Insert: Control room for real time monitoring of process parameters in a modern plant

WHEN YOU WANT TO BE SURE, CHECK!

Every year, 1.4 million tons of cyanide are produced worldwide, of which 13% is used in gold processing.

In concentrated amounts, cyanide is harmful to people and other living organisms. The Roşia Montană Project is designed to ensure the highest standards of safety, for both employees and the environment, in all activities related to cyanide. These activities include: transportation, storage, use and detoxification of cyanide.

In the modern processing plant to be built, cyanide will be used in full compliance with Romanian and European law, and consistent with international best practices.

Sensors to detect cyanide concentrations or its compounds continuously monitoring air quality will be located in the process plant.

All stakeholders will be permanently informed about the main activities involving cyanide.

YOU WILL BE SURPRISED AT WHO USES IT

About 13% of the quantity produced worldwide is used in gold processing. The other 87% is used in different industries, including the production of plastics, adhesives, fire retardants, cosmetics, pharmaceuticals, food processing, in fabrics such as the denim in blue jeans, and as an anti-caking additive for road salts, and table salt, too.

Cyanide compounds in small amounts even occur naturally in common foods such as almonds, coffee, certain varieties of beans, apricots, cherries, as well as cigarette smoke.

WE DO NOT LEAVE CYANIDE BEHIND

In a modern mining project, most of the cyanide is used up in the chemical transformations in ore processing. Over time, the remaining cyanide - which degrades quickly - will be changed chemically into non-toxic substances. The remaining cyanide will be detoxified, using a modern and efficient oxidation process. This process has been used at over 80 mines around the world in the last 30 years. After it is detoxified, it is then discharged into the specially built tailings dam.

Tailings are the waste material left over after the process of separating the gold and silver from the waste rock.

The cyanide concentration in the tailings dam will be lower than the maximal limits set by the EU Mining Waste Directive.

The EU Mining Waste Directive, which came into force in May 2008, sets the EU requirements for cyanide levels.

Operating mines are required to gradually reduce their cyanide concentration in tailings until they reach 10 parts per million (ppm) by 2018 at the latest. New mines, however, will start with 10 ppm.

The mine from Roșia Montană will have a concentration of 5-7 ppm from day one of operation.

By comparison, the cyanide naturally concentrated in a cup of coffee can reach 6 ppm.



Photo: Cyanide container in a modern gold ore process plant

TRANSPORT UNDER TWO LOCKS

Sodium cyanide will be purchased in solid form, and delivered in containers specially designed for cyanide transport - special trucks with extremely strong cylinders, and with double walls. An emergency vehicle will escort every truck. To prevent cyanide leakage, when it is delivered the solid

cyanide will be dissolved inside the container and pumped directly to the storage and distribution system, without ever being handled in the open.

All containers will be returned to the supplier for re-use, eliminating potential treatment and disposal problems.

THE PLAN IS SIMPLE: ATTENTION FROM DAY ONE TO THE LAST OUNCE OF GOLD

The cyanide management plan in the Roșia Montană Project complies with the International Cyanide Management Code (ICMC), (www.cyanidecode.org), recognized by the gold mining industry around the world.

The code includes best practices for cyanide management and targets the following:

- production
- transport
- handling and storage
- operations and closure phases of mining
- worker safety
- emergency response
- training
- public consultation and disclosure

RMGC will only contract companies that can prove their working practices are safe and protective of the environment.

STRICT CONTROL SYSTEMS

Spill containment and monitoring systems will be built into the Roșia Montană plant design. **Back-up containment systems will be built around all tanks that contain cyanide;** sumps will be located anywhere cyanide is handled, to contain potential spills.

Monitoring systems will detect any spills or hydrogen cyanide gas emissions in the air.

MONITORING

If at any point the amount of cyanide exceeds a safe level, automatic alarms will go off and the pump systems will shut down automatically. In the event of a power failure, back-up electrical generators will be in place to keep the systems operating efficiently.

Workers will receive personal protective equipment and will be fully trained in all aspects of cyanide management.

FOR FURTHER INFORMATION

Get informed:

In order to ensure that you receive clear and transparent information, RMGC invites all those who have an interest in the project to register as a stakeholder – to inform yourselves, to make up your own minds, to discuss aspects related to the project.

You do not have to register as a stakeholder to obtain information, but it does enable us to keep you informed directly of project progress, and upcoming events.

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