Item no.	892
No. to identify the observations received from the public	No. 110082/ 22.08.2006 and No. 75169/ 23.08.2006

The Questioners ask the MEWM not to issue the environmental permit for the Roşia Montană mining Project.

They come up with the following observations related to the Project:

- the TMF is located right upstream Abrud town, and downstream the TMF there are numerous small towns such as Cărpeniş Câmpeni, Bistra, etc.; of the TMF fails, the consequences could be catastrophic.
- there is no safety report available for the public disclosure and competent authorities assessment, in accordance with the legislation in force.
- The EIA Report contains an obvious inconsistence between the overall costs for closure and the real costs required (USD 70,789,884 in comparison to the real costs of approximately, over 2 billion dollars).
- the proposed TMF is not going to be sealed; this breaches the Directive regarding the underground waters protection.
- As far as the Biodiversity is concerned, Roşia Montană includes habitats and important fauna and flora species which are fully under protection status as per Romanian legislation and EU Directives.
- inconsistency regarding the Urbanism Plans for Roşia Montană, Bucium, Abrud, Câmpeni and the mining Project.

The TMF is located approximately 2 km above the town of Abrud and therefore the design criteria for the dam have been established to address consequence of a dam failure. The proposed dam at the Tailings Management Facility (TMF) and the secondary dam at the catchment basin are rigorously designed to exceed Romanian and international guidelines, to allow for significant rainfall events and prevent dam failure due to overtopping and any associated cyanide discharge, surface or groundwater pollution.

Specifically, the facility has been designed for two Probable Maximum Precipitation (PMP) events and the associated Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area. The construction schedule for embankment and basin staging will be completed to ensure that PMP storage requirements are available throughout the project life. The Roşia Montană TMF is therefore designed to hold a total flood volume over four times greater than the Romanian government guidelines. In addition, an emergency spillway for the dam will be constructed in the unlikely event that another event occurs after the second PMP event. A spillway is only built for safety reasons to ensure proper water discharge in an unlikely event and, thus, avoid overtopping which could cause a dam breach. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

Additional study was done regarding earthquakes, and, as indicated in the EIA the TMF is engineered to withstand the Maximum Credible Earthquake(MCE). The MCE is the largest earthquake that could be considered to occur at the site based on the historical record.

In addition, Section 7 of the EIA report includes an assessment of the risks cases that have been analyzed and include various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modelling results indicate the extent of tailings run out. Based on the two cases analyzed, the tailings will not extend beyond the confluence of the Corna Valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

**Proposal** 

Solution

For a more detailed technical analysis, please refer to Chapter 7, Section 6.4.3.1, "TMF Potential Failure Scenarios" of the EIA.

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This claim is not true. The safety report was submitted together with the Environmental Impact Assessment (EIA) Report on May  $18^{th}$ , 2006 and was available for public consultation at the locations where the EIA Report was submitted, both as hardcopy and in electronic form. The electronic copy of the report could be accessed both on the web page of the Ministry of Environment and Water Management, and on www.povesteaadevarata.ro .

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The figure of US \$768 million is both unsubstantiated and implausibly high. RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful revegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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The Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam; to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

- 1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.
  - The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.
  - In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [.....] designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape;"

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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The impacts on protected flora and fauna will only occur locally, but these impacts will not lead to the disappearance of any species. The mining project was designed even from the beginning to meet all Romanian and European environmental legal requirements.

The company believes that the project's impact on the environment remains significant, especially because the project will cover previous environmental impact. But, the investments required to restore/rehabilitate Rosia Montana area in order to resolve current complex environmental issues, are possible only after the implementation of economic projects capable of generating and warranting responsible and direct courses of action as a base component of sustainable development concepts. Clean economic processes and technologies may develop only in the presence of a solid economic system, in a

total respect towards environment that will resolve even previous impacts caused by all anthropic activities.

Project's base documents are an unbiased reasoning of its implementation, taking into account the complex environmental commitments assumed for Rosia Montană area.

Some of species existing at Roşia Montană that are under a certain protection status represent an insignificant percentage from populations estimated at national level. The species characterization can be found in the species tables included in Chapter 4.6, Biodiversity of the Report on Environmental Impact Assessment Study (EIA) as well as in its Annexes. Due to the large amount of information, these tables are available in the electronic format of EIA. 6,000 electronic copies of EIA Report presented on DVD/CDs have been disclosed to the public both in English and Romanian. Moreover, the EIA is also available on RMGC's website and on the websites of Ministry of Environment and Waters Management and Local and Regional Environment Protection Agencies of Alba, Cluj and Sibiu, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area an SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to restore/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

### References

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory. [...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary

importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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We underline the fact that pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no. 85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

In other words, we mention the fact that the General Urbanism Plan for the entire Roşia Montană settlement was prepared in 2002. This Plan stipulates urban-planning regulations for all 16 villages included in the Roşia Montană Commune, and for a protected area including historical buildings. The General Urbanism Plan has been presented to the public and subject to public debates, therefore all interested persons have been able to express their opinion regarding the development opportunities of the commune. After the completion of the public participation stage, the General Urbanism Plan has obtained all necessary approvals from the competent ministries, from Alba County Council, the Urbanism Committee, Alba Environmental Protection Agency, the network operators and the final approval of Roşia Montană Local Council.

S.C. Roşia Montană Gold Corporation S.A. (RMGC) has requested and obtained, from Alba County Council, the Urbanism Certificate no. 78 of 26.04.2006 for the entire Roşia Montană mining project, including the tailings management facility (TMF). This urbanism certificate is fully compliant with the project proposal whose impact is assessed in the EIA Report. The certificate covers the area included in the Zonal Urbanism Plan for Roşia Montană Industrial Area and is included in the Mining License issued by the National Agency for Mineral Resources. The Zonal Urbanism Plan for the Industrial Area has been subject to public consultations and debates organized in Roşia Montană, Bucium, Câmpeni and Abrud and has received the approval to continue the permitting procedures, from all 4 local councils.

Concerning the urbanism plans of the other settlements, the General Urbanism Plan for Abrud city was updated in 2002, incorporating the part of the TMF located within the territory under Abrud administration. This General Urbanism Plan has been subject to the same approval procedure as the General Urbanism Plan of Roşia Montană Commune. The General Urbanism Plan for Câmpeni city is currently being updated, and Roşia Montană Gold Corporation requested the Local Council to include the part of the water supply pipe and the pipe collecting water from Arieş River. After completion, it will be subject to the approval procedure described above.

Only one road will be constructed on the administrative territory of Bucium Commune, having a reduced impact on the urbanism plan. Consequently, in compliance with the applicable urbanism regulations it is not necessary to include it in a new urbanism plan or to modify the existing plan.

Item no.	893
item no.	
No. to identify	No.
the	110081/
observations	22.08.2006
received from	and No.
the public	75170/ 23.08.2006
	The Questioner disagrees with the Roşia Montană Project, and asks the following questions,
	observations and comments:
	- There is a large number of deficiencies of the Project and its EIA Report
	-The lack of real interest shown by the Administration in regards to finding solutions for sustainable
	development of the environment in the area;
	-Roșia Montană Project proposes a false solution to the local problems: a small number of jobs for a short
	period of time.
	- RMGC didn't take into consideration the environment protection principles: sustainable development,
	prevention, caution in taking decisions, overall approach, preservation of the environment.
	- the proposed mining project doesn't stipulate that the sulfides will be treated and stored separately onto
Proposal	a special sealed dam The tremendously waste deposit of cyanide content is located right above Abrud town; of the dam fails, it
•	will result an ecological catastrophe.
	- The size of the Project, the large quantity of hazardous chemicals (cyanide) used for technological
	processes, the large quantity of wastes (residue) remained and stored for long time are subject to
	questioning the technical and technological feasibility of the Project;
	- Financial resources for starting the investment;
	-The proposed socio-economic aspects are false.
	-What will it happen should the Project gets closed down before the term expires? What will it happen to
	the area, who's going to rehabilitate it, using what finances?
	- Should RMGC fail as a company, what will it happen to: the plant site, the tailings stockpiles and cyanide,
	their supervision, impacted area? Who will cover the costs?
	As regards your comment, please note according to art. 44 (1) of the Order of the Minister of Waters and Environmental Protection no. 860/2002 regarding the environment impact assessment and the issuance
	of environmental agreement procedures ("Order no. 860/2002") "during the public debate meeting the project
	titleholder [], provides grounded answers to the justified proposals of the public, which were received under a
	written form, previously to the respective hearing";
	At the same time, art. 44 (3) of Order no. 860/2002 provides that "based on the results of the public debate,
	the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public
	and requests to the titleholder the supplementation of the report on the environmental impact assessment study
	with an appendix comprising solutions for the solving of the indicated issues".
	Considering the legal wordings quoted above, as your allegation (i) does not identify nor indicate issues
	related to the project initiated by RMGC and undergoing the environment impact assessment procedure,
	(ii) refers to decisional capacities under the competence of certain public authorities, issues to which
Solution	RMGC is not in the position to answer, we mention that the project titleholder cannot and does not have the capacity to provide an answer or make any comments in this respect.
	the capacity to provide an answer of make any comments in this respect.
	*

In an area grapping with chronic high unemployment, the direct jobs created by Roşia Montană Gold Corporation (RMGC) will prove a strong stabilizing influence in Roşia Montană and the region.

In terms of creating new economic opportunites for local residents, RMGC currently employs almost 500 people, of whom more than 80 % live in Roşia Montană, Abrud, and Campeni. The Roşia Montană Project (RMP) expects to employ on average 1,200 people during the two-year construction period and 634 people, including security, transportation and cleaning contracted personal, during its 16 years of operations. The goal is to source as many of the jobs locally as possible. Training programs are underway to assist people from the local communities around RMP to qualify for positions both during construction

and then operations. If the required skills are not available locally, offers would be made to residents within a 100 km radius of RMP, with a preference to residents of Alba county. Based on our preliminary assessment, the majority of jobs both during construction and operations are expected to come from the local community. But the project will also result in the creation of approximately 6000 indirect employment opportunities.

Taken over 20 years, the injection of investment into the area, if handled correctly, should stimulate other development. RMGC is committed to promoting long term development opportunities as part of the sustainable development plan.

According to the provisions of art. 52 (1) of the Mining Law no. 85/2003, the entities ceasing the mining activities should submit to the competent authority an application accompanied by the updated mining activities cessation plan, describing the details for the actions necessary to be performed for the effective mine closure. The Mine Closure Plan should contain, among others, a social protection program for the personnel.

At the time of closure, the company will do all it can for the existing workforce in providing assistance in finding alternative employment. Given the skills base and experience that the workers will have acquired, this might be jobs on other mining projects in a region with significant resource development potential. Alternatively, RMGC will provide the opportunity of re-training and support in setting up alternative businesses.

One of the most important sides of development is community and local authorities capacity building and development. Even before the project starts, the company is interested in working together with the community to finding the best development solutions for the area. It is hoped that, under the auspices of the United Nations Development Plan (UNDP), a number of working groups will be established, one of which will be assigned the task of exploring development opportunities.

Meanwhile, a number of programs already in place aim at raising both the educational profile and the level of skills in the community, to meet the needs of the project and to encourage people think of other ways of making a living apart from mining. The vocational training program is one of them. Business training is part of the vocational training program. A business incubator is also established.

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

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We strongly disagree with the questioner's assertion. The Environmental Impact Assessment study report (EIA) that Roşia Montană Gold Corporation (RMGC) submitted responded fully and professionally to the Terms of Reference proposed by the Ministry of the Environment and Water Management (MEWM) and complied with the relevant legal provisions and international practices. More than 100 independent consultants, (certified) experts and specialists renowned at the national, European, and even international levels, prepared the report. We are confident that the EIA provides sufficiently detailed information and reasoning for its conclusions to permit the MEWM to make its decision on the Roşia Montană Project (RMP). RMGC had previously changed various parts of the proposal, notably a reduction in the size of several proposed pits as well as enhancing sustainable development activities, and a stronger commitment to preservation of cultural patrimony including a reduced impact on local churches, in response to stakeholder consultations before submission of the EIA. Further, we believe the project will support the community's initiatives to develop industries other than mining, and this is central to the Community Sustainable Development Management Plan attached to the EIA report (Plan L).

Technical experts, representing several international private sector banks and export credit agencies have concluded that the EIA complies with the Equator Principles designed to promote responsible lending by financial institutions to projects which raise environmental and social concerns, and an ad hoc committee of European experts (International Group of Independent Experts – IGIE) has publicly stated that the EIA was well-developed, taking into considerations their recommendations and suggestions. A copy of the IGIE report and RMGC's response are included as a reference document to the present annex of the EIA.

We further disagree with the view that the project will lead to environmental destruction in the Roşia Montană area and the surrounding region. The environmental protection laws that are in effect all over the world, including in Romania, do not allow the destruction of the environment under any circumstances. The RMP will be conducted in full compliance with Romanian and European environmental and other laws and in accordance with international best practices. The Project will bring Best Available Techniques (BAT) to Romania, many of which are designed to minimize the impact of mining operations on the environment.

As detailed in the EIA, RMGC will also undertake a significant plan of environmental rehabilitation at the site not only to mitigate the environmental effects of the current project but to clean up the effects of past poor mining practices as well. There will be less pollution at the site after the mine closure process is complete than there is now.

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The sulphides in the case of the Roşia Montana project may occur disseminated within the ore deposit, and the sulphates in certain concentrations within the sludge resulted from the treatment plant of the acid waters. In the case of the disseminated sulphides, excepting pyrite, these have extremely low contents and will not be recovered and specially treated.

For the sludge from the treatment plant of the acid waters, depending on the development stages of the Project, the following flow sheets are designed:

- During the operation stage, the thickened sludge, resulting from the sedimentation basin of the treatment plant of the acid waters, will be discharged into the tailings management facility as supplementary waste in a ratio of 1:500 as compared with tailings.
- During the mine-closure period, this waste stream will be discharged into the Cetate open pit lake, because the tailings management facility will not be still available for waste discharge.

The environment impact caused by the discharging into the tailings management facility of the sludge resulting from the treatment of the acid waters will be negligible comparatively with the impact caused by the processing tailings due to:

- Much less quantity of resulted sludge in comparison with the quantity of tailings;
- Much lower toxic properties of the sludge in comparison with those of tailings.

Thus, the references from the Section [2.8.1.8] of the EIA to the period when the sludge resulted from the acid water treatment plant will be deposited into the tailings management facility are justified.

If the sludge of acid water treatment is deposited into the Cetate flooded open pit, the sludge may dissolve and liberate heavy metals and neutral major ions (sulphate, calcium) into the water from open pit, if this water becomes acid. But the water from lake will not be evacuated directly into environment. The water from open pit if is reaching the underground works may be collected by Cetate dam and pumped back to the treatment plant, so that no pollution will be discharged into environment.

Moreover, prevention measures are provided in order to minimize the risk that the acid waters generated by the sulphuric portion of the open pit walls to acidulate the waters from open pit. These measures are described in Section [2.8.2.9.] of the EIA.

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The TMF is located approximately 2 km above the town of Abrud and therefore the design criteria for the dam have been established to address consequence of a dam failure. The proposed dam at the Tailings Management Facility (TMF) and the secondary dam at the catchment basin are rigorously designed to exceed Romanian and international guidelines, to allow for significant rainfall events and prevent dam failure due to overtopping and any associated cyanide discharge, surface or groundwater pollution.

Specifically, the facility has been designed for two Probable Maximum Precipitation (PMP) events and the associated Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area. The construction schedule for embankment and basin staging will be completed to ensure that PMP storage requirements are available

throughout the project life. The Roşia Montană TMF is therefore designed to hold a total flood volume over four times greater than the Romanian government guidelines. In addition, an emergency spillway for the dam will be constructed in the unlikely event that another event occurs after the second PMP event. A spillway is only built for safety reasons to ensure proper water discharge in an unlikely event and, thus, avoid overtopping which could cause a dam breach. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

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In addition, Section 7 of the EIA report includes an assessment of the risks cases that have been analyzed and include various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modelling results indicate the extent of tailings run out. Based on the two cases analyzed, the tailings will not extend beyond the confluence of the Corna Valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

For a more detailed technical analysis, please refer to Chapter 7, Section 6.4.3.1, "TMF Potential Failure Scenarios" of the EIA.

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Cyanide is a toxic compound and it must be handled and managed carefully. Still, as it disintegrates rapidly in normal atmospheric conditions into non-hazardous substances, unlike mercury, for instance. The Roşia Montană Project will use the best available technologies for the extraction of gold and management of wastes and will comply with the European Directive regarding management of wastes containing cyanides.

Cyanide is one of the few substances that can dissolve gold. Cyanide is used in hundreds of gold mines around the world and in many other industries. At Roşia Montană, the Tailings Management Facility will be constructed to the highest international standards. It will be an environmentally safe construction for permanent deposition of detoxified tailings resulting from ore processing. Sophisticated equipment will be used for geotechnical and water level monitoring. Because detoxification will take place before the tailings are deposited to the TMF, they will contain very low concentrations of cyanide (5-7 parts per million or ppm or mg/l), which is below the regulatory limit of 10 ppm recently adopted by the EU Mining Waste Directive 2006/21/EC. Mine waste in the EU is currently permitted to have a 50 ppm concentration of cyanide, which the Directive reduces to 10 ppm for new mines. Roşia Montană's TMF will have a concentration of 5-7ppm.

RMGC has signed and will comply with the International Cyanide Management Code (ICMC), which requires the use of best practices in the field of cyanides management. RMGC will obtain the cyanides from a manufacturer that also complies with this code. Also, the transporter will comply with ICMC. The EIA study also evaluated alternatives to cyanide from the economic, process applicability, and environmental perspectives. The study concluded that the use of cyanide as it will be used in the Roşia Montană Project is a Best Available Techniques as defined by EU Directive 96/61/EC (IPPC).

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The estimated capital cost to complete the development of the Roşia Montană project – including interest, financing and corporate costs – is approximately USD 750 million. The Company anticipates financing these costs with approximately 20% equity – USD 150 million and 80% debt. The equity component has been raised and the debt component is in final negotiations.

While the risk attendant on developing Roşia Montană Project is carried by the company, the benefits that

will flow from its successful development will infuse USD \$2.5 billion into the Romanian economy over the life of the mine.

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According to the relevant legal provisions, the interested public may submit justified proposals on the environment impact assessment. Art. 44 (3) of the Order no. 860/2002 on the Environment Impact Assessment Procedure and the issuance of the environmental approval provides to this end that "based on the results of the public debate, the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public and requests the titleholder the supplementation of the report to the environmental impact assessment study with an annex containing solutions for the solving of the underlined issues".

As the statement of the attendant to the public consultations (i) refers to the existence of alleged false aspects in the Environmental Impact Assessment Study Report (EIA), without containing any specific indications, and (ii) identifies and specifies no problems in regard of the project initiated by Roşia Montană Gold Corporation (RMGC), subject to the environmental impact assessment procedure, RMGC is not in position to answer and has not the capacity to make any comments to this end.

Nonetheless, please note the Household socio-economic study is documented in the Planning Alliance study 2002 - Roşia Montană Gold Mining Project – Gold and Cold: Traits of the Communities in the Impacted Area, Planning Alliance. [1]

This study included the administration of a questionnaire to 247 households representing about 25% of affected households. It also included focus group discussions and key informant interviews. The household and key informant questionnaires were designed to capture basic socio-economic information on a cross-section of affected households. Indicators and/or areas of inquiry included: employment, income, income streams, agriculture (including animal husbandry and gardening), education, health, infrastructure and perceptions about the Roşia Montană Project (RMP).

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

Reference:

[1] www.truestory.ro

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RMGC is also committed to maintaining the highest standards of occupational health and safety for its employees and service providers. Our utilization of Best Available Techniques helps us to ensure this goal is achieved. No organization gains from a loss, and to that end we will work to implement engineering solutions to risk, as they are far superior to insurance solutions to risk. Up to 75% of loss risk can be removed during the design and construction phase of a project.

Yet we recognize that with a project as large as that being undertaken at Roşia Montană, there is a need to hold comprehensive insurance policies (such policies are also a prerequisite for securing financing from lending institutions). Core coverage includes property, liability, and special purpose (e.g. delayed start up, transportation, non-owned). Thus in the event of legitimate claims against the company, these claims will be paid out by our insurers, and there will be no financial impact on the company, thus we would not expect any hypothetical temporary closure to result in a long-term closure.

RMGC also recognizes that mining, while permanently changing some surface topography, represents a temporary use of the land. Thus from the time the mine is constructed, continuing throughout its lifespan, closure-related activities – such as rehabilitating the land and water, and ensuring the safety and stability of the surrounding area – will be incorporated into our operating and closure plans.

In Romania, the creation of an Environmental Financial Guarantee ("EFG") is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003). Two directives issued by the European Union also impact the EFG:

the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

There are two separate and distinct EFGs under Romanian law.

The first, which is updated annually, focuses on covering the projected reclamation costs associated with the operations of the mine in the following year. These costs are of no less than 1.5 percent per year, of total costs, reflective of annual work commitments.

The second, also updated annually, sets out the projected costs of the eventual closure of the Roşia Montană mine. The amount of the EFG to cover the final environmental rehabilitation is determined as an annual quota of the value of the environmental rehabilitation works provided within the monitoring program for the post-closure environmental elements. Such program is part of the Technical Program for Mine Closure, a document to be approved by the National Agency for Mineral Resources ("NAMR").

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals. The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine).

The annual updates capture the following four variables:

- Changes in the project that impact reclamation objectives;
- Changes in Romania's legal framework, including the implementation of EU directives;
- New technologies that improve the science and practice of reclamation;
- Changes in prices for key goods and services associated with reclamation.

Once these updates are completed, the new estimated closure costs will be incorporated into RMGC's financial statements and made available to the public.

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roṣia Montană project.

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Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

RMGC is also committed to maintaining the highest standards of occupational health and safety for its employees and service providers. Our utilization of Best Available Techniques helps us to ensure this goal is achieved. No organization gains from a loss, and to that end we will work to implement engineering solutions to risk, as they are far superior to insurance solutions to risk. Up to 75% of loss risk can be removed during the design and construction phase of a project.

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Item no.	894	Same as: 895, 896, 897, 898, 899, 900
No. to identify the observations received from the public	No. 110080/ 22.08.2006 and No. 75171/ 23.08.2006	Same as: No. 110079/22.08.2006 and No. 75172/23.08.2006, No. 110078/22.08.2006 and No. 75173/23.08.2006, No. 110077/22.08.2006 and No. 75174/23.08.2006, No. 110076/22.08.2006 and No. 75175/23.08.2006, No. 110075/22.08.2006 and No. 75176/23.08.2006, No. 110074/22.08.2006 and No. 75177/23.08.2006

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the "Roşia Montană" commune do not correspond with the mining project proposal described in EIA;
- -The tailings management facility is not lined;
- The proposed waste deposits will be not constructed according to the legislation in force;

osal -Financial guarantees were not fixed

- -There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- -The EIA report does not evaluate the "Zero Alternative";
- -The project represents a threatening for the protected flora and fauna;
- -The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- -The public/ONGs whish to consult the contracts and agreements between Company and Romanian State;
- -Modification of the urbanism plan without the public consultation;
- -From archeological point of view, the area proposed to be occupied by project was not legally investigated;
- -The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

### SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences

# Proposal

Solution

to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roşia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for

more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \text{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat  $12.5~\mathrm{kW/m2}$  is within a  $10.5~\mathrm{m}$  radius circle and Threshold II, of heat radiation  $5~\mathrm{kW/m2}$  is within a circle of  $15~\mathrm{m}$  radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel):
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureş joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that

reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is  $5.17~\mathrm{mm}$  thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page 173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and

regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35) are located inside the protected area of the Roşia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation of the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability ( $1 \times 10^{-6}$  cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

• A low permeability  $(1x10^{-6} \text{ cm/sec})$  cut off wall within the foundation of the starter dam to

control seepage;

- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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- the secondary seepage collection pond;
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The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

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- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam; to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of

Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

\*

Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit;
- Surety bonds;

• Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roṣia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roşia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU

Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

### References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than  $5\,\%$  of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and measurement activities as well as the selection of appropriate Best Management Practices/Best Available Techniques for further mitigation of the potential noise and vibration impacts from Project activities.

These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see **Tables 4.3.8** through **4.3.16** and **Exhibits 4.3.1** through **4.3.9**. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison of modeled predictions versus actual measurements has consistently shown close agreement; typically in the range of 1 to 3 dB (A).

### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Rosia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roşia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal Urbanism Plan, to reflect all changes made to the Roşia Montană Project, following the public

consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roşia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roşia Montană since 2000 have been carried out as part of a complex research program; permits for preventive archaeological excavations being issued

in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roṣia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on theCultural heritage of Roşia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

[1] The text of the Convention is available at the following address:

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions - has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Țarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs). Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest

(SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

ltem no.	901
No. to identify the observations received from the public	No. 110073/ 22.08.2006 and No. 75178/ 23.08.2006

The questioner expresses the following remarks:

- The gold and silver reserves from Roşia Montană represent one of the strategic reserves of Romania;
- From economic point of view, the distribution of the benefits resulted from gold and silver extraction is opposite to the international practice;
- The urbanism plans do not correspond to the project proposal;
- Within the EIA report there are no financial guarantees regarding the safety assurance of the waste deposit;
- From technical point of view, the tailings management facility will be not "lined". It is situated above the Abrud town and could have a catastrophic consequence in case of failure;
- The EIA report does not contain an evaluation of the phenomenon so-called "cyanide rain" nor a description of the trans-frontier impact on some natural important areas in case of accident;
- The EIA report does not assess the "Zero Alternative";
- The data provided by EIA report infringe the standards of environment protection

### SEE THE CONTENT OF THE TYPE II CONTESTATION

The Romanian Mine Law, Law 85/2003, does not put any restrictions on the licenses to be given for exploration for gold and development of gold reserves. Both Romanian and foreign companies, both public and private companies, may apply to obtain a license to work a gold deposit. The Romanian state no longer has a monopoly on gold production.

We agree that Roşia Montană represents an issue of national strategic importance, designed to raise the bar for long-term investment in Romania. RMGC is the largest employer in this disadvantaged region and indeed the whole county and is the largest local taxpayer. Romania will receive about US\$ 1 billion for its share of the project, and a total of about US\$ 1.5 billion when one includes the value of goods and services procured in Romania. The project meets or exceeds all Romanian and EU standards, creates new jobs for Romanians, especially in Roşia Montană and the surrounding region, and will be a catalyst for reviving the mining sector, which is strategic to the Romanian economy and an important tool for rural development.

Solution

Proposal

However, we disagree that this means the project should not be approved. RMGC has been working on this project since 1998 and has invested over US\$ 200 million to date. By the time production begins, the company will have invested almost US \$1 billion. Mining is a high risk industry; it is an industry rule of thumb that for every 1,000 projects considered, 100 merit drilling, and only one is opened as an actual productive mine. In fact, no country in the developed world is currently involved directly in assuming the risk of mining operations; instead, private capital assumes the risk and will bring the best available techniques to Romania. Approval of this project will show the world that Romania welcomes this type of productive foreign investment. The profits from the mine and the jobs provided by the mine are tangible benefits to Romania.

As regarding your request, we mention that art. 44 (3) of the Minister of Waters and Environment Protection Order no. 860/2002 on the environment impact assessment and the issuance of environmental agreements Procedures ("Order no. 860/2002") provides that "based on the results of the public debate, the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public and requests the titleholder the supplementation of the report on the environmental impact assessment study with an appendix comprising solutions for the solving of the indicated issues".

Consequently, considering the fact that your proposal is just an allegation which does not indicate possible problems, nor provide additional information, we mention that the decision on the issuance or refusal of

the environment approval cannot be made only by considering a simple proposal, but according to certain objective criteria provided by the wording of art. 45 of the Order no. 860/2002 and only after examining:

- (i) the report on the environmental impact assessment study;
- (ii) the conclusions of the parties involved in the assessment;
- (iii) the possibilities to implement the project;
- (iv) the titleholder answers to the grounded proposals/comments of the public.

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Unlike the common international practice related to the distribution of profits, it should be noted that in relation to the Roşia Montană Project, the distribution of benefits is more favorable to Romania/Romanian State than to the investor/the titleholder of the project.

Furthermore, please observe that the Romanian government has an ownership stake in the project (without putting up any capital) and has a direct share in the profits in the expected amount of USD 306 million, along with the right to receive profit taxes, royalties and other taxes and fees. Nowhere else in the developed world does a government have a direct profit sharing interest in a mining project such as this.

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We would like to state that your statement is erroneous. The General Urbanism Plan (PUG) of Roşia Montană approved in 2002, allows the development of Roşia Montană Project as it was presented during public debates.

At the same time, pursuant to the provisions under art. 41,  $2^{nd}$  paragraph from Mines Law no. 85/2003, the local authorities must alter and/or update existing territorial arrangement plans and general urban plans, in order to allow execution of all required actions to develop mining activities.

RMGC has also commenced the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no 78 from 26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to

begin at Roșia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit ;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roṣia Montană project.

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## Tailings Management Facility

An engineered liner is included in the design of the Tailings Management Facility (TMF) basin to be protective of groundwater. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as

defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam; to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

# Proximity to Abrud

The TMF is located approximately 2 km above the town of Abrud and therefore the design criteria for the dam have been established to address consequence of a dam failure. The proposed dam at the Tailings Management Facility (TMF) and the secondary dam at the catchment basin are rigorously designed to exceed Romanian and international guidelines, to allow for significant rainfall events and prevent dam failure due to overtopping and any associated cyanide discharge, surface or groundwater pollution.

Specifically, the facility has been designed for two Probable Maximum Precipitation (PMP) events and the associated Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area. The construction schedule for embankment and basin staging will be completed to ensure that PMP storage requirements are available throughout the project life. The Roşia Montană TMF is therefore designed to hold a total flood volume over four times greater than the Romanian government guidelines. In addition, an emergency spillway for the dam will be constructed in the unlikely event that another event occurs after the second PMP event. A spillway is only built for safety reasons to ensure proper water discharge in an unlikely event and, thus, avoid overtopping which could cause a dam breach. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

Additional study was done regarding earthquakes, and, as indicated in the EIA the TMF is engineered to withstand the Maximum Credible Earthquake(MCE). The MCE is the largest earthquake that could be considered to occur at the site based on the historical record.

In addition, Section 7 of the EIA report includes an assessment of the risks cases that have been analyzed and include various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modelling results indicate the extent of tailings run out. Based on the two cases analyzed, the tailings will not extend beyond the confluence of the Corna valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

For a more detailed technical analysis, please refer to Chapter 7, Section 6.4.3.1, "TMF Potential Failure Scenarios" of the EIA.

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The possibility for a "cyanide rain" phenomenon to occur doesn't exist. Moreover, the specialty literature does not indicate a phenomenon called "cyanide rain"; it is known and researched only the "acid rains" phenomenon that has no connection with the behavior of the cyanide compounds in atmosphere.

The reasons for stating that no "cyanide rains" phenomenon will ever occur are the followings:

- The sodium cyanide handling, from the unloading from the supplying trucks up to the processing tailings discharge onto the tailings management facility, will be carried out only in liquid form, represented by alkaline solutions of high pH value (higher than 10.5 11.0) having different sodium cyanide concentrations. The alkalinity of these solutions has the purpose to maintain the cyanide under the form of cyan ions (CN) and to avoid the hydrocyanic acid formation (HCN), phenomenon that occurs only within environments of low pH;
- The cyanide volatilization from a certain solution can not occur under the form of free cyanides, but only under the form of HCN;
- The handling and storage of the sodium cyanide solutions will take place only by means of some closed systems; the only areas/plants where the HCN can occur and volatilize into air, at low emission percentage, are the leaching tanks and slurry thickener, as well the tailings management facility for the processing tailings;
- The HCN emissions from the surface of the above mentioned tanks and from the tailings management facility surface can occur as a result of the pH decrease within the superficial layers of the solutions (that helps the HCN to form) and of the desorption (volatilization in air) of this compound;
- The cyanide concentrations within the handled solutions will decrease from 300 mg/l within the leaching tanks up to 7 mg/l (total cyanide) at the discharge point into the tailings management facility; the drastic reduction of the cyanide concentrations for discharging into the Tailings Management Facility (TMF) will be done by the detoxification system;
- The knowledge of cyanide chemistry and on the grounds of past experiences, we estimated the following possible HCN emissions into air: 6 t/year from the leaching tanks, 13 t/year from the slurry thickener and 30 t/year (22.4 t, respectively 17 mg/h/m $^2$  during the hot season and 7.6 t, respectively 11.6 mg/h/m $^2$  during the cold season) from the tailings management facility surface, which totals 134.2 kg/day of HCN emission;
- Once released, the hydrocyanic acid is subject to certain chemical reactions at low pressure, resulting ammonia;
- The mathematical modeling of the HCN concentrations within the ambient air (if the HCN released in the air is not subject to chemical reactions) emphasized the highest concentrations being at the ground level, within the industrial site namely within the area of the tailings management facility and within a certain area near the processing plant; the maximum concentration being of  $382~\mu g/m^3/h$ ;
- The highest HCN concentrations within the ambient air will be 2.6 times lower than the limit value stipulated by the national legislation for labor protection;
- The HCN concentrations within the ambient air from the populated areas close by industrial site will be of 4 to 80  $\mu g/m^3$ , more than 250 12.5 times lower than limit value stipulated by the national legislation for labor protection the national legislation and European Union (EU) legislation on the Quality of Air, don't stipulate limit values for the population's health protection);
- Once released in the air, the evolution of the HCN implies an insignificant component resulted from the reactions while liquid (water vapors and rain drops). The reactions are due to HCN being weak water-soluble at partial, low pressures (feature of the gases released in open air), and the rain not effectively reducing the concentrations in the air (Mudder, et al., 2001, Cicerone and Zellner, 1983);
- The probability that the HCN concentration value contained by rainfalls within and outside the footprint of the Project to be higher than the background values (0.2 ppb) is extremely low.

On the basis of the above presented information, it is very clear that HCN emissions may have a certain local impact on atmosphere quality, restricted to well within legislated limits as described above, but their implication within a possible trans-boundary impact on air quality is excluded.

Also, the specialty literature doesn't comprise information related to the effect of air-borne HCN emissions on fauna and flora.

For details referring to the use of cyanide in the technological processes, the cyanides balance as well as the cyanide emission and impact of the cyanides on the air quality, please see the Environmental Impact Assessment (EIA) Report, Chapter 2, Chapter 4.1 and Chapter 4.2 (Section 4.4.3).

The EIA Report (Chapter 10, Transboundary Impacts) assesses the proposed project with regard to potential for significant river basin and transboundary impacts downstream which could, for example, affect the Mureş and Tisa river basins in Hungary. The Chapter concludes that under normal operating conditions, there would be no significant impact for downstream river basins/transboundary conditions.

The issue of a possible accidental large-scale release of tailings to the river system was recognized to be an important issue during the public meetings when stakeholders conveyed their concern in this regard. As a result, further work has been undertaken to provide additional detail to that provided in the EIA Report on impacts on water quality downstream of the project and into Hungary. This work includes modelling of water quality under a range of possible operational and accident scenarios and for various flow conditions.

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (www.eurolimpacs.ucl.ac.uk). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modelling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and phsico-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureş joins it.

Because of dilution and dispersion in the river system, and of the initial EU Best Available Techniques (BAT) – compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modelling work is presented under the title of the Mureş River Modelling Program and the full modelling report is presented as Annex 5.1

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roṣia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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According to the provisions of art. 44 (3) of the Order of Ministry of Water and Environment Protection

no. 860/2002 on the environmental impact assessment and environmental approval issuance procedure ("Order no. 860/2002"), the project titleholder prepares "an evaluation of the public's grounded proposals, containing solutions for the settlement of the underlined problems, which shall be submitted to the relevant public authority for environmental protection, according to the form presented in anenx no. IV.2".

We consider that, as no exact specification is made in regard of the enactments allegedly breached by the report to the environmental impact assessment study (EIA), the project's titleholder cannot answer in regard of this affirmation of a generic character.

Though your statement is not grounded and/or supported in any way, the only authority empowered to analyze such breaches of the European legislation is the environmental authority. To this end, we specify the provisions of art. 45 of the Order no. 860/2002 on the environmental impact assessment and environmental approval issuance procedure ("Order no. 860/2002"), which provide: "after the examination of the report to the environmental impact assessment study, of the conclusions of the parties involved in the evaluation, of the possibilities to fulfill the project and the grounded evaluation of the public's proposals, the public authority competent in regard of the environmental protection shall take the decision concerning the issuing of the environmental approval/integrated environmental approval or the grounded rejection of the project on the respective location".

ltem no.	902	Same as: 903, 904	
No. to identify the observations received from the public	No. 110072/ 22.08.2006 and No. 75179/ 23.08.2006	Same as: No. 110071/22.08.2006 and No. 75180/23.08.2006, FR.NR. and No. 75181/23.08.2006	
Proposal	The Complainer doesn't agree with promoting the Roşia Montană Project and it addresses the following comments and observations:  - The overall costs for mine closure are not realistic.  - No financial guarantees have been stipulated;  - There is no liner proposed for the tailings pond;  - There is not a Safety Report submitted for the public consultation;  - The EIA report does not assess the "Zero Alternative";  - The Project poses a threat for protected flora and fauna;  - Roşia Montană Gold Corporation does not comply with the provisions of art. 11 of The Mining Law no. 85/2003.  SEE THE CONTENT OF THE TYPE 2 CONTESTATION		

The overall costs for mine closure are realistic. RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and re-vegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainable reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

Solution

We believe that—far from not being realistic—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;

- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roṣia Montană project.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability  $(1\times10^{-6} \text{ cm/sec})$  recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- $\bullet$  A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- $\bullet~$  A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roṣia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

## References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species

ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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The statement RMGC does not fulfill the provisions of art. 11 of the Mining Law no.85/2003, published in the Romanian Official Gazette, Section I, no. 197/27.03.2003 is incorrect. The Mining Law no. 85/2003 has a general applicability and makes no reference to the Roşia Montană Project or to other mining projects, as it has been mistakenly suggested. According to art. 11 of the Mining Law, "the performance of mining activities on the lands where historical monuments are located, [...] archaeological sites of special interest [...], as well as the creation of an easement right for mining activities on such lands is strictly forbidden. The exemptions from the provisions of art. 1 are established by Government decision, with the approval of the relevant authorities in the field and by establishing indemnification and other compensatory measures".

Based on the Concession License for mining exploitation no. 47/1999, RMGC obtained the right to perform mining activities in the Roşia Montană perimeter, which includes areas upon which a protection regime has been instituted. In case the interdiction established by art. 11 would have been absolute, the Mining Law would have provided the legal interdiction of creating mining perimeters in the locations where there have been created protection regimes.

Such an interdiction does not exist; moreover, the Government Ordinance no. 43/2000 on the protection of the archaeological patrimony and declaring of some archaeological sites as national interest areas, republished in the Official Gazette, Section I, no. 951/24.11.2006 ("GO no. 43/2000"), as well as Law no. 422/2001 on the protection of the historical monuments, republished in the Official Gazette, Section I,

no. 938/20.11.2006 ("Law no. 422/2001"), provide specific procedures for the returning of such lands to current human activities, by declassifying the historical monument and by granting the archaeological clearance. Such procedures represent the rule applicable in all situations in which there is contemplated the performing of works requiring a construction authorization on lands subject to a protection regime.

The Mining Law no. 85/2003 does not forbid the use of such procedures, only allows that, in exceptional cases, the Government may be empowered, based on the Mining Law, to establish by decision the cases in which the performance of the mining activities would be possible without following the legal procedures generally applicable, as provided by GO no. 42/2000 and Law no. 422/2001. Such a Government decision is not necessary in case of the Roṣia Montană Project, as RMGC observes the provisions and procedures established by GO no. 43/2001 and Law no. 422/2001, for the archaeological clearance of the lands to be affected by he mining activities, as these are to be returned to the current human activities, as per the law.

Also, for the cultural patrimony values existing in the Roşia Montană perimeter and classified as per the law, the Project provides the creation of a protected are, within which no mining activity shall be performed, as well as the preservation *in situ* of the historical monuments located outside this area, as detailed in the Cultural Heritage Management Plan - Plan M from the EIA Report.

905 Item no. No. No. to identify 110070/22. the 08.2006 observations and No. received from 75182/23.0 the public 8.2006 The Questioner disagrees with the proposed gold and silver mining Project in Roşia Montană, presents a description of the mining in the area and emphasizes the fact that the continuation of mining will affect the historical vestiges, the health of the environment and the development of the future economy.

Proposal

The Questioner proposes an emergency issuance of a law to stop Roşia Montană project and any other similar activity which it would bring impact on the historical vestiges, health of the environment and future development.

This Project, unlike past mining at Roşia Montană, will be operated in accordance with international best practices for mining. For the first time, it will bring best available techniques (BAT) to Romania. With respect to the cultural heritage of the village, it is important to remember that the project affects only 4 of the 16 sub-comuna that comprise Roșia Montană. There is a buffer zone in the village itself, and the proposal includes the renovation and restoration of the historical center of Roșia Montană and the construction of two new relocation sites in the Piatra Alba area (situated at approximately 6 km away from the historical centre). This site will be the new civic centre of the commune, which will be the most modern in Romania. In addition to individual homes, new and modern quarters for the City Hall, cultural and community centres, a police station, a dispensary, a school, and other buildings will be built. This new and modern location will preserve the character and tradition of the mountain villages of the Apuseni Mountains but will benefit from all the advantages and facilities of 21st century construction. (Only the school will be built in a modern architectural style.) A new neighbourhood will also be built in Alba Iulia. All relocations will be conducted according to the Resettlement and Relocation Action Plan, which fully complies with World Bank standards for involuntary resettlement of individuals.

As detailed in the EIA study, RMGC will undertake a significant plan of environmental rehabilitation at the site not only to mitigate the environmental effects of the current Project but to clean up the effects of past poor mining practices as well, leaving the area cleaner than we found it.

Solution

The EIA report indicates that the existing baseline conditions are characterized by widespread water pollution and the presence of large areas of derelict mined land and waste heaps. This presents a serious impediment to development other than that proposed under the Project. Remediation of the area would be very expensive and certainly beyond the means of the local community. However, Chapter 5 of the EIA Report (Assessment of the Alternatives) examines alternative options for the RMP including the "no-project" option. The EIA considered alternative developments that include agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes. It concluded that none of these industries could provide the economic stimulus to assure sustainable prosperity for local communities as is forecast for the Project. However, it also noted that the Project would not halt development of alternative industries in parallel and would indeed remove some of the current obstacles for sustainable development, such as pollution and land dereliction. The Project would therefore support the community's initiatives to develop industries other than mining and this is central to the Community Sustainable Development Management Plan attached to the EIA report (Plan L). Additional supplementary information/study materials completed since the submittal of the EIA, reflecting comments received during the public consultation process, further expands on our CSDP efforts, has been included as reference documents to the Annex.

As regarding your request, we mention that art. 44 (3) of the Minister of Waters and Environment Protection Order no. 860/2002 on the environment impact assessment and the issuance of environmental agreements Procedures ("Order no. 860/2002") provides that "based on the results of the public debate, the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public and requests the titleholder the supplementation of the report on the environmental impact assessment study with an appendix comprising solutions for the solving of the indicated issues".

Consequently, considering the fact that your proposal is just an allegation which does not indicate possible problems, nor provide additional information, we mention that the decision on the issuance or refusal of the environment approval cannot be made only by considering a simple proposal, but according to certain objective criteria provided by the wording of art. 45 of the Order no. 860/2002 and only after examining,

- (i) the Report on the Environmental Impact Assessment Study;
- (ii) the conclusions of the parties involved in the assessment;
- (iii) the possibilities to implement the project;
- (iv) the titleholder answers to the grounded proposals/comments of the public.

Overall, Rosia Montană will be enhanced rather than destroyed. An area of the village of Rosia Montană has been designated as a protected area, the proposal includes the renovation and restoration of the historical center of Rosia Montană and the construction of two new relocation sites: one in the Piatra Albă area (situated at approximately 6 km away from the historical center) and one at Dealul Furcilor, a subdivision of Alba Iulia, the county's capital. Piatra Albă site will be the new civic center of the commune, which will be the most modern in Romania. In addition to individual homes, new and modern quarters for the City Hall, cultural and community centers, a police station, a dispensary, a school, and other buildings will be built. This new and modern location will preserve the character and tradition of the mountain villages of the Apuseni Mountains but will benefit from all the advantages and facilities of 21st century construction. The school will be the only building built in a modern architectural style. Please also note that the property purchase program established by the company has been designed according to World Bank guidelines, and is based on a "willing seller, willing buyer" model, offering individual development opportunities and various support programs. To this extent, RMGC provided fair compensation packages for the affected inhabitants of the impacted area, in full compliance with the World Bank policies in this field, as detailed in the Resettlement and Relocation Action Plan (RRAP) developed by RMGC, which may be found on company's official website.

As for economic development, Chapter 5 of the EIA Report (Assessment of the Alternatives) examines alternative options for the RMP including the "no-project" option. The EIA considered alternative developments that include agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes. It concluded that none of these industries could provide the economic stimulus to assure sustainable prosperity for local communities as is forecast for the Project. However, it also noted that the Project would not halt development of alternative industries in parallel and would indeed remove some of the current obstacles for sustainable development, such as pollution and land dereliction. The Project would therefore support the community's initiatives to develop industries other than mining and this is central to the Community Sustainable Development Management Plan attached to the EIA report (Plan L).

ltem no.	906		
No. to identify the observations received from the public	No. 4273/SB 17.08.2006 and No. 75183/ 23.08.2006		
Proposal	A group of TV reporters of Deva local station, based on a 6 weeks documenting period, have made a 30 minutes documentary trying to catch the spirit of the area and the voices of the people.		
Solution	We sincerely appreciate the efforts of these reporters to understand the Project and to inform the public of this important issue and we hope their interest will continue throughout the period of mine construction, operations, and closure. For our part, we have engaged in a long process of public and stakeholder consultation and look forward to working with them and other members of the Romanian press.		

ltem no.	907		
No. to identify the observations received from the public	No.		
	110068/		
	22.08.2006		
	and No.		
	75184/		
	23.08.2006		
	The questioner opposes the proposed gold and silver mining project at Roşia Montană and makes the		
	following observations and comments:		
Proposal	-The tailings pond is unlined and is a hazard for the town of Abrud, as there is the risk of a failure;		
	-The overall costs for mine closure are not realistic.		
	-The Project poses a threat for protected flora and fauna;		
	-The phase of public consultation and quality evaluation of the impact assessment study report begun		
	without a valid urbanism certificate;		
	-The company could not find an insurer for the mining project.		
	-The EIA report does not assess the "Zero Alternative";		
	- The EIA report does not include an assessment of the "cyanide rain" phenomenon.		

An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

Solution

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability  $(1x10^{-6} \text{ cm/sec})$  recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- $\bullet$  A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented

to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

## Proximity to Abrud

The EIA describes how the dam will be built with rockfill materials, engineered drain and filter materials and a low permeability core to control seepage. The facility is being designed and engineered by MWH, one of the leading dam designers in the world. In addition, the feasibility level designs have been reviewed and approved by certified Romanian dam experts and by the Romanian National Committee for the Safety of Large Dams. Prior to operation, the dam must again be certified for operations by the National Commission for Dams Safety (CONSIB).

The Tailings Management Facility (TMF) dam is rigorously designed to incorporate all EU, Romanian and international criteria to reduce the risk of failure. These guidelines allow for significant rainfall events and prevent dam failure due to overtopping. Specifically, the facility has been designed to store for the run off from two Probable Maximum Precipitation (PMP) events. This is generally referred to as the Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area.

Additionally, an emergency spillway for the dam will be constructed in the unlikely event that the site rainfall exceeds two PMPs. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

Section 7 of the EIA report includes an assessment and analysis of risks and includes various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modeling indicates the extent of tailings runout for the specific conditions analyzed. Based on the two cases considered the tailings would not extend beyond the confluence of the Corna valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

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The overall costs for mine closure are realistic. RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and re-vegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainable reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from not being realistic—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developped within the mining

project of Rosia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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With respect to the issues indicated by you, namely the insurance of mining projects, we would like to underline the fact that the Directive no. 2004/35/CE regarding on environmental liability with regard to the prevention and remedying of environmental damage, which has been published in the Official Journal of the European Union no. L143/56 ("Directive no. 35/2004") establishes the general governing framework with regard to environmental pollution.

According to the provisions stipulated by art. 1 of Directive no. 35/2004 "The purpose of this directive is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage."

Directive no. 35/2004 states as a principle pursuant to the provisions of art. 14(1) the fact that "Member States shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive".

Moreover, according to the provisions of art. 19(1) Directive no. 35/2004, Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 April 2007. We would like to underline the fact that, up to now, the Directive no. 35/2004 hasn't been transposed into our legislation. Taking into account the previously mentioned aspects, we kindly ask you to take notice of the fact that, at this moment there are no internal legal regulations to establish the material and procedural aspects related to the establishment of such a guarantee.

However, if specific legal dispositions are going to be created with regard to the establishment of certain guarantees, RMGC is going to take all necessary measures to fulfill all mandatory legal liabilities.

Moreover, we underline the fact that RMGC has contracted one of the world's leading insurance brokers, which is well established in Romania and has a long and distinguished record of performing risk assessments on mining operations. The broker will use the most appropriate property and machinery breakdown engineers to conduct risk analysis and loss prevention audit activities, during the construction and operations activity at Roşia Montană, to minimize hazards. The broker will then determine the appropriate coverage, and work with A-rated insurance companies to put that program in place on behalf of RMGC, for all periods of the project life from construction through operations and closure.

RMGC is committed to maintaining the highest standards of occupational health and safety for its

employees and service providers. Our utilization of Best Available Techniques helps us to ensure this goal is achieved. No organization gains from a loss, and to that end we will work to implement engineering solutions to risk, as they are far superior to insurance solutions to risk. Up to 75% of loss risk can be removed during the design and construction phase of a project.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roṣia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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It is stated precisely that a "cyanide rain" phenomenon will not exist. Neither was encountered in other places or situations. Moreover, the specialty literature doesn't make any mentions related to the so-called "cyanide rains" phenomenon, but only "acidic rains" phenomenon which can't be generated by the cyanic compounds breaking down in the atmosphere.

The reasons for making the statement that 'cyanide rains' phenomenon won't occur are the followings:

- The sodium cyanide handling, from the unloading from the supplying trucks up to the processing tailings discharge onto the tailings management facility, will be carried out only in liquid form, represented by alkaline solutions of high pH value (higher than 10.5 11.0) having different sodium cyanide concentrations. The alkalinity of these solutions has the purpose to maintain the cyanide under the form of cyan ions (CN) and to avoid the hydrocyanic acid formation (HCN), phenomenon that occurs only within environments of low pH;
- The cyanide volatilization from a certain solution cannot occur under the form of free cyanides, but only under the form of HCN;
- The handling and storage of the sodium cyanide solutions will take place only by means of some closed systems; the only areas/plants where the HCN can occur and volatilize into air, at low emission percentage, are the leaching tanks and slurry thickener, as well the tailings management facility for the processing tailings;
- The HCN emissions from the surface of the above mentioned tanks and from the tailings management facility surface can occur as a result of the pH decrease within the superficial layers of the solutions (that helps the HCN to form) and of the desorption (volatilization in air) of this compound;
- The cyanide concentrations within the handled solutions will decrease from 300 mg/L within the leaching tanks up to 7 mg/L (total cyanide) at the discharge point into the tailings management facility. The drastic reduction of the cyanide concentrations for discharging into the Tailings Management Facility (TMF) will be done by the detoxification system;
- The knowledge of the cyanide chemistry and on the grounds of the past experience, we estimated the following possible HCN emissions into air: 6 t/year from the leaching tanks, 13 t/year from the slurry thickener and 30 t/year (22.4 t, respectively 17 mg/h/m² during the hot season and 7.6 t, respectively 11.6 mg/h/m² during the cold season) from the tailings management facility surface, which totals 134.2 kg/day of HCN emission;
- Once released into air, the hydrocyanic acid is subject to certain chemical reactions at low pressure, resulting ammonia;
- The mathematical modeling of the HCN concentrations within the ambient air (if the HCN released in the air is not subject to chemical reactions) emphasized the highest concentrations being at the ground level, within the industrial site namely within the area of the tailings

- management facility and within a certain area near the processing plant. The maximum concentration is of  $382 \, \mu g/m^3/h$ ;
- The highest HCN concentrations within the ambient air will be 2.6 times lower than the standard value stipulated by the national legislation for labor protection;
- The HCN concentrations within the ambient air in the populated areas close by the industrial site will be of 4 to 80  $\mu g/m^3$ , more than 250 12.5 times lower than standard value stipulated by the national legislation for labor protection the national legislation and European Union (EU) legislation on the Air Quality don't stipulate standard values for the population's health protection;
- Once released in air, the evolution of the HCN implies an insignificant component resulted from the reactions while liquid (water vapors and rain drops). The reactions are due to HCN being weak water-soluble at partially low pressures (feature of the gases released in open air), and the rain not effectively reducing the concentrations in the air (Mudder, et al., 2001; Cicerone and Zellner, 1983);
- The probability that the HCN concentration value contained by rainfalls within and outside the footprint of the Project be significantly higher than the background values (0.2 ppb) is extremely low.

Details referring to the use of cyanide in the technological processes, the cyanides balance as well as the cyanide emission and impact of the cyanides on the air quality are contained in the Environmental Impact Assessment (EIA) Report, Chapter 2, Subchapter 4.1 and Subchapter 4.2 (Section 4.2.3).

ltem no.	908	Same as: 909
No. to identify the observations received from the public	No. 110067/ 22.08.2006 and No. 75185/ 23.08.2006	Same as: No. 110066/22.08.2006 and No. 75186/23.08.2006

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the Roşia Montană commune do not correspond with the mining project proposal described in EIA;
- There is no liner proposed for the tailings pond;
- The proposed waste deposits will be not constructed according to the legislation in force;
- No financial guarantees have been stipulated;

## Proposal

- There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- The EIA report does not assess the "zero alternative";
- The Project poses a threat for protected flora and fauna;
- The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- The public/ONGs whish to consult the contracts and agreements between Company and Romanian State:
- Modification of the urbanism plan without the public consultation;
- From archeological point of view, the area proposed to by occupied by project was not legally investigated;
- The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

## SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

# Solution

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the

Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- $\,$  risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roṣia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result

HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \mathrm{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel);
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureş joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is 5.17 mm thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its

legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Rosia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35)

are located inside the protected area of the Rosia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roșia Montană Sustainable Development and the Roșia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability  $(1\times10^{-6} \text{ cm/sec})$  recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are

included in the design to be protective of groundwater include:

- A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [.....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;

- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roşia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Rosia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

#### References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and

measurement activities as well as the selection of appropriate Best Management Practices/Best Available Techniques for further mitigation of the potential noise and vibration impacts from Project activities. These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see Tables 4.3.8 through 4.3.16 and Exhibits 4.3.1 through 4.3.9. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison

of modeled predictions versus actual measurements has consistently shown close agreement; typically in the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Roşia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roṣia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the

tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal Urbanism Plan, to reflect all changes made to the Roşia Montană Project, following the public consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roşia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roşia Montană since 2000 have been carried out as part of a complex research program; permits for preventive archaeological excavations being issued in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roșia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on the Cultural heritage of Roṣia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research

Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

[1]The text of the Convention is available at the following address: http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=143&CM=8&DF=7/6/2006&CL=E

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions – has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Tarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs).

Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest (SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

Item no.	910			
No. to identify the observations received from the public	No. 110065/ 22.08.2006 and No. 75187/ 23.08.2006			

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the "Roşia Montană" commune do not correspond with the mining project proposal described in EIA;
- -The tailings management facility is not lined;
- The proposed waste deposits will be not constructed according to the legislation in force;

Proposal

- -Financial guarantees were not fixed
- -There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- -The EIA report does not evaluate the "Zero Alternative";
- -The project represents a threatening for the protected flora and fauna;
- -The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- -The public/ONGs whish to consult the contracts and agreements between Company and Romanian State;
- -Modification of the urbanism plan without the public consultation;
- -From archeological point of view, the area proposed to be occupied by project was not legally investigated;
- -The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

### SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

Solution

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences

to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roşia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for

more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \text{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel):
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureş joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that

reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is  $5.17~\mathrm{mm}$  thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and

regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35) are located inside the protected area of the Roşia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation of the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability ( $1 \times 10^{-6}$  cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

• A low permeability  $(1x10^{-6} \text{ cm/sec})$  cut off wall within the foundation of the starter dam to

control seepage;

- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

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- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
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With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of

Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit;
- Surety bonds;

• Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roṣia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

\*

The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roṣia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU

Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

#### References

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than  $5\,\%$  of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and measurement activities as well as the selection of appropriate Best Management Practices/Best Available Techniques for further mitigation of the potential noise and vibration impacts from Project activities.

These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see **Tables 4.3.8** through **4.3.16** and **Exhibits 4.3.1** through **4.3.9**. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison of modeled predictions versus actual measurements has consistently shown close agreement; typically in the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Rosia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roşia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal Urbanism Plan, to reflect all changes made to the Roşia Montană Project, following the public

consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roşia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roşia Montană since 2000 have been carried out as part of a complex research program; permits for preventive archaeological excavations being issued

in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roṣia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on theCultural heritage of Roṣia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

[1] The text of the Convention is available at the following address: http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=143&CM=8&DF=7/6/2006&CL=E

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions - has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Țarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs). Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest

(SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

| No. to identify the observations received from the public | No. 110064/ 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.2006 | 23.08.200

The questioner expresses the following remarks:

- The gold and silver reserves from Roşia Montană represent one of the strategic reserves of Romania
- As far as the economic side concerns, the distribution of the benefits to result from the gold and silver mining are in contradiction to the worldwide practices.
- The urbanism plans do not correspond to the project proposal;
- Within the EIA report there are no financial guarantees regarding the safety assurance of the waste deposit
- From technical point of view, the tailings management facility will be not "lined". It is situated above the Abrud town and could have a catastrophic consequence in case of failure
- The EIA report does not contain an evaluation of the phenomenon so-called "cyanide rain" nor a description of the trans-frontier impact on some natural important areas in case of accident
- The EIA report does not assess the "zero alternative";
- The data provided by EIA report infringe the standards of environment protection

The Romanian Mine Law, Law 85/2003, does not put any restrictions on the licenses to be given for exploration for gold and development of gold reserves. Both Romanian and foreign companies, both public and private companies, may apply to obtain a license to work a gold deposit. The Romanian state no longer has a monopoly on gold production.

We agree that Roşia Montană represents an issue of national strategic importance, designed to raise the bar for long-term investment in Romania. RMGC is the largest employer in this disadvantaged region and indeed the whole county and is the largest local taxpayer. Romania will receive about US\$ 1 billion for its share of the project, and a total of about US\$ 1.5 billion when one includes the value of goods and services procured in Romania. The project meets or exceeds all Romanian and EU standards, creates new jobs for Romanians, especially in Roşia Montană and the surrounding region, and will be a catalyst for reviving the mining sector, which is strategic to the Romanian economy and an important tool for rural development.

Solution

Proposal

However, we disagree that this means the project should not be approved. RMGC has been working on this project since 1998 and has invested over US\$ 200 million to date. By the time production begins, the company will have invested almost US \$1 billion. Mining is a high risk industry; it is an industry rule of thumb that for every 1,000 projects considered, 100 merit drilling, and only one is opened as an actual productive mine. In fact, no country in the developed world is currently involved directly in assuming the risk of mining operations; instead, private capital assumes the risk and will bring the best available techniques to Romania. Approval of this project will show the world that Romania welcomes this type of productive foreign investment. The profits from the mine and the jobs provided by the mine are tangible benefits to Romania.

As regarding your request, we mention that art. 44 (3) of the Minister of Waters and Environment Protection Order no. 860/2002 on the environment impact assessment and the issuance of environmental agreements Procedures ("Order no. 860/2002") provides that "based on the results of the public debate, the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public and requests the titleholder the supplementation of the report on the environmental impact assessment study with an appendix comprising solutions for the solving of the indicated issues".

Consequently, considering the fact that your proposal is just an allegation which does not indicate possible problems, nor provide additional information, we mention that the decision on the issuance or refusal of the environment approval cannot be made only by considering a simple proposal, but according to certain objective criteria provided by the wording of art. 45 of the Order no. 860/2002 and only after examining:

- (i) the report on the environmental impact assessment study;
- (ii) the conclusions of the parties involved in the assessment;
- (iii) the possibilities to implement the project;
- (iv) the titleholder answers to the grounded proposals/comments of the public.

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In a certain sense, the questioner is correct. In this project, the distribution of benefits is more favorable for Romania than is typical of mining projects worldwide. No other country in the developed world is currently involved directly in assuming the risk of mining operations; instead, private capital assumes the risk while Romania will reap its share of the benefits without putting any capital into the project. Here, the risk is entirely borne by RMGC. RMGC has been working on this project since 1998 and has invested over US\$200 million to date. By the time production begins, the company will have invested almost US\$1 billion. Mining is a high risk industry; it is an industry rule of thumb that for every 1,000 projects considered, 100 merit drilling, and only one is opened as an actual productive mine. Approval of this project will show the world that Romania welcomes this type of productive foreign investment.

Overall, the Roşia Montană Project is expected to generate US\$2.5 billion in financial benefits for Romania. The Romanian State stands to receive US\$1.0 billion in financial benefits from its share of the projects profits, profit taxes, royalties and other taxes, including payroll taxes. An additional US\$1.5 billion of Romanian goods and services will be acquired by the project over the life of the operation.

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We would like to state that your statement is erroneous. The General Urbanism Plan (PUG) of Roşia Montană approved in 2002, allows the development of Roşia Montană Project as it was presented during public debates.

At the same time, pursuant to the provisions under art. 41, 2<sup>nd</sup> paragraph from Mines Law no. 85/2003, the local authorities must alter and/or update existing territorial arrangement plans and general urban plans, in order to allow execution of all required actions to develop mining activities.

RMGC has also commenced the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no 78 from 26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event

of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Rosia Montană project.

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## Tailings Management Facility

An engineered liner is included in the design of the Tailings Management Facility (TMF) basin to be protective of groundwater. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath

the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam; to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

## Proximity to Abrud

The TMF is located approximately 2 km above the town of Abrud and therefore the design criteria for the dam have been established to address consequence of a dam failure. The proposed dam at the Tailings Management Facility (TMF) and the secondary dam at the catchment basin are rigorously designed to exceed Romanian and international guidelines, to allow for significant rainfall events and prevent dam failure due to overtopping and any associated cyanide discharge, surface or groundwater pollution.

Specifically, the facility has been designed for two Probable Maximum Precipitation (PMP) events and the associated Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area. The construction schedule for embankment and basin staging will be completed to ensure that PMP storage requirements are available throughout the project life. The Roşia Montană TMF is therefore designed to hold a total flood volume over four times greater than the Romanian government guidelines. In addition, an emergency spillway for the dam will be constructed in the unlikely event that another event occurs after the second PMP event. A spillway is only built for safety reasons to ensure proper water discharge in an unlikely event and, thus, avoid overtopping which could cause a dam breach. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

Additional study was done regarding earthquakes, and, as indicated in the EIA the TMF is engineered to withstand the Maximum Credible Earthquake(MCE). The MCE is the largest earthquake that could be considered to occur at the site based on the historical record.

In addition, Section 7 of the EIA report includes an assessment of the risks cases that have been analyzed and include various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modelling results indicate the extent of tailings run out. Based on the two cases analyzed, the tailings will not extend beyond the confluence of the Corna valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

For a more detailed technical analysis, please refer to Chapter 7, Section 6.4.3.1, "TMF Potential Failure Scenarios" of the EIA.

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The possibility for a "cyanide rain" phenomenon to occur doesn't exist. Moreover, the specialty literature does not indicate a phenomenon called "cyanide rain"; it is known and researched only the "acid rains" phenomenon that has no connection with the behavior of the cyanide compounds in atmosphere.

The reasons for stating that no "cyanide rains" phenomenon will ever occur are the followings:

- The sodium cyanide handling, from the unloading from the supplying trucks up to the processing tailings discharge onto the tailings management facility, will be carried out only in liquid form, represented by alkaline solutions of high pH value (higher than 10.5 11.0) having different sodium cyanide concentrations. The alkalinity of these solutions has the purpose to maintain the cyanide under the form of cyan ions (CN) and to avoid the hydrocyanic acid formation (HCN), phenomenon that occurs only within environments of low pH;
- The cyanide volatilization from a certain solution can not occur under the form of free cyanides, but only under the form of HCN;
- The handling and storage of the sodium cyanide solutions will take place only by means of some closed systems; the only areas/plants where the HCN can occur and volatilize into air, at low emission percentage, are the leaching tanks and slurry thickener, as well the tailings management facility for the processing tailings;
- The HCN emissions from the surface of the above mentioned tanks and from the tailings management facility surface can occur as a result of the pH decrease within the superficial layers of the solutions (that helps the HCN to form) and of the desorption (volatilization in air) of this compound;
- The cyanide concentrations within the handled solutions will decrease from 300 mg/l within the leaching tanks up to 7 mg/l (total cyanide) at the discharge point into the tailings management facility; the drastic reduction of the cyanide concentrations for discharging into the Tailings Management Facility (TMF) will be done by the detoxification system;
- The knowledge of cyanide chemistry and on the grounds of past experiences, we estimated the following possible HCN emissions into air: 6 t/year from the leaching tanks, 13 t/year from the slurry thickener and 30 t/year (22.4 t, respectively 17 mg/h/m $^2$  during the hot season and 7.6 t, respectively 11.6 mg/h/m $^2$  during the cold season) from the tailings management facility surface, which totals 134.2 kg/day of HCN emission;
- Once released, the hydrocyanic acid is subject to certain chemical reactions at low pressure, resulting ammonia;
- The mathematical modeling of the HCN concentrations within the ambient air (if the HCN released in the air is not subject to chemical reactions) emphasized the highest concentrations being at the ground level, within the industrial site namely within the area of the tailings management facility and within a certain area near the processing plant; the maximum concentration being of  $382 \, \mu g/m^3/h$ ;
- The highest HCN concentrations within the ambient air will be 2.6 times lower than the limit value stipulated by the national legislation for labor protection;
- The HCN concentrations within the ambient air from the populated areas close by industrial site will be of 4 to 80  $\mu g/m^3$ , more than 250 12.5 times lower than limit value stipulated by the national legislation for labor protection the national legislation and European Union (EU) legislation on the Quality of Air, don't stipulate limit values for the population's health protection);
- Once released in the air, the evolution of the HCN implies an insignificant component resulted from the reactions while liquid (water vapors and rain drops). The reactions are due to HCN being weak water-soluble at partial, low pressures (feature of the gases released in open air), and the rain not effectively reducing the concentrations in the air (Mudder, et al., 2001, Cicerone and Zellner, 1983);
- The probability that the HCN concentration value contained by rainfalls within and outside the footprint of the Project to be higher than the background values (0.2 ppb) is extremely low.

On the basis of the above presented information, it is very clear that HCN emissions may have a certain local impact on atmosphere quality, restricted to well within legislated limits as described above, but their implication within a possible trans-boundary impact on air quality is excluded.

Also, the specialty literature doesn't comprise information related to the effect of air-borne HCN emissions on fauna and flora.

For details referring to the use of cyanide in the technological processes, the cyanides balance as well as the cyanide emission and impact of the cyanides on the air quality, please see the Environmental Impact Assessment (EIA) Report, Chapter 2, Chapter 4.1 and Chapter 4.2 (Section 4.4.3).

The EIA Report (Chapter 10, Transboundary Impacts) assesses the proposed project with regard to potential for significant river basin and transboundary impacts downstream which could, for example, affect the Mureş and Tisa river basins in Hungary. The Chapter concludes that under normal operating conditions, there would be no significant impact for downstream river basins/transboundary conditions.

The issue of a possible accidental large-scale release of tailings to the river system was recognized to be an important issue during the public meetings when stakeholders conveyed their concern in this regard. As a result, further work has been undertaken to provide additional detail to that provided in the EIA Report on impacts on water quality downstream of the project and into Hungary. This work includes modelling of water quality under a range of possible operational and accident scenarios and for various flow conditions.

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modelling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieș-Mureș river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and phsico-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureș joins it.

Because of dilution and dispersion in the river system, and of the initial EU Best Available Techniques (BAT) – compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modelling work is presented under the title of the Mureş River Modelling Program and the full modelling report is presented as Annex 5.1

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roşia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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According to the provisions of art. 44 (3) of the Order of Ministry of Water and Environment Protection no. 860/2002 on the environmental impact assessment and environmental approval issuance procedure ("Order no. 860/2002"), the project titleholder prepares "an evaluation of the public's grounded proposals, containing solutions for the settlement of the underlined problems, which shall be submitted to the relevant public authority for environemental protection, according to the form presented in anenx no. IV.2".

We consider that, as no exact specification is made in regard of the enactments allegedly breached by the report to the environmental impact assessment study (EIA), the project's titleholder cannot answer in regard of this affirmation of a generic character.

Though your statement is not grounded and/or supported in any way, the only authority empowered to analyze such breaches of the European legislation is the environmental authority. To this end, we specify the provisions of art. 45 of the Order no. 860/2002 on the environmental impact assessment and environmental approval issuance procedure ("Order no. 860/2002"), which provide: "after the examination of the report to the environmental impact assessment study, of the conclusions of the parties involved in the evaluation, of the possibilities to fulfill the project and the grounded evaluation of the public's proposals, the public authority competent in regard of the environmental protection shall take the decision concerning the issuing of the environmental approval/integrated environmental approval or the grounded rejection of the project on the respective location".

Item no.	912
No. to identify the observations received from the public	No. 110063/ 22.08.2006 and No. 75189/ 23.08.2006
	The questioner does not agree to the promotion of the Rosia Montana Project, making the following

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- The barrage slope angle of the tailings management facility is not correctly calculated

Proposal

- -How will the social situation be solved after the project is closed down?
- -There isn't a realistic calculation on the Aeolian erosion of the pit's walls and the tailings and waste ore;
- -The status of the underground voids and the rehabilitation procedure in case of accident.

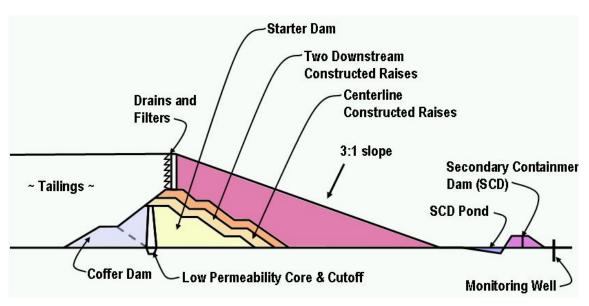
The slope angle of the Tailings Management Facility is correctly calculated, please see information below. As also explained in Plan F of the EIA, the downstream slope of the ultimate tailings dam was selected at a conservative angle, recommended by Best Available Techniques as defined by EU Directive.

The current dam design is very robust with many redundancies incorporated in the design. The design redundancies were based on a review of historical dam failures as reported by ICOLD. Tailings Dam Incidents, U.S. Committee on Large Dams - USCOLD, Denver, Colorado, ISBN 1-884575-03-X, 1994, 82 pages [compilation and analysis of 185 tailings dam incidents].

The TMF has been designed to meet international best practices, specifically, it will meet or exceed:

- All Romanian and International design criteria;
- The International Cyanide Management Code requirements;
- Earthquake Design Criteria include the Maximum Credible Earthquake, Richter Magnitude 8;
- A water retention dam design for starter dam [(clay core, with rockfill downstream (2H:1V slopes) and upstream (1.75H:1V slopes)];
- Downstream constructed rockfill dam with 2H:1V slopes for the first two dam raises above the starter dam:
- Centerline constructed rockfill dam with 3H:1V slopes for subsequent raises.(Standard practice is for 1.5:1 to 1.75:1 slopes). The 3:1 slope increases stability and reduces the potential for failure).

Solution



Page of answer 1 of 3

Taken over 20 years, the injection of investment into the area, if handled correctly, should stimulate other development. Roşia Montană Gold Corporation (RMGC) is committed to promoting long term development opportunities as part of the sustainable development plan.

According to the provisions of art. 52 (1) of the Mining Law no. 85/2003, the entity ceasing the mining activities should submit to the competent authority an application accompanied by the updated mining activities cessation plan, describing the details for the actions necessary to be performed for the effective mine closure. The Mine Closure Plan should contain, among others, a social protection program for the personnel.

At the time of closure, the company will do all it can for the existing workforce in providing assistance in finding alternative employment. Given the skills base and experience that the workers will have acquired, this might be jobs on other mining projects in a region with significant resource development potential. Alternatively, RMGC will provide the opportunity of re-training and support in setting up alternative businesses.

One of the most important sides of development is community and local authorities capacity building and development. Even before the project starts, the company is interested in working together with the community to finding the best development solutions for the area. It is hoped that, under the auspices of the United Nations Development Program (UNDP), a number of working groups will be established, one of which will be assigned the task of exploring development opportunities.

Meanwhile, a number of programs already in place aim at raising both the educational profile and the level of skills in the community, to meet the needs of the project and to encourage people think of other ways of making a living apart from mining. The vocational training program is one of them. Business training is part of the vocational training program. A business incubator is also established.

RMGC established Rosia Montana MicroCredit in January 2007, as "IFN Gabriel Finance SA", to encourage the local investors. This micro lender is designed to provide funding and necessary resources to the people of Rosia Montana, Abrud, Campeni and Bucium. The objective is supporting local people in establishing small businesses or expanding existing ones.

The Roşia Montană Project (RMP) closure plan is also designed to return the site to productive public use.

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

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The pit walls will be made of massive rocks most of which will be represented by dacite and breccia with high Aeolian erosion resistance, and at the end of the project, part of these walls will be covered by refilling the pits, and part of them will remain as rock areas that can be re-vegetated either spontaneously or using climbing plants. Presently, Cetate, Cârnic, Orlea or Jig are all composed of rocks and stockpiles resulting from old mining activities where no visible signs of Aeolian erosion can be observed. Both waste rock stockpiles and the low-grade ore stockpile will be composed of massive rock fragments and blocks resulting from blasts inside the pits and that also have high erosion resistance.

The waste rock stockpiles will be re-graded and re-vegetated as the project will proceed so that the Aeolian erosion will remain within the same limits as the surrounding areas.

The Report on Environmental Impact Assessment Study (EIA) (Vol. 12 – Chapter 4.2, Subchapter 4.2.4) and *The Air Quality Management* Plan (Volume 24, Plan D) include, in detail, technical and operational measures for mitigation/elimination of dust emissions generated by the Project activities and give details regarding the aspects mentioned by the questioner; please find below some of these measures.

Measures for the dust emissions control in the pits and the transport roads for ore and waste rock:

• The use of a new blasting technology: sequential blasting, that leads to a lower upraise of the

- pollutant plume and a smaller dispersion area;
- Cessation of dust-generating activities in very high-wind situations or when automatic PM10 monitor placed in Roşia Montană Protected Area indicates an alert situation;
- Implementing the dust control program for unsealed road surface in dry seasons via water spray trucks and use of inert dust suppression chemicals, measures that will lead to reduction of dust dispersion by 90%.
- Minimizing the drop heigh in material handling/placement
- Establishment and enforcement of vehicle speed limits
- Implementing schedules for periodic routine maintenance of vehicle and motorized equipment.
- Automatic air quality and meteorological parameters monitoring
- Implementation of additional measures for pollutant emission control in case of noncompliance related to air quality. Such measures may consist of water spraying of ore and waste rocks during loading into vehicles.

Measures for dust emissions control from the waste rock dumps and low-grade ore stockpile:

- Cleaning and water spraying of platforms during low precipitation periods;
- Limiting activities on the stockpiles platforms in order to avoid disturbance of new surfaces that might generate dust emissions by aeolian erosion.

Note that with the advancement of ore mining activities, the pit goes deeper (250-300m comparing to the current levels) the pit walls representing physical obstacles against the dust dispersion in the pit surrounding areas.

Details: The Report on Environmental Impact Assessment Study (Vol. 12 – Chapter 4.2, Subchapter 4.2.4) and *The Air Quality Management Plan* (Volume 24, Plan D) include, in detail, technical and operational measures for mitigation/elimination of dust emissions generated by the Project activities.

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The underground voids, which were caused by previous mining and exploration, have been totally mapped, counted, modeled and introduced into a three dimensional model that allows the tracking and monitoring of them during the mining process. There are several types of voids. The most numerous are the old exploitation voids (so called "coranda"), and the more recent voids (the "room and pillars" type) and also voids generated by underground access and exploration workings. In total, the holes represent approximately 0.4% of the total volume of the Roṣia Montană deposit. The position of the holes is known in detail: they are topographic surveyed and located on the mining plans. When mine works reach areas with holes, special precautions will be taken in blasting, loading and transport. For example, workers will blast smaller portions of ore, use smaller capacity equipment, evacuate the personnel from the area.

The existence of underground holes under the open pit benches can cause the working area to cave in when unexpectedly large quantities of rock break off. Such an accident is highly unlikely if the aforementioned procedures and technologies are strictly observed and utilized. In the unlikely event of an accident, the following might occur:

- Human accidents in the working area;
- Damage to mining equipment and likely incidental leak of fuel on the ground;
- Damage to pipes or power cables located in or near the affected area;
- Caving in of access ways, which would stop ore extraction work until they could be rebuilt.

Were an accident to occur, all personnel would be evacuated from the affected area and the mine management and competent authorities would be contact immediately. If there were injuries, first aid would be administered and personnel would be transported to receive medical attention. There would also be an initial investigation into the incident to determine whether further preventative actions (i.e. stabilizing the area, reestablishing water management structures, or extra monitoring precautions) were necessary. Were an accident to result in an emergency, all appropriate emergency actions would be taken.

ltem no.	913				
No. to identify the observations received from the public	No. 110062/ 22.08.2006 and No. 75190/ 23.08.2006				
Proposal	The questioner opposes the promotion of the Roșia Montană Project.				
	Regarding your allegation, we mention that art. 44 (3) of the Minister of Waters and Environ Protection Order no. 860/2002 on the environmental impact assessment and the issuant environmental agreements Procedures ("Order no. 860/2002") provides that "based on the results public debate, the relevant authority for the environmental protection evaluates the grounded proposals/common of the public and requests the titleholder the supplementation of the report on the environmental assessment study with an appendix comprising solutions for the solving of the indicated issues".				
Solution	Consequently, considering the fact that your proposal is just an allegation which does not indicate possible problems, nor provide additional information, we mention that the decision on the issuance or refusal of the environmental approval cannot be made only by considering a simple proposal, but according to certain objective criteria provided by the wording of art. 45 of the Order no. 860/2002 and only after examining  (i) the report on the environmental impact assessment study;  (ii) the conclusions of the parties involved in the assessment;  (iii) the possibilities to implement the project;				
	(iv) the titleholder answers to the grounded proposals/comments of the public.				

Item no.	914	Same as: 915, 916, 917, 918, 919, 920
No. to identify the observations received from the public	No. 110061/ 22.08.2006 and No. 75191/ 23.08.2006	Same as: No. 110069/22.08.2006 and No. 75192/23.08.2006, No. 110059/22.08.2006 and No. 75193/23.08.2006, No. 110058/22.08.2006 and No. 75194/23.08.2006, No. 110057/22.08.2006 and No. 75195/23.08.2006, No. 110056/22.08.2006 and No. 75196/23.08.2006, No. 110055/22.08.2006 and No. 75197/23.08.2006

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the Roşia Montană commune do not correspond with the mining project proposal described in EIA;
- There is no liner proposed for the tailings pond;
- The proposed waste deposits will be not constructed according to the legislation in force;
- No financial guarantees have been stipulated;

## Proposal

- There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- The EIA report does not assess the "zero alternative";
- The Project poses a threat for protected flora and fauna;
- The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- The public/ONGs whish to consult the contracts and agreements between Company and Romanian State:
- Modification of the urbanism plan without the public consultation;
- From archeological point of view, the area proposed to by occupied by project was not legally investigated;
- The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

## SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

# Solution

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the

Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- $\,$  risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roṣia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result

HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \mathrm{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel);
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (www.eurolimpacs.ucl.ac.uk). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureş joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is 5.17 mm thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its

legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Rosia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35)

are located inside the protected area of the Rosia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roșia Montană Sustainable Development and the Roșia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability  $(1\times10^{-6} \text{ cm/sec})$  recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are

included in the design to be protective of groundwater include:

- A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

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- A low permeability (1x10-6 cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
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will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;

- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roşia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Rosia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

#### References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and

measurement activities as well as the selection of appropriate Best Management Practices/Best Available Techniques for further mitigation of the potential noise and vibration impacts from Project activities. These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see Tables 4.3.8 through 4.3.16 and Exhibits 4.3.1 through 4.3.9. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison

of modeled predictions versus actual measurements has consistently shown close agreement; typically in the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Roşia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roṣia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the

tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal Urbanism Plan, to reflect all changes made to the Roşia Montană Project, following the public consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roşia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roşia Montană since 2000 have been carried out as part of a complex research program; permits for preventive archaeological excavations being issued in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roșia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on the Cultural heritage of Roşia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research

Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

 $[1] The text of the Convention is available at the following address: \\ http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=143&CM=8&DF=7/6/2006&CL=E$ 

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions – has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Tarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs).

Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest (SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

ltem no.	921
No. to identify the observations received from the public	No. 4260/SB/ 17.08.2006 and No. 75215/ 23.08.2006
Proposal	The questioner opposes the promotion of the Roșia Montană Project.
	Regarding your allegation, we mention that art. 44 (3) of the Minister of Waters and Environment Protection Order no. 860/2002 on the environmental impact assessment and the issuance of environmental agreements Procedures ("Order no. 860/2002") provides that "based on the results of the public debate, the relevant authority for the environmental protection evaluates the grounded proposals/comments of the public and requests the titleholder the supplementation of the report on the environmental impact assessment study with an appendix comprising solutions for the solving of the indicated issues".
Solution	Consequently, considering the fact that your proposal is just an allegation which does not indicate possible problems, nor provide additional information, we mention that the decision on the issuance or refusal of the environmental approval cannot be made only by considering a simple proposal, but according to certain objective criteria provided by the wording of art. 45 of the Order no. 860/2002 and only after examining  (i) the report on the environmental impact assessment study; (ii) the conclusions of the parties involved in the assessment;
	<ul><li>(iii) the possibilities to implement the project;</li><li>(iv) the titleholder answers to the grounded proposals/comments of the public.</li></ul>

ltem no.	922
No. to identify the observations received from the public	No. 4277/SB/ 17.08.2006 and No. 75216/ 23.08.2006
Proposal	Why is RMGC willing to spend so much money if they wouldn't know the expected gain? Why the Romanian authorities destroy, consciously, the historical vestiges of the Romanians? Why so many voices of Romanian and foreign scientists are not taken into consideration? Why the TV stations intoxicates us with the commercials of RMGC whose aim is to steal the riches of our country? Who is responsible for and who charges the ones who destroy for all what they destroy?

RMGC has carefully evaluated the prospects for mining in Roşia Montană and is confident that its efforts will produce a significant profit for all shareholders, including the Government of Romania. RMGC's evaluation of the ore deposit is based on the most extensive calculation of reserves ever perfomed in Romania, which produced 191,320 samples from drilling, underground networks, and surface rock. Its calculations have been verified by independent analysts.

The project as proposed in the EIA (Environment Impact Assessment) reflects stakeholder comments and reduced the size of the proposed pits. For the project as proposed in the EIA, RMGC's survey calculates a reserve of 215 million tones of ore with an average grade of 1.46 g/t Au and 6.9 g/t Ag, respectively, for a total amount of 314.11 tones of gold and 1480.36 tones of silver.

Based on a gold price of USD 600/ounce and on a silver price of USD 10.50/ounce, RMGC is projecting a total net profit of USD 1,572 million and an internal rate of return (IRR) of 26%. Because the estimated total cash cost to produce gold over the life of the project is USD 237/ounce, the project would still be profitable even if the market prices for gold and silver decline from their currently high levels.

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Solution

Prior to 2000, the only thing that could be said about Roṣia Montană was that it was an area of archaeological potential. In the areas of Cetate, Cârnic Jig, and Orlea, a number of random archaeological discoveries had been recorded – such as epigraphic monuments, funerary architecture items - that suggested the presence of archaeological sites, but there had been no excavations necessary to provide a detailed understanding of the site components.

However, in the context of implementing a new mining project in the region, the Ministry of Culture and Religious Affairs authorized the assessment the of archaeological and architectural assets, and in late 2000 the National Cultural Heritage Design Center (an institution directly reporting to the Ministry of Culture and Religious Affairs) presented these preliminary results to the National Historical Monuments Commission and the National Archeology Commission, also technical commissions of the MCR. In 2001, based on these results, the "Alburnus Maior" National Research Program was established under Order No. 2504 of 07.03.2001, as provided by Law 378/2001 (further amended by Law No. 462/2003 an Law No. 259/2006, respectively) All research involved in the study of the cultural heritage was conducted by institutions of the Ministry of Culture and Religious Affairs, the Romanian Academy, and the Ministry of Education and Research. Thus, since 2000, the central government, i.e. the Ministry of Culture and Religious Affairs, has been involved in the management of heritage assets issues at Roṣia Montană, in accordance with its legal responsibilities.

**Preventive archaeological research** is under the scientific coordination of the National History Museum of Romania, and has been undertaken by 21 national and 3 foreign institutions of recognized competence in this area, as annually approved by the National Archeology Commission of the Ministry of Culture and Religious Affairs. The program has been run with the financial support S.C. Roşia Montană Gold

Corporation S.A., i.e. of the mining Company that aims to extend and continue surface mining operations on the gold and silver deposits at Roṣia Montană. Thus, extensive preventive archaeological research work has been conducted in the Roṣia Montană Project impact area, and based on its results, proposals have been made either to remove the archaeological duty of care obligations for certain investigated sites in the investor's impact area, or to preserve representative structures and monuments on site, as provided by the law. The areas proposed for conservation, as well as those where archaeological duty of care removal has been applied, were investigated by specialists and it was based on this expert study and its review by the National Archeology Commission that those decisions were made. During 2000-2005, the mining project underwent a number of changes specifically in order to allow the implementation of heritage conservation decisions. Some examples in this regard include: extension of the archaeological work on the site over several years (e.g. Țarina, Pârâul Porcului, Orlea), reconsideration of the location of infrastructure elements of the project to accommodate archaeological relic preservation in the areas of Carpeni, Tău Găuri, Piatra Corbului.

Architecture and urbanism studies were developed according to the legal provisions, by companies certified by the Ministry of culture and Religiuos Affairs, and the developed urbanism documents, as well as the restoration and conservation work conducted to date, were approved by the National Commission for Historical Monuments, and Regional Historical Monument Commission No.7, respectively. Thus, approval and implementation of urbanism documentation was done under the law, and the Company assumed these decisions by changing the mine development plans accordingly:

- all the 41 historic monument buildings will be preserved and rehabilitated;
- a protection area was established in 2002 and further on, its delimitation was considerably extended reaching a surface of about 130 ha in the context of PUZ elaboration;
- archaeological reserve areas were defined Carpeni, Tău Gauri, Piatra Corbului, and classified on the List of Historical Monuments in 2004;
- the restoration project for the Roman funerary site at Tău Gauri was approved and primary monument conservation measures were adopted.

During 2002-2004, under coordination of the specialists from "Dimitrie Gusti" Village Museum (a national ranking museum institution, subordinated to the Ministry of Culture and Religious Affairs), an **comprehensive ethnographical research program** of the Roşia Montană – Abrud – Corna area was conducted and further supported during 2001-2002 by a number of verbal history interviews by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Verbal History Center in Bucharest (SRR – CIO).

According to the requirements of the Ministry of Environment and Waters Management, and of the Ministry of Culture and Religious Affairs, respectively, as part of the documentation developed under the Environmental Impact Assessment Study for the Roşia Montană Project, specific management plans have been developed for the management and conservation of the heritage assets of the Rosia Montană area in the context of Project implementation. (see EIA Report vol. 32-33, Plan M - Cultural Heritage Management Plan, Part I – Management Plan for the Archaeological Heritage in Rosia Montană, Part II – Management Plan for the Historic Monuments and Protected Areas in Rosia Montană, Part III -Management Plan for the Cultural Heritage). These management plans contain a detailed description of the obligations and responsibilities that the Company has assumed, according to the decisions of the central cultural administration, throughout the implementation of its mining project, specifically in regard to the protection and conservation of heritage assets in Roşia Montană area: surface and underground archaeological relics, historic monument buildings, protected areas, non-material heritage items, cultural landscape elements, etc. In this context, note that heritage conservation and protection activities are supported by those involved in the rehabilitation and conservation of the Historic Center Protected Area of Roşia Montană (including 35 historic monument buildings, Tăul Mare, Tăul Brazi and Tăul Anghel, and relics of surface mining operations in the Văidoaia area) and by the establishment, during project implementation, of a modern museum complex dedicated to mining history in the Apuseni Mountains, which will include geology, archeology, industrial and ethnographic heritage displays, as well as an underground section organized around the Cătălina Monulești Gallery. These are in addition to the protection and conservation of the 6 historic monument buildings located within the future industrial development area.

For the same purpose, the County Directorate for Culture, Religious Affairs and National Cultural Heritage Alba has conducted numerous information gathering and inspection visits on site. Also under

this administrative body, the Company conducted the legal procurement of historic monument buildings. Preemptive acquisition rights over these buildings were expressed by the central authority, i.e. the Ministry of Culture and Religious Affairs.

In conclusion, please read the annex entitled "Information on the Cultural Heritage of Roṣia Montană and Related Management Aspects", with a brief presentation of both the main objectives and the characteristics of the national research program targeting the cultural heritage of Roṣia Montană and the main results obtained in the 7 years of research and heritage studies developed for the area and a synthesis with the specific measures of management of these heritage assets. This is evidence of the efforts – and implicitly of the progress - made in investigating and understanding the cultural heritage assets of the area, and demonstrates the intention of RMGC to protect, rather than destroy them.

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With respect to one prominent group of Romanian Scientists, the members of the Romanian Academy, the most recent position of the Romanian Academy regarding the Roşia Montană Project was made public on February 27, 2006, almost three months before the submission of the report to the Environmental Impact Assessment Study to the Ministry of Environment and Water Management. RMGC made changes to the design of the project to incorporate stakeholder concerns, including those mentioned by the Romanian Academy and foreign scientists, notably a reduction in the size of several proposed pits as well as enhancing sustainable development activities, and a stronger commitment to preservation of cultural patrimony including a reduced impact on local churches, in response to stakeholder consultations, including with members of the Academy, before submission of the EIA. Thus the position does not reflect changes to the project design and an analysis of the EIA that was actually submitted to the Ministry.

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RMGC believes that informing people is an important part of debate in a democratic society.

For many years, the public heard just what RMP's opponents said, avoiding any mention of the benefits of the project and the social problems of a mining area.

The Romanian Mining Law "assures maximum transparency of the mining activities and a fair competition without discrimination between the property forms, the origin of capital and the nationality of the operators."

With that provision in view, the company launched at the end of 2006, a campaign in order to create a current of opinion and to properly inform the public on the Roşia Montană Mining Project and of the benefits above-mentioned Project brings. The Roşia Montană project has been subject of public debates over the past years, largely due to lack of dialogue and information and mainly through the voice of the opposition. We have started this campaign acknowledging this lack and because we strongly believe in the right of the public to have correct and complete information about Roşia Montană reality.

The overall objective of the campaign was to clarify controversial aspects and already existing distorted information for the public and the stakeholders of this project in order to enable them to receive information, participate in the public debate on this project and finally contribute to its improvement by their positions and comments.

Finally, in contrast to the claim that RMGC's project will "steal Romanian riches", as at the end of 2006, RMGC had invested over US\$ 200 million, and the company expects to invest nearly US\$1 billion before production begins, all part of US\$ 2. 5 billion infused into Romanian Economy. The direct financial benefits to the Romanian State, at the local, county, and national level are projected to be US\$ 1.0 billion. This includes the government's share of profits, profit taxes, royalties and other taxes such as payroll taxes. An additional US\$ 1.5 billion of Romanian goods and services will be acquired by the project, including US\$ 400 million during construction (2 years) and US\$ 1.1 billion during production, from Romania (16 years).

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The Roşia Montană Project is not about "destroying" anything in Roşia Montană bur rather of making an investment in the area's future. RMGC will operate the project in full compliance with Romanian and European law and in accordance with international best practices. The Project will bring best available techniques (BAT) to Romania. The Company will have invested nearly a billion dollars by the time the mine opens, and its mine closure plan includes an extensive plan for environmental rehabilitation, leaving the area cleaner than we found it.

ltem no.	923
No. to identify the observations received from the public	No. 110102/ 22.08.2006 sau No. 75218/ 24.08.2006

The questioner opposes the proposed gold and silver mining project at Roşia Montană and makes the following observations and comments:

- The tailings pond is unlined and is a hazard for the town of Abrud, as there is the risk of a failure;
- The overall costs for mine closure are not realistic.
- The Project poses a threat for protected flora and fauna;

### **Proposal**

- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- The company could not find an insurer for the mining project.
- The EIA report does not assess the "zero alternative";
- The EIA report does not include an assessment of the "cyanide rain" phenomenon.

### SEE CONTENT CONTESTATION TYPE 2

An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

## Solution

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability ( $1 \times 10^{-6}$  cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- $\bullet$  A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

## Proximity to Abrud

The EIA describes how the dam will be built with rockfill materials, engineered drain and filter materials and a low permeability core to control seepage. The facility is being designed and engineered by MWH, one of the leading dam designers in the world. In addition, the feasibility level designs have been reviewed and approved by certified Romanian dam experts and by the Romanian National Committee for the Safety of Large Dams. Prior to operation, the dam must again be certified for operations by the National Commission for Dams Safety (CONSIB).

The Tailings Management Facility (TMF) dam is rigorously designed to incorporate all EU, Romanian and international criteria to reduce the risk of failure. These guidelines allow for significant rainfall events and prevent dam failure due to overtopping. Specifically, the facility has been designed to store for the run off from two Probable Maximum Precipitation (PMP) events. This is generally referred to as the Probable Maximum Flood (PMF). The design criterion for TMF includes storage for two PMF flood events, more rain than has ever been recorded in this area.

Additionally, an emergency spillway for the dam will be constructed in the unlikely event that the site rainfall exceeds two PMPs. The TMF design therefore very significantly exceeds required standards for safety. This has been done to ensure that the risks involved in using Corna valley for tailings storage are well below what is considered safe in every day life.

Section 7 of the EIA report includes an assessment and analysis of risks and includes various dam break scenarios. Specifically, the dam break scenarios were analyzed for a failure of the starter dam and for the final dam configuration. The dam break modeling indicates the extent of tailings runout for the specific conditions analyzed. Based on the two cases considered the tailings would not extend beyond the confluence of the Corna valley stream and the Abrud River.

However, the project recognizes that in the highly unlikely case of a dam failure that a Emergency Preparation and Spill Contingency Management Plan must be implemented. This plan was submitted with the EIA as Plan I, Volume 28.

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The overall costs for mine closure are realistic. RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and re-vegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has

been demonstrated by RMGC that all remediation targets have been sustainable reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from not being realistic—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

### References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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With respect to the issues indicated by you, namely the insurance of mining projects, we would like to underline the fact that the Directive no. 2004/35/CE regarding on environmental liability with regard to the prevention and remedying of environmental damage, which has been published in the Official Journal of the European Union no. L143/56 ("Directive no. 35/2004") establishes the general governing framework with regard to environmental pollution.

According to the provisions stipulated by art. 1 of Directive no. 35/2004 "The purpose of this directive is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage."

Directive no. 35/2004 states as a principle pursuant to the provisions of art. 14(1) the fact that "Member States shall take measures to encourage the development of financial security instruments and markets by the appropriate economic and financial operators, including financial mechanisms in case of insolvency, with the aim of enabling operators to use financial guarantees to cover their responsibilities under this Directive".

Moreover, according to the provisions of art. 19(1) Directive no. 35/2004, Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 April 2007. We would like to underline the fact that, up to now, the Directive no. 35/2004 hasn't been transposed into our legislation. Taking into account the previously mentioned aspects, we kindly ask you to take notice of the fact that, at this moment there are no internal legal regulations to establish the material and procedural aspects related to the establishment of such a guarantee.

However, if specific legal dispositions are going to be created with regard to the establishment of certain guarantees, RMGC is going to take all necessary measures to fulfill all mandatory legal liabilities.

Moreover, we underline the fact that RMGC has contracted one of the world's leading insurance brokers, which is well established in Romania and has a long and distinguished record of performing risk assessments on mining operations. The broker will use the most appropriate property and machinery breakdown engineers to conduct risk analysis and loss prevention audit activities, during the construction and operations activity at Roşia Montană, to minimize hazards. The broker will then determine the appropriate coverage, and work with A-rated insurance companies to put that program in place on behalf of RMGC, for all periods of the project life from construction through operations and closure.

RMGC is committed to maintaining the highest standards of occupational health and safety for its employees and service providers. Our utilization of Best Available Techniques helps us to ensure this goal is achieved. No organization gains from a loss, and to that end we will work to implement engineering solutions to risk, as they are far superior to insurance solutions to risk. Up to 75% of loss risk can be removed during the design and construction phase of a project.

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The EIA Report considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue. (Chapter 5 – Assessment of Alternatives)

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural and environmental benefits brought by the Roṣia Montană Project.

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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It is stated precisely that a "cyanide rain" phenomenon will not exist. Neither was encountered in other places or situations. Moreover, the specialty literature doesn't make any mentions related to the so-called "cyanide rains" phenomenon, but only "acidic rains" phenomenon which can't be generated by the cyanic compounds breaking down in the atmosphere.

The reasons for making the statement that 'cyanide rains' phenomenon won't occur are the followings:

- The sodium cyanide handling, from the unloading from the supplying trucks up to the processing tailings discharge onto the tailings management facility, will be carried out only in liquid form, represented by alkaline solutions of high pH value (higher than 10.5-11.0) having different sodium cyanide concentrations. The alkalinity of these solutions has the purpose to maintain the cyanide under the form of cyan ions (CN) and to avoid the hydrocyanic acid formation (HCN), phenomenon that occurs only within environments of low pH;
- The cyanide volatilization from a certain solution cannot occur under the form of free cyanides, but only under the form of HCN;
- The handling and storage of the sodium cyanide solutions will take place only by means of some closed systems; the only areas/plants where the HCN can occur and volatilize into air, at low emission percentage, are the leaching tanks and slurry thickener, as well the tailings management facility for the processing tailings;
- The HCN emissions from the surface of the above mentioned tanks and from the tailings management facility surface can occur as a result of the pH decrease within the superficial layers of the solutions (that helps the HCN to form) and of the desorption (volatilization in air) of this compound;
- The cyanide concentrations within the handled solutions will decrease from 300 mg/L within the leaching tanks up to 7 mg/L (total cyanide) at the discharge point into the tailings management facility. The drastic reduction of the cyanide concentrations for discharging into the Tailings Management Facility (TMF) will be done by the detoxification system;
- The knowledge of the cyanide chemistry and on the grounds of the past experience, we estimated the following possible HCN emissions into air: 6 t/year from the leaching tanks, 13 t/year from the slurry thickener and 30 t/year (22.4 t, respectively 17 mg/h/m² during the hot season and 7.6 t, respectively 11.6 mg/h/m² during the cold season) from the tailings management facility surface, which totals 134.2 kg/day of HCN emission;
- Once released into air, the hydrocyanic acid is subject to certain chemical reactions at low pressure, resulting ammonia;
- The mathematical modeling of the HCN concentrations within the ambient air (if the HCN released in the air is not subject to chemical reactions) emphasized the highest concentrations

- being at the ground level, within the industrial site namely within the area of the tailings management facility and within a certain area near the processing plant. The maximum concentration is of  $382 \, \mu g/m^3/h$ ;
- The highest HCN concentrations within the ambient air will be 2.6 times lower than the standard value stipulated by the national legislation for labor protection;
- The HCN concentrations within the ambient air in the populated areas close by the industrial site will be of 4 to 80  $\mu g/m^3$ , more than 250 12.5 times lower than standard value stipulated by the national legislation for labor protection the national legislation and European Union (EU) legislation on the Air Quality don't stipulate standard values for the population's health protection;
- Once released in air, the evolution of the HCN implies an insignificant component resulted from the reactions while liquid (water vapors and rain drops). The reactions are due to HCN being weak water-soluble at partially low pressures (feature of the gases released in open air), and the rain not effectively reducing the concentrations in the air (Mudder, et al., 2001; Cicerone and Zellner, 1983);
- The probability that the HCN concentration value contained by rainfalls within and outside the footprint of the Project be significantly higher than the background values (0.2 ppb) is extremely low.

Details referring to the use of cyanide in the technological processes, the cyanides balance as well as the cyanide emission and impact of the cyanides on the air quality are contained in the Environmental Impact Assessment (EIA) Report, Chapter 2, Subchapter 4.1 and Subchapter 4.2 (Section 4.2.3).

No. to identify the 110089/ Same as: No. 110088/22.08.2006 and No. 75220/24.08.2006, No. 110087/22.08.2006	
observations received from the public  22.08.2006 and No. 75221/24.08.2006, No. 110086/22.08.2006 and No. 75222/24.08.2006, No. 110112/22.08.2006 and No. 75223/24.08.2006  The public 22.08.2006 and No. 75223/24.08.2006  The public 22.08.2006 and No. 75223/24.08.2006	

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the Roşia Montană commune do not correspond with the mining project proposal described in EIA;
- There is no liner proposed for the tailings pond;
- The proposed waste deposits will be not constructed according to the legislation in force
- No financial guarantees have been stipulated;

## Proposal

- There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- The EIA report does not assess the "zero alternative";
- The Project poses a threat for protected flora and fauna;
- The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- The public/ONGs whish to consult the contracts and agreements between Company and Romanian State:
- Modification of the urbanism plan without the public consultation;
- From archeological point of view, the area proposed to by occupied by project was not legally investigated;
- The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

### SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

# Solution

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the

Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- $\,$  risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roṣia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result

HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \mathrm{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel);
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieș-Mureș river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureș joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is 5.17 mm thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its

legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Roşia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35)

are located inside the protected area of the Rosia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roșia Montană Sustainable Development and the Roșia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability ( $1 \times 10^{-6}$  cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are

included in the design to be protective of groundwater include:

- A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

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- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
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pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [.....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term

perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

• Cash deposit;

- Trust funds:
- Letter of credit:
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Rosia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Roṣia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community

importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

#### References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration

impacts from background and Roşia Montană Project sources, and to guide future monitoring and measurement activities as well as the selection of appropriate Best Management Practices/Best Available Techniques for further mitigation of the potential noise and vibration impacts from Project activities. These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see **Tables 4.3.8** through **4.3.16** and **Exhibits 4.3.1** through **4.3.9**. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

Tables 4.3.8 through 4.3.16 and Exhibits 4.3.1 through 4.3.9 present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating

industrial sites that had been previously modeled during the engineering design phases. The comparison of modeled predictions versus actual measurements has consistently shown close agreement; typically in the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Roşia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roşia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roșia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the

Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal Urbanism Plan, to reflect all changes made to the Roşia Montană Project, following the public consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roşia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roṣia Montană since 2000 have been carried out as part of a complex research program; permits for preventive archaeological excavations being issued in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roșia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on the Cultural heritage of Rosia and Related Management Aspects". In addition, the annex includes supplementary information with

regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

#### References:

[1] The text of the Convention is available at the following address:

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions - has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Țarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a

National Museum directly under the coordination of the Ministry of Culture and Religious Affairs). Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest (SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

Item no.	929	Same as: 930, 931, 932
No. to identify the observations received from the public	No. 110113/ 22.08.2006 and No. 75224/ 24.08.2006	Same as: No. 110114/22.08.2006 and No. 75225/24.08.2006, No. 110115/22.08.2006 and No. 75226/24.08.2006, No. 110116/22.08.2006 and No. 75227/24.08.2006

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the Roşia Montană commune do not correspond with the mining project proposal described in EIA;
- There is no liner proposed for the tailings pond;
- The proposed waste deposits will be not constructed according to the legislation in force;
- No financial guarantees have been stipulated;
- There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- The EIA report does not assess the "zero alternative";
- The Project poses a threat for protected flora and fauna;
- The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- The public/ONGs whish to consult the contracts and agreements between Company and Romanian State
- Modification of the urbanism plan without the public consultation;
- From archeological point of view, the area proposed to by occupied by project was not legally investigated;
- The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

# SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures,

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the implementation of the environmental management and risk systems are mitigating the consequences to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roşia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result HCN dispersion into the air. At the same time, under certain situations and weather conditions

unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 65 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of  $104 \, \mathrm{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel);
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieş-Mureş river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mures joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology

adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is 5.17 mm thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its legal obligations. Most importantly, the current estimates assume the application of international best

practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Rosia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roṣia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roṣia Montană. Out of the 41 historical buildings in Roṣia Montană, thirty-five (35) are located inside the protected area of the Roṣia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage

issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roşia Montană Sustainable Development and the Roşia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability  $(1\times10^{-6} \text{ cm/sec})$  recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are included in the design to be protective of groundwater include:

- A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability  $(1x10^{-6} \text{ cm/sec})$  core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam, and the Secondary Containment dam) and the proposed installation of a low-permeability (1x10-6 cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

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- A low permeability (1x10-6 cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
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reestablish.

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [.....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;
- Letter of credit;

- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Rosia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Rosia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Roşia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

## References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and measurement activities as well as the selection of appropriate Best Management Practices/Best Available

Techniques for further mitigation of the potential noise and vibration impacts from Project activities. These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see **Tables 4.3.8** through **4.3.16** and **Exhibits 4.3.1** through **4.3.9**. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison of modeled predictions versus actual measurements has consistently shown close agreement; typically in

the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Roşia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roşia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal

Urbanism Plan, to reflect all changes made to the Roṣia Montană Project, following the public consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roṣia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Roṣia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roșia Montană since 2000 have been carried

out as part of a complex research program; permits for preventive archaeological excavations being issued in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roșia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on the Cultural heritage of Rosia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the result of the researches undertaken as part of the "Alburnus Maior" National Research Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

[1] The text of the Convention is available at the following address:  $http://conventions.coe.int/Treaty/Commun/QueVoulezVous.asp?NT=143\&CM=8\&DF=7/6/2006\&CL=E_{100}$ 

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions - has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Țarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roşia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs). Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest

(SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană Ar*ea, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).

ltem no.	933	Same as: 934, 935, 936, 937, 938, 939, 940, 941, 942
No. to identify the observations received from the public	No.	Same as: No. 110118/23.08.2006 and No. 75229/23.08.2006, No. 110119/23.08.2006
	110117/	and No. 75230/23.08.2006, No. 110120/23.08.2006 and No. 75231/23.08.2006, No.
	23.08.2006	110121/23.08.2006 and No. 75232/23.08.2006, No. 110122/23.08.2006 and No.
	and No.	75233/23.08.2006, No. 110123/23.08.2006 and No. 75234/23.08.2006, No.
	75228/	110124/23.08.2006 and No. 75235/23.08.2006, No. 110125/23.08.2006 and No.
	23.08.2006	75236/23.08.2006, No. 110126/23.08.2006 and No. 75237/23.08.2006

The questioner does not agree to the promotion of the Roşia Montană Project, making the following comments:

- In EIA there are no presented all the possible risks derived from this project;
- Total costs for closing the mine are unrealistic;
- There isn't until now an approved Zonal Urbanism Plan for the Protected Areas;
- The phase of public consultation and quality evaluation of the impact assessment study report begun without a valid urbanism certificate;
- Information about the foundation which RMGC will establish and subsidize is not given. This foundation follows to assume the obligations which the mining operation can not assume;
- The present urbanism plans of the Roşia Montană commune do not correspond with the mining project proposal described in EIA;
- There is no liner proposed for the tailings pond;
- The proposed waste deposits will be not constructed according to the legislation in force;
- No financial guarantees have been stipulated;

#### **Proposal**

- There is not a Safety Report submitted for the public consultation and evaluation by the competent authorities:
- The EIA report does not assess the "zero alternative";
- The Project poses a threat for protected flora and fauna;
- The EIA report does not refer to the impact on the listed heritage buildings of noise and vibrations caused by the mining operations;
- The public/ONGs whish to consult the contracts and agreements between Company and Romanian State:
- Modification of the urbanism plan without the public consultation;
- From archeological point of view, the area proposed to by occupied by project was not legally investigated;
- The questioner contests the protection of the architectural and spiritual monuments with the responsibility of the state institutions for the protection operation.

## SEE THE CONTENT OF THE TYPE 1 CONTESTATION

It is the nature of risk that it can be mitigated and diminished; it cannot be made to disappear. In order to put this into context, the common action of walking on the street or developing everyday activities have an accident potential. This accident potential is twice higher than within the framework of industrial activities that use hazardous substances.

## Solution

A major chapter of the EIA report was dedicated to the identification of risks for the project. In addition, this chapter provides a discussion of the mitigation measures for each risk and how they were incorporated into the project designs. It is recognized that risk identification is difficult due to the number and diversity of events that can be envisioned. The EIA report cannot assume to cover all of he potential risks associated with the project. However, it has attempted to identify and address the most relevant risks. The extent of risk assessment and the intensity of the prevention and mitigation measures should be proportional to the risk involved and therefore only the risks that have been considered important have been assessed in detail. Each is described below.

In the larger sense, the entire EIA report is focused on the assessment of impacts and their associated mitigation. Specifically, Chapter 4 of the EIA presents that impact assessment of the project. The following discussion presents a summary of the impact discussed in the EIA.

As far as natural and technological risks assessments are concerned, Chapter 7, "Risk Cases", from the

Report on Environmental Impact Assessment, emphasizes the fact that safety and prevention measures, the implementation of the environmental management and risk systems are mitigating the consequences to acceptable levels as compared to the most restrictive norms, standards, the best practices or national and international recommendations in the field. The risk level has been established as moderate and so, socially acceptable. The extension of the risk assessment and the intensity of the prevention and mitigation measures of the consequences should be proportionate to the risk involved. Selection of a specific mitigation technique is depends on the analyzed accident scenario.

More detailed assessments are conducted for accident scenarios that, based on the qualitative assessment are found to be potentially major, of probability more than  $10^{-6}$  (reduced recovery periods of 1/1,000,000) meaning that they could have major consequences therefore, elevated associated risk, a higher risk level than 9 to 12 (on a scale of 1-25). To put this in context, simply living in southern Florida rates a 25 on the risk scale.

A global assessment of the risks associated with the Roşia Montană Project is obtained by the quick environmental and health risk assessment methodology initially developed by the Italian Ministry of the Environment and the World Health Organization. Natural hazard and risk identification and analysis presents key data and information in assessing potential technological accidents. Thus:

- In designing the Tailings Management Facility, the design parameters were chosen to fully cover the characteristic seismic risk of the area. These seismic design parameters adopted for the TMF and other facilities on the proposed site result in a safety factor much greater than the minimum accepted under the Romanian and European design standards for such facilities;
- in the sector physically impacted by the Project, the risk of floods will remain very low due to the small catchments (controlled by the Roşia and Corna Streams) the area affected by the operation, and the creation of containment, diversion and drainage hydro-technical structures for storm waters on the site, and in the Abrud catchment in general;
- $\,$  risks caused by meteorological events have been reviewed and used in assessing the hazards of the affected technological processes.

From the analysis of morphometrical parameters and their correlation with other sets of information on the natural slopes on and near the site shows that the (qualitatively estimated) landslide occurrence risk is low to moderate and its consequences will not cause major impacts on the structural components of the Project.

There is no significant risk associated with resource depletion. Mining activities are planned judiciously, so as to extract only the profitable gold and silver resources and only the necessary construction rock for the Project. The management of the mining concession site will minimize reserve "sterilization" (limitation of future access to the reserves).

In assessing technological hazards and risks, the quantity of hazardous substances on the site was calculated as a total and by category, as provided by the *Notification Procedure* approved by Ministry of Agriculture, Forestry, Water and Environment (MAFWE) Order 1084/2003. Based on an evaluation of hazardous substances in stock on the Project site in relation to the relevant quantities provided by the Government Decision 95/2003 which transposes the Seveso Directive, the Project ranges between the upper and the lower limits, and therefore S.C. Roṣia Montană Gold Corporation S.A. is required to prepare a Report on Environmental Impact Assessment Study to be sent to the local environmental authority and the local civilian protection authority a *Safety Report* on its operations to prevent major accident risks.

In assessing the consequences of major accidents involving dangerous substances, physical-mathematical models accepted internationally and especially at EU level, and the current version of the SLAB (Canada) software have been used, the latter for the atmospheric dispersion of denser than air gases, that may handle a multitude of situations and scenarios. Similarly, the EFFECTSGis 5.5 (Netherlands) software, developed for the analysis of the effects of industrial accidents and of consequences. Several scenarios were considered in response to the internal legislative requirements, especially related to the implementation of the Internal Emergency Plans (GD 647/2005). The conclusions of the risk assessment for major accidents were:

- The total destruction of plant facilities may only be caused by terrorist attack with classic or nuclear weapons. Simultaneous damage to the HCl tank (including containment) and to the NaCN solution tank, the tanks containing enriched solution, to one or more leaching tanks, having as a result

HCN dispersion into the air. At the same time, under certain situations and weather conditions unfavorable for dispersion, people within 40 m of the emission source, surprised by the toxic cloud for more than 1 minute without respiratory protection equipment, will most certainly die. It may also be considered that, on a radius of about 310 m, persons exposed for more than 10 minutes may suffer serious intoxications that may also lead to death. Toxic effects may occur in persons up to about 2 km downwind of the process plant;

- Operating errors and/or failures in the measurement and control devices, resulting in a lower pH in the leaching tank, thickener and/or DETOX slurry and accidental emissions of hydrocyanic acid. The area affected by concentrations of 290 ppm over a 10 min exposure time is within a circle of 36 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 157.5 m radius. The center of these circles is the middle of the CIL tanks platform;
- Accidental HCN emission from the decanter. The accident may be caused by a drop of pH in the CIL tanks combined with an overdose of flocculent solution and faulty pH monitoring systems. The area affected by concentrations of 300 ppm over a  $10 \, \text{min}$  exposure time is within a circle of  $65 \, \text{m}$  radius and the  $50 \, \text{ppm}$  IDLH threshold for  $30 \, \text{min}$  exposure will be reached over an area of  $104 \, \text{m}$  radius. The center of these circles is mid-distance between the two DETOX facilities;
- Accidental HCN emission from the DETOX facility. The accident may be caused by a drop of pH in the reactors generated by an overdose of metabisulfite solution and/or copper sulphate combined with faulty pH monitoring systems. The area affected by high 1900 ppm concentrations for a 1 min exposure time is located within a 10 m radius circle. The area affected by concentrations of 300 ppm over a 10 min exposure time is within a circle of 27 m radius and the 50 ppm IDLH threshold for 30 min exposure will be reached over an area of 33 m radius. The center of these circles is mid-distance between the two DETOX facilities;
- Explosion of the LPG storage tank. The LPG storage tank has a 50 ton capacity and is located outdoors, near the heating plant. The simulation was conducted for the worst case scenario, considering an explosion of the full tank. Threshold I with heat 12.5 kW/m2 is within a 10.5 m radius circle and Threshold II, of heat radiation 5 kW/m2 is within a circle of 15 m radius;
- Damage and/or fire at the fuel tanks. Simulations were conducted for the worst case scenarios, considering ignition and combustion of all the diesel (fire in the tank, or in the containment vat, when full of diesel);
- Corna Dam break and breach development. Two credible accident scenarios were considered in simulating tailings flow out of the Tailings Management Facility, and six credible scenarios for the flow of decant water and tailings pore water, with significant effects on the terrestrial and aquatic ecosystems, in different weather conditions;
- Tailings flow may occur along Corna Valley, on a 800 m (starter dam break) or over 1600 m reach should the Corna dam break in its final stage;
- In regard to water quality impacts, cyanide concentrations in the water in the shape of a pollution plume may reach Arad, near the Romanian-Hungarian border on the Mureş River, in concentrations ranging between 0.03 and 0.5 mg/L. Due to inherent mathematical limitations in the models, these values and the accident effects are considered overestimated. Therefore, the results describe the "worst case scenario" based on extreme dam break assumptions for the Corna Dam.

A new and much more precise and realistic simulation has been subsequently established based on the INCA Mine model, that considers the dispersion, volatilization and breakdown of cyanides during the downstream movement of the pollutant flow (Whiteland et al., 2006).

The model used is the INCA model developed over the past 10 years to simulate both terrestrial and aquatic systems within the EUROLIMPACS EU research program (<a href="www.eurolimpacs.ucl.ac.uk">www.eurolimpacs.ucl.ac.uk</a>). The model has been used to assess the impacts from future mining, and collection and treatment operations for pollution from past mining at Roşia Montană.

The modeling created for Roşia Montană simulates eight metals (cadmium, lead, zinc, mercury, arsenic, copper, chromium, manganese) as well as Cyanide, Nitrate, Ammonia and dissolved oxygen. The model has been applied to the upper catchments at Roşia Montană as well as the complete Abrud-Arieș-Mureș river system down to the Hungarian Border and on into the Tisa River. The model takes into account the dilution, mixing and physical-chemical processes affecting metals, ammonia and cyanide in the river system and gives estimates of concentrations at key locations along the river, including at the Hungarian Boarder and in the Tisa after the Mureș joins it.

Because of dilution and dispersion in the river system, and of the initial EU BAT-compliant technology adopted for the project (for example, the use of a cyanide destruct process for tailings effluent that reduces cyanide concentration in effluent stored in the TMF to below 6 mg/l), even a large scale unprogrammed release of tailings materials (for example, following failure of the dam) into the river system would not result in transboundary pollution. The model has shown that under worse case dam failure scenario all legal limits for cyanide and heavy metals concentrations would be met in the river water before it crosses into Hungary.

The INCA model has also been used to evaluate the beneficial impacts of the existing mine water collection and treatment and it has shown that substantial improvements in water quality are achieved along the river system under normal operational conditions.

For more information, an information sheet presenting the INCA modeling work is presented under the title of the Mureş River Modeling Program and the full modeling report is presented in Annex 5.1:

- Development of HCN on the tailings pond surface. Simulated emissions of HCN from the Tailings Management Facility pond surface and of their dispersion into the ambient air show that the level of  $400\mu$  g/m3 hourly average and  $179\mu$  g/m3 8hr average will not be exceeded. These HCN concentrations are only slightly over the odor threshold (0.17ppm) and much below potentially dangerous concentrations;
- Cetate Dam break and breach development. Flood modeling was in case of a break in Cetate dam was based on the design parameters obtained from the hydrometeorological study "Assessment of rainfall intensity, frequency and runoff for the Roşia Montană Project Radu Drobot". The breach characteristics were predicted using the BREACH model, and the maximum height of the flood wave in various flow sections was modeled using the FLDWAV software. The assumptions included a total 800000  $\rm m^3$  discharge for one hour, when the peak of the flood hydrograph is about 4.9 m above base flow immediately below the dam and in the narrow Abrud valley 5.9-7,5 km downstream of the dam, while in the last section considered (10,5 km) water depth is about 2.3 m above base flow and the maximum flow rate 877  $\rm m^3/s$ . Further, the broader Aries valley allows the flood wave to propagate on a significantly wider bed, which results in a highly attenuated hydrograph. These results describe the "worst case scenario" based on extreme dam break assumptions:
- Accidents during cyanide transportation. Due to the large quantities of cyanide transported (about 30t /day) the risks associated to this activity were assessed in detail using the ZHA- Zurich Hazard Analysis method. As a consequence, the optimum transport route was selected from the manufacturer to the Process Plant, e.g.;
- Cyanide transport (in solid state) will exclusively involve special SLS (Solid to Liquid System) containers, 16 tons each. The ISO compliant container will be protected by a framework with legs, which allows separation from the transport trailer for temporary storage. The wall is  $5.17~\mathrm{mm}$  thick, which, together with the protective framework, provides additional protection to the load in case of accident. This system is considered BAT and is currently one of the safest cyanide transportation options.

It is being mentioned the fact that the study develops the occurrence possibility of these scenarios (pages 166-171, Conclusions).

As regards the cyanides management, there is a baseline study named "Roşia Montană Golden Project, Cyanides Management Plan" prepared in compliance with the "International Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (International Cyanide management Institute) May 2002". S.C. Roşia Montană Gold Corporation is signatory to this code.

Bibliographical references for Chapter 7 "Risk Cases" are listed at page173-176.

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RMGC's closure estimates, which were developed by a team of independent experts with international experience and will be reviewed by third party experts, are based on the assumption that the project can be completed according to the plan, without interruptions, bankruptcy or the like They are engineering calculations and estimates based on the current commitments of the closure plan and are summarized in the EIA's Mine Closure and Rehabilitation Management Plan (Plan J in the EIA). Annex 1 of Plan J will be updated using a more detailed approach looking at every individual year and calculating the amount of surety, which must be set aside year by year to rehabilitate the mine before RMGC is released from all its

legal obligations. Most importantly, the current estimates assume the application of international best practice, best available technology (BAT) and compliance with all Romanian and European Union laws and regulations.

Closure and rehabilitation at Rosia Montană involves the following measures:

- Covering and vegetating the waste dumps as far as they are not backfilled into the open pits;
- Backfilling the open pits, except Cetate pit, which will be flooded to form a lake;
- Covering and vegetating the tailings pond and its dam areas;
- Dismantling of disused production facilities and revegetation of the cleaned-up areas;
- Water treatment by semi-passive systems (with conventional treatment systems as backup) until all effluents have reached the discharge standards and need no further treatment;
- Maintenance of the vegetation, erosion control, and monitoring of the entire site until it has been demonstrated by RMGC that all remediation targets have been sustainably reached.

While the aspects of closure and rehabilitation are many, we are confident in our cost estimates because the largest expense—that incurred by the earthmoving operation required to reshape the landscape—can be estimated with confidence. Using the project design, we can measure the size of the areas that must be reshaped and resurfaced. Similarly, there is a body of scientific studies and experiments that enable scientists to determine the depth of soil cover for successful re-vegetation. By multiplying the size of the areas by the necessary depth of the topsoil by the unit rate (also derived from studying similar earthmoving operations at similar sites), we can estimate the potential costs of this major facet of the rehabilitation operation. The earthmoving operation, which will total approximately US \$65 million, makes up 87% of closure and rehabilitation costs.

Also, the necessity of additional technological measures to stabilize and reshape the tailings surface will be discussed in the update of the Economical Financial Guarantee (EFG) estimate, which leads to an increase the provisions for tailings rehabilitation, especially if the TMF is closed prematurely and no optimized tailings disposal regime is applied. The exact figures depend on the details of the TMF closure strategy which can be finally determined only during production.

We believe that—far from being too low—our cost estimates are evidence of our high level of commitment to closure and rehabilitation. Just as a comparison, the world's largest gold producer has set aside US \$683 million (as of December 31, 2006) for the rehabilitation of 27 operations, which equates to US \$25 million on average per mine. The RMGC closure cost estimates, recently revised upward from the US \$73 million reported in the EIA based on additional information, currently total US \$76 million.

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According to Law 5/2000, regarding the approval of the Territory Arrangement Plan  $-3^{\rm rd}$  Section - protected areas ("Law 5/2000") (article 5, paragraphs 2-3), local public authorities, with the support of the competent central public authorities, had the obligation to establish the boundaries of the protection areas for the cultural heritage elements stipulated in Annex III to the above-mentioned law. This measure should have been taken within 12 months from the effective date of Law 5/2000, based on specialized studies. For this purpose, the local public authorities had to prepare the town planning documentation and its related regulations, developed and approved according to the law. This documentation must comprise the necessary protection and conservation measures for the national cultural heritage elements located in this area.

Concurrently, Law 350/2001 on the territory arrangement and urbanism stipulates the right of legal or natural persons interested in arranging the territory, to initiate the development of urbanism plans.

In accordance with these legal provisions, in 2001, RMGC initiated the preparation of these specific town-planning documentations - the General Urbanism Plan and the Zonal Urbanism Plan. These plans have been developed by Romanian certified companies and followed the legal approval procedure. The permit for the establishment of the Roşia Montană Historical Centre Protected Area was issued by the Ministry of Culture and Religious Affairs in 2002 (permits no. 61/14.02.2002 and no. 178/20.06.2002) as part of the procedure for the approval of the town planning documentation. Based on these permits, the Ministry of Culture and Religious Affairs requested the company to develop a Zonal Urbanism Plan for the Historical Centre of Roşia Montană. Out of the 41 historical buildings in Roşia Montană, thirty-five (35)

are located inside the protected area of the Rosia Montană Historical Centre.

As for the heritage elements located in the future industrial development area (6 historical buildings), these are discussed in the Industrial Zonal Urbanism Plan prepared by SC Proiect Alba SA. The regulations included in this document will contain measures for the protection of these monuments.

In conclusion, the town planning studies and the specialized studies conducted for the purpose of establishing the boundaries of the protection areas within the future mining operations perimeter are currently pending approval, in accordance with the legal provisions, by the competent institutions and committees. Please note that none of the historical houses located in the perimeter of the proposed project will be affected; on the contrary, all the 41 historic buildings will be included in a complex restoration and rehabilitation program (see the Management Plan). This program is mandatory, regardless of the implementation of the mining project, if we want to prevent these buildings from collapsing because of their advanced degradation.

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Your assertion regarding the failure to obtain an applicable urbanism certificate at the start up of the public debates and of the evaluation o the quality of the report to the environmental impact assessment, is not correct.

Thus, by the time when the public debate stage started up there was an applicable urbanism certificate and namely the urbanism certificate no. 78/26.04.2006 issued by Alba County Council. This certificate was obtained prior to the evaluation stage of the quality of the report to the environmental impact assessment which started up once the EIA was submitted to the Ministry of Environment and Water Management on the  $15^{\rm th}$  May 2006.

For better understanding the applicable legal provisions and the facts developed within the mining project of Roşia Montană zone we would like to make several comments:

- The procedure for issuing the environmental permit for Roşia Montană project started up on the 14<sup>th</sup> December 2004 by submitting the technical memorandum and the urbanism certificate no.68/26.August 2004 (certificate applicable by that time). S.C. Roşia Montană Gold Corporation S.A. (RMGC) applied for and obtained a new urbanism certificate no.78/26.04.2006 issued by Alba County Council for the entire Roşia Montană Project applicable on the date of the EIA Report submission (15<sup>th</sup> May 2006) and prior to the public debate strat up (June 2006);
- The Section 1 of the urbanism certificate no.78 of 26<sup>th</sup> 04.2006 entitled Work construction, position 10 "Processing plant and associated constructions " including the tailing management facility which existence is compulsory for the processing plant running. The Tailing management facility is also specified on the layout plans which are integral part of the urbanism certificate and they were sealed by Alba County Council so that they cannot be modified;
- The Urbanism Certificate is an informative document and its goal is only to inform the applicant about the legal, economic and technical regime of the existing lands and buildings and to establish the urbanism requirements and the approvals necessary to obtain the construction permit (including the environmental permit) as per art.6 of Law 50/1991 referring to the completion of construction works, republished and art 27 paragraph 2 of the Norms for the application of Law 50/1991 Official Journal 825 bis/13.09.2005).

As it is an informative document, it does not limit the number of certificates an applicant may obtain for the same land plot (art. 30 of Law no. 350/2001 regarding the territorial planning and urbanism).

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Introduced as part of the Environmental Impact Assessment Report Study (EIA), the Roşia Montană Foundation is shifting in focus. The Community Sustainable Development Plan activities initially conceived as coming under the Foundation umbrella (business oriented activities: business incubator, business advisory center, micro-finance facility, as well as social oriented activities: education and training center) have been advanced independently, via partnerships and with community participation in decision-making – a preferable way to advance social and economic development programs.

Going forward, the Foundation will take shape around preservation, patrimony and cultural heritage issues, with its final form determined in consultation with the community.

In terms of the philosophy that guides the company's Sustainable Development efforts, the Roşia Montană Gold Corporation (RMGC) sees itself not as principal provider, but as a partner. Community involvement is considered the starting point; over time, as the community builds the capacity to maintain programs in its own right, the company will turn over control of currently-established programs to the community and its institutions.

For more information, please see Roșia Montană Sustainable Development and the Roșia Montană Project – annex 4.

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We underline the fact that your statement is false. The General Urbanism Plan for the Roşia Montană commune, endorsed in 2002 allows the development of Roşia Montană project, as it has been presented during the public consultations.

Concurrently, pursuant to the provisions of art. 41, paragraph 2, from the Mining Law no.85/2003, the authorities from the local administration have the liability to adjust and/or update the territory arrangement plans and the general urbanism plans, in order to allow the development of all operations necessary for the development of mining activities.

RMGC has also initiated the preparation of two zonal urbanism plans: Zonal Urbanism Plan Modification – Roşia Montană Industrial Area and Zonal Urbanism Plan – Roşia Montană Historical Area. The first urbanism plan is required by the urbanism certificate no.78/26.04.2006, which updates the Zonal Urbanism Plan for the Industrial Area approved in 2002. As far as the historical area is concerned, its Zonal Urbanism Plan is required by the General Urbanism Plan approved also in 2002. Both urbanism plans are pending approval and have been subject to public consultations.

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An engineered liner is included in the design of the Tailings Management Facility (TMF) basin. Specifically, the Roşia Montană Tailings Management Facility (TMF or "the facility") has been designed to be compliant with the EU Groundwater Directive (80/68/EEC), transposed as Romanian GD 351/2005. The TMF is also designed for compliance with the EU Mine Waste Directive (2006/21/EC) as required by the Terms of Reference established by the MEWM in May, 2005. The following paragraphs provide a discussion of how the facility is compliant with the directives.

The TMF is composed of a series of individual components including:

- the tailings impoundment;
- the tailings dam;
- the secondary seepage collection pond;
- the secondary containment dam; and
- the groundwater monitoring wells/extraction wells located downstream of the Secondary Containment dam.

All of these components are integral parts of the facility and necessary for the facility to perform as designed.

The directives indicated above require that the TMF design be protective of groundwater. For the Roşia Montană project (RMP), this requirement is addressed by consideration of the favorable geology (low permeability shales underlying the TMF impoundment, the TMF dam and the Secondary Containment dam) and the proposed installation of a low-permeability ( $1x10^{-6}$  cm/sec) recompacted soil liner beneath the TMF basin. Please see Chapter 2 of EIA Plan F, "The Tailings Facility Management Plan" for more information.

The proposed low permeability soil liner will be fully compliant with Best Available Techniques (BAT) as defined by EU Directive 96/61 (IPPC) and EU Mine Waste Directive. Additional design features that are

included in the design to be protective of groundwater include:

- A low permeability (1x10<sup>-6</sup> cm/sec) cut off wall within the foundation of the starter dam to control seepage;
- A low permeability (1x10<sup>-6</sup> cm/sec) core in the starter dam to control seepage;
- A seepage collection dam and pond below the toe of the tailings dam to collect and contain any seepage that does extend beyond the dam centerline;
- A series of monitoring wells, below the toe of the secondary containment dam, to monitor seepage and ensure compliance, before the waste facility limit.

In addition to the design components noted above specific operational requirements will be implemented to be protective of human health and the environment. In the extremely unlikely case that impacted water is detected in the monitoring wells below the secondary containment dam, they will be converted to pumping wells and will be used to extract the impacted water and pump it into the reclaim pond where it will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish.

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will be incorporated into the RMP processing plant water supply system, until the compliance is reestablish

With respect to your comments made as regards a presumptive infringement of the provisions of Government Decision No.351/2005 ("GD 351/2005"), there are several aspects to be taken into consideration. Thus:

1. Firstly, please note that, according to the provisions of art. 6 of GD 351/2005, any activity that might determine the discharge of dangerous substances into the environment is subject to the prior approval of the water management authorities and shall comply with the provisions of the water permit issued in accordance with the relevant legislation.

The GD 351/2005 provides that the water permit shall be issued only after all technical-construction measures are implemented as prevent the indirect discharge of dangerous substances into the underground waters. The maximum discharge limits are expressly provided under GD 351/2005 and compliance with such is a condition for granting and maintaining the water permit.

In accordance with the provisions of GD 351/2005, the actual discharge limits should be authorized by the relevant authority, such process being understood by the lawmaker in consideration of the complexity and variety of industrial activities, as well as the latest technological achievements.

Therefore, please note that the EIA stage is not intended to be finalized into an overall comprehensive permit, but it represents only a part of a more complex permitting process. Please note that, according with art. 3 of GD 918/2002, the data's level of detail provided in the EIA is the one available in the feasibility stage of the project, obviously making impossible for both the titleholder and authority to exhaust all required technical data and permits granted.

The adequate protection of the ground water shall be ensured by the terms and conditions of the water permit. The issuance of the water permit shall be performed following an individual assessment of the project, considering its particular aspects and the relevant legal requirements applicable for mining activities. Until the water permit is obtained, any allegation regarding the infringement of GD 351/2005 is obviously premature mainly because the water permit shall regulate, in accordance with the relevant legal provisions, the conditions to be observed by the developer as regards the protection of the ground water;

2. Secondly, kindly note that the complexity and specificity of mining projects generated the need of a particular legal framework. Therefore, for such projects, the reading of the legal provisions of a certain enactment should be corroborated with the relevant provisions of the other regulations applicable.

In this respect, please not that the understanding of GD 351/2005 must be corroborated with the provisions of the entire relevant legislation enforceable as regards Roşia Montană Project, with a particular accent to Directive 2006/21/EC on the management of waste from the extractive industries ("Directive 21").

The very scope of Directive 21 is to provide a specific legal framework for the extractive wastes and waste facilities related to mining projects, considering the complexity of such projects and the particular aspects of mining activities that can not always be subject to the common regulations on waste management and landfill.

From this perspective, Directive 21 provides that, an operator of a waste facility, as such is defined thereunder (please note that the TMF proposed by RMGC is considered a "waste facility" under Directive 21), must inter alia, ensure that:

- a) "the waste facility is [....]designed so as to meet the necessary conditions for, in the short and long-term perspectives, preventing pollution of the soil, air, groundwater or surface water, taking into account especially Directives 76/464/EEC (1), 80/68/EEC (2) and 2000/60/EC, and ensuring efficient collection of contaminated water and leachate as and when required under the permit, and reducing erosion caused by water or wind as far as it is technically possible and economically viable;"
- b) "the waste facility is suitably constructed, managed and maintained to ensure its physical stability and to prevent pollution or contamination of soil, air, surface water or groundwater in the short and long-term perspectives as well as to minimize as far as possible damage to landscape."

In addition, it should be mentioned that RMGC was required by MWEM under the Terms of Reference, to perform the EIA considering the provisions of Directive 21 and the BAT Management of Mining Waste. The Directive 21 was intended by the EU DG of Environment to be the legislative regime applicable to sound management of mining waste throughout Europe and therefore compliance with its provisions is mandatory.

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Information regarding our Environmental Financial Guarantee ("EFG") is fully discussed in the section of the Environmental Impact Assessment titled "Environmental and Social Management and System Plans" (Annex 1 of the subchapter titled "Mine Rehabilitation and Closure Management Plan"). The EFG is updated annually and will always reflect the costs associated with reclamation. These funds will be held in protected accounts at the Romanian state disposal.

Roşia Montană Gold Corporation ("RMGC") has invested significant time, energy, and resources assessing the viability of a mining project in the valley of Roşia Montană. This assessment has led RMGC to conclude that Roşia Montană presents an attractive long-term development opportunity – an opinion confirmed by a variety of lending institutions, who have completed detailed reviews of the project's design and profitability. We have every confidence that we will see the project through to the end of its projected 16-year lifespan, regardless of any fluctuations in the market price of gold.

In Romania, the creation of an EFG is required to ensure adequate funds are available from the mine operator for environmental cleanup. The EFG is governed by the Mining Law (no. 85/2003) and the National Agency for Mineral Resources instructions and Mining Law Enforcement Norms (no. 1208/2003).

Two directives issued by the European Union also impact the EFG: the Mine Waste Directive ("MWD") and the Environmental Liability Directive ("ELD").

The Mine Waste Directive aims to ensure that coverage is available for 1) all the obligations connected to the permit granted for the disposal of waste material resulting from mining activities and 2) all of the costs related to the rehabilitation of the land affected by a waste facility. The Environmental Liability Directive regulates the remedies, and measures to be taken by the environmental authorities, in the event of environmental damage created by mining operations, with the goal of ensuring adequate financial resources are available from the operators for environmental cleanup efforts. While these directives have yet to be transposed by the Romanian Government, the deadlines for implementing their enforcement mechanisms are 30 April 2007 (ELD) and 1 May 2008 (MWD) – thus before operations are scheduled to begin at Roşia Montană.

RMGC has already begun the process of complying with these directives, and once their implementation instruments are enacted by the Romanian Government, we will be in full compliance.

Each EFG will follow detailed guidelines generated by the World Bank and the International Council on Mining and Metals.

The current projected closure cost for Roşia Montană is US \$76 million, which is based on the mine operating for its full 16-year lifespan. The annual updates will be completed by independent experts, carried out in consultation with the NAMR, as the Governmental authority competent in mining activities field. These updates will ensure that in the unlikely event of early closure of the project, at any point in time, each EFG will always reflect the costs associated with reclamation. (These annual updates will result in an estimate that exceeds our current US \$76 million costs of closure, because some reclamation activity is incorporated into the routine operations of the mine.)

A number of different financial instruments are available to ensure that RMGC is capable of covering all of the expected closure costs. These instruments, which will be held in protected accounts at the Romanian state disposal, include:

- Cash deposit;
- Trust funds;

- Letter of credit;
- Surety bonds;
- Insurance policy.

Under the terms of this guarantee, the Romanian government will have no financial liability in connection with the rehabilitation of the Roşia Montană project.

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The Security Report has been made available for public access by being posted at the following Internet address http://www.mmediu.ro/dep\_mediu/rosia\_montana\_securitate.htm as well as through the printed version which could have been found at several information locations established for public hearings.

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The Report on the Environmental impact assessment study (EIA) considered all alternative developments, including the option of not proceeding with any project – an option that would generate no investment, allowing the existing pollution problems and socio-economic decline to continue (Chapter 5 – Assessment of Alternatives).

The report also considered alternative developments – including agriculture, grazing, meat processing, tourism, forestry and forest products, cottage industries, and flora/fauna gathering for pharmaceutical purposes – and concluded that these activities could not provide the economic, cultural ands environmental benefits brought by the Rosia Montană Project (RMP).

Chapter 5 also examines alternative locations for key facilities as well as alternative technologies for mining, processing and waste management, in line with best practice and as compared against published EU best available techniques (BAT) documentation.

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The impact on protected flora and fauna will exist only locally, but this impact will not lead to the loss of any specie. The Project has been designed even from the beginning to fully comply with the requirements and norms imposed by Romanian and European environmental legislation.

The company believes the fact that the project impact on environment remains significant, especially because covers previous impacts. But, the investments required to ecologically restore/rehabilitate Roşia Montană area in order to address current complex environmental issues, are only achievable following the implementation of some economic projects that will generate and warrant implementation of some direct and responsible actions as a component of base principles of sustainable development concepts. Clean processes and technologies may be developed only in the presence of a solid economic environment fully compliant with the environment that will also resolve previous impacts of anthropic activities.

The base documents of the Project are in fact an unbiased reason of its implementation, considering the highly complex environmental commitment within Rosia Montană area.

Some of the Roşia Montană species that are under a certain protection status stand for an insignificant percentage of the scale of populations estimated at national level. The characterization of species from their habitat point of view exists in the species tables presented in the Biodiversity Chapter of the EIA Report and its annexes, although this is not a requirement imposed by the Habitats Directive. Due to their large volume of information, the annexes of chapter 4.6 Biodiversity can be found in the electronic version of the EIA disclosed by the company both in Romanian and English through approx. 6,000 DVD/CD copies, being accessible on the company website, and on the websites of Ministry of Environment and Water Management, local and regional environmental protection agencies of Alba, Sibiu, Cluj, etc.

From practical point of view, the low value of conservation of the impact area is also indirectly emphasized by the fact that there is no proposal to designate the area a SPA (aviafaunistic special protected area) and by the denial as unfounded of the proposal to designate the area as a pSCI area (sites of community importance).

Taking all these into account, we believe that the proposed Project is compliant with the provisions of EU Directive no. 92/43 Habitats[1], and EU Directive no. 79/409 Birds[2] respectively, especially because within Biodiversity Management Plan, Plan H, several active and responsible measures are provided to reconstruct/rehabilitate several natural habitats, pursuant to the provisions of the same documents [3].

## References:

[1] art.3, 2nd paragraph, Each Member State shall contribute to the creation of Natura 2000 (network) in proportion to the representation within its territory of the natural habitat types and the habitats of species referred to in paragraph 1. To that effect each Member State shall designate, in accordance with Article 4, sites as special areas of conservation taking account of the objectives set out in paragraph 1.

art.4, 1st paragraph. On the basis of the criteria set out in Annex III (Stage 1) and relevant scientific information, each Member State shall propose a list of sites indicating which natural habitat types in Annex I and which species in Annex II that are native to its territory the sites host. For animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical or biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction. Where appropriate, Member States shall propose adaptation of the list in the light of the results of the surveillance referred to in Article 11. [...]

2nd paragraph.[...] Member States whose sites hosting one or more priority natural habitat types and priority species represent more than 5 % of their national territory may, in agreement with the Commission, request that the criteria listed in Annex III (Stage 2) be applied more flexibly in selecting all the sites of Community importance in their territory.[...]

Art. 6, 4th paragraph. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Art. 16. Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):[...]

- in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

[2] Art.4, 1st paragraph. The species mentioned in annex 1 shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. [...]

Trends and variations in population levels shall be taken into account as a background for evaluations. Member states shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species, taking into account their protection requirements in the geographical sea and land area where this directive applies.

[3] Directive 92/43 Habitats, art. 2, 2nd paragraph; Directive 79/409 Birds, art. 3, 2nd paragraph, letter c.

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This statement is ungrounded, because the environmental impact assessment (EIA) process has included preliminary cumulative estimates for stationary motorized equipment and linear (vehicular) sources were prepared in order to provide an initial understanding of the potential cumulative noise and vibration impacts from background and Roşia Montană Project sources, and to guide future monitoring and measurement activities as well as the selection of appropriate Best Management Practices/Best Available

Techniques for further mitigation of the potential noise and vibration impacts from Project activities. These preliminary estimates apply to major construction activities, as well as the operation and decommissioning/closure of the mine and process plant. They are documented as data tables and isopleth maps for major noise-generating activities in selected, representative Project years; see **Tables 4.3.8** through **4.3.16** and **Exhibits 4.3.1** through **4.3.9**. All these details related to the applied assessment methodology, the input data of the dispersion model, the modeling results and the measures established for the prevention/mitigation/elimination of the potential impact for all project stages (construction, operation, closure) are included in Chapter 4, Section 4.3 Noise and Vibrations of the EIA Report.

Project Years 0, 9, 10, 12, 14, and 19 were selected for modeling because they are considered to be representative of the most significant levels of noise-generating activity. They are also the same years used for air impact modeling purposes in Section 4.2, as air and noise impacts share many of the same sources or are otherwise closely correlated. In order to more accurately reflect potential receptor impacts, all of these exhibits integrate the background traffic estimates discussed in Section 4.3.6.1.

The Project site plan and process plant area and facility drawings were used to establish the position of the noise sources and other relevant physical characteristics of the site. Receptor locations were established using background reports and project engineering and environmental documentation provided by RMGC. With this information, the source locations and receptor locations were translated into input (x, y, and z) co-ordinates for the noise-modeling program.

**Tables 4.3.8 through 4.3.16** and **Exhibits 4.3.1 through 4.3.9** present the average maximum noise values likely to be experienced by the receptor community over all Project phases after incorporation of a variety of initial mitigation measures designed specifically to reduce the impacts associated with mobile and stationary machinery sources. The influence of non-mining related background (primarily traffic) noise is also included.

To evaluate the sound levels associated with haul trucks and other mobile sources crossing the site carrying excavated ore, waste rock, and soil, a noise analysis program based on the (U.S.) Federal Highway Administration's (FHWA) standard RD-77-108 [1] model was used to calculate reference noise emissions values for heavy trucks along the project roadways. The FHWA model predicts hourly  $L_{eq}$  values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 decibels (dB).

The model is based on the standardized noise emission factors for different types and weights of vehicles (e.g., automobiles, medium trucks, and heavy trucks), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The emission levels of all three vehicle types increase as a function of the logarithm of their speed.

To evaluate the sound sources from the proposed mine processing facility and the semi-stationary material handling equipment (at the ore extraction, waste rock and soil stockpiling areas), a proprietary computerized noise prediction program was used by AAC to simulate and model the future equipment noise emissions throughout the area. The modeling program uses industry-accepted propagation algorithms based on the following American National Standards Institute (ANSI) and International Organization for Standardization (ISO) standards:

- ANSI S1.26-1995 (R2004), Method for the Calculation of the Absorption of Sound by the Atmosphere;
- ISO 9613-1:1993, Acoustics -- Attenuation of sound during propagation outdoors-- Part 1: Calculation of the absorption of sound by the atmosphere;
- ISO 9613-2:1996, Acoustics -- Attenuation of sound during propagation outdoors -- Part 2: General method of calculation;
- ISO 3891:1978, Acoustics -- Procedure for describing aircraft noise heard on the ground.

The calculations account for classical sound wave divergence (i.e., spherical spreading loss with adjustments for source directivity from point sources) plus attenuation factors due to air absorption, minimal ground effects, and barriers/shielding.

This model has been validated by AAC over a number of years via noise measurements at several operating industrial sites that had been previously modeled during the engineering design phases. The comparison of modeled predictions versus actual measurements has consistently shown close agreement; typically in

the range of 1 to 3 dB (A).

#### References:

[1] FHWA Highway Traffic Noise Prediction Model; see Federal Highway Administration Report Number FHWA-RD-77-108, USA, Washington, D.C., 1978.

A detailed presentation of blasting technology can be found in the annex 7.1 - Proposed blasting technology for the operational phase of Roşia Montană Project.

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The partnership between Gabriel Resources and Regia Autonomă a Cuprului Deva (currently, CNCAF Minvest SA) has been established based on Law no. 15/1990 on the reorganization of the state owned companies as autonomous directions and trade companies, published in the Official Gazette, Section I, no. 98/08.08.1990, as subsequently amended and supplemented. Art. 35 of this law provides the possibility of the regies autonomous to enter into partnerships with legal third parties, Romanian or foreign, for the purpose of setting up new trading companies.

Roşia Montană Gold Corporation SA was set up in 1997, according to the legal provisions in force as at that time, the setting up being made by observing all the conditions imposed by Company Law no. 31/1990 and Trade Register Law no. 26/1990, in regard of the setting up of the joint stock companies with mixed capital.

We underline that the Articles of Associations of Roşia Montană Gold Corporation SA, representing the result of the parties agreement in regard of the terms and conditions under which the partnership between the Romanian state and investor takes place represents a public document, being included in the category of documents which, as per Law no. 26/1990 on the Trade Register, are published in the Romanian Official Gazette and for which the Trade Register is obliged to issue, on the expense of the persons submitting a request, certified copies.

As for the agreement concerning the setting up of the mixed company together with Gabriel Resources Ltd., this has been expressed by the Ministry of Industry and Trade, the conditions imposed by the setting up of the mixed company being the following: (i) ensuring of the jobs at the level existing upon the conclusion of the agreement concerning the setting up of the mixed company; (ii) the expenses incurred by the fulfillment of the exploration stage should be fully supported by Gabriel; (iii) the obtaining of the approval from the ANRM by the Copper Autonomous Direction Deva and (iv) the observance of all legal provisions in force concerning the setting up of the mixed companies with foreign partners. These conditions have been fully complied withy as at the setting up of the company and during the development of its activity.

We also specify that the establishing of the shareholders' quotas to the benefits and losses of Roşia Montană Gold Corporation SA has been made by considering their contribution quota to the company's share capital. The current percentage of 80% for Gabriel Resources Ltd. and of 19.31% for CNCAF Minvest SA resulted from the initial contribution and the subsequent contributions of the shareholders to the company's share capital, in consideration also of Gabriel Resources Ltd. advancing all expenses and costs related to the development-exploitation and permitting of the Roşia Montană Mining Project.

The provisions of the Articles of Associations of Roşia Montană Gold Corporation SA on the necessary majority and quorum conditions for the decision-making process within the General Shareholders Meeting and the quotas to the benefits and losses of the company are taken from Law no. 31/1990, and no derogation exists in regard of this aspect.

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This claim is not true; the Urbanism Plan has been prepared with public consultation.

S.C. Roşia Montană Gold Corporation S.A. has requested and obtained from Alba County Council the Urbanism Certificate no. 78 of 26.04.2006, for the entire Roşia Montană mining project, including the tailings management facility. The Urbanism Certificate also stipulated the preparation of a Zonal

Urbanism Plan, to reflect all changes made to the Roṣia Montană Project, following the public consultations and debates organized in relation to this project, and the consultations with the permitting authorities. This plan, entitled "Modification of the Zonal Urbanism Plan, Roṣia Montană Industrial Area", was prepared and subject to public debate in June 2006 in accordance with the provisions of Order no.176/N/2000 issued by the Ministry of Public Works and Territory Development for the approval of the technical regulations "Guidelines regarding the methodology applied for the preparation and framework content of the Zonal Urbanism Plan" and, at present, it is pending approval.

Concerning the Roşia Montană General Urbanism Plan approved in 2002, such plan was prepared in parallel with the Zonal Urbanism Plan of 2002, all the provisions of the General Urbanism Plan being also included in the Zonal Urbanism Plan. Also, the approval procedure related to the two urbanism plans was carried out in parallel.

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Preventive archaeological researches within the Roşia Montană mining project area have been undertaken based on specific techniques, specifically trial trenches in all accessible areas that are suitable for human habitation, taking into account the bibliographical information and the observations recorded during the archaeological survey campaigns, the geophysical studies and the analyses of the photogrammetric flights. In addition, surface investigations were undertaken, where appropriate.

The archaeological researches at Roşia Montană covered a large surface and focused on the areas known to have archaeological potential. THEREFORE, ALL AREAS THAT HAVE BEEN ARCHAEOLOGICALLY DISCHARGED HAD BEEN PREVIOUSLY INVESTIGATED. All research programs, beginning with the 2004 campaign, have been undertaken in full compliance with the current legal requirements, i.e. Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs.

The proposed gold mining project at Roşia Montană has raised a series of issues related to the rescue of the historical-archaeological heritage within the area, as well as issues related to its scientific development and also the enhancement of heritage within a museum. Given the complex difficulties encountered in this respect, the Ministry of Culture and Religious Affairs decided to initiate the "Alburnus Maior" National Research Program.

The company's role was to provide the necessary financial resources for the assessment, research and enhancement of the archaeological remains, in full compliance with the Romanian current legislation. The development of the research and of the archaeological discharge works has been conducted through specific means and methodologies that have been adjusted to the realities of every site researched, in our case, Rosia Montană. They consisted in:

- Archives studies;
- Archaeological surveys; trial trenches;
- aerial reconnaissance/survey and aerial photo interpretation; high resolution satellite images;
- mining archaeology studies; underground topography and 3D modeling;
- geophysical surveys;
- extensive archaeological investigations in the areas with an identified archaeological potentialthis implied carrying out archaeological excavations;
- Interdisciplinary studies- sedimentology, archaeo-zoology, comparative palynology, archaeo-metallurgy, geology, mineralogy;
- Radiocarbon dating and dendrochronology;
- This research and its results were included in an integrated database;
- traditional and digital archaeological topography and development of the GIS project; generate a photo archive- both traditional and digital;
- restoration of artifacts;
- an inventory and a digital catalogue of the artifacts;
- studies conducted by specialists in order to enhance the research results publication of monographs/scientific books and journals, exhibitions, websites, etc.

All the preventive archaeological researches undertaken at Roșia Montană since 2000 have been carried

out as part of a complex research program; permits for preventive archaeological excavations being issued in compliance with the current legislation. These archaeological investigations have been undertaken by representatives of 21 specialized institutions from Romania and 3 others from abroad, under the scientific coordination of the Romanian National Museum of History. All archaeological researches have been conducted in full compliance with the existing legislation. The investigations undertaken during each archaeological research campaign have been approved by the Ministry of Culture and Religious Affairs based on the Annual Archaeological Research Plan approved by the National Commission of Archaeology.

Under the current legislation (Ministerial Order no. 2392 of 6 September 2004 on the establishment of the Archaeological Standards and Procedures by the Ministry of Culture and Religious Affairs) the archaeologists who have conducted the research may ask that an archaeological discharge certificate be granted. Based on a complex research program, the archaeologists prepare comprehensive documentation with regard to the researched area. Upon consideration of the submitted documentation, the National Commission of Archaeology makes a decision as to whether to recommend or not the granting of the archaeological discharge certificate. In the case of the research conducted in the period 2001-2006, the archaeological discharge certificate was issued directly by the Ministry of Culture and Religious Affairs or by its local agencies.

Preventive archaeological researches at Roșia Montană have allowed the research of five Roman cremation necropolis (Tău Corna, Hop-Găuri, Țarina, Jig - Piciorag and Pârâul Porcului – Tăul Secuilor), two funerary areas (Carpeni, Nanului Valley), sacred areas (Hăbad, Nanului Valley), habitation areas (Hăbad, Carpeni, Tăul Țapului, Hop), the most significant being the Roman structures on the Carpeni Hill and the circular funerary monument at Tău Găuri. In addition, for the first time in Romania, surface investigations have been paralleled by underground investigations of Cetate, Cârnic, Jig and Orlea massifs, with important discoveries in the Piatra Corbului, area, Cătălina-Monulești gallery and the Păru Carpeni mining sector.

The research consisted of aerial photo interpretation, archaeological magnetometric studies, electrical resistivity, palynology, sedimentology, geology studies, radiocarbon and dendrochronology dating. For a better management of the research units and of the archaeological findings, data bases were used, including text and photographs-among which 4 satellite images (an archive satellite image type SPOT Panchromatic (10m) from 1997; 2 satellite images LANDSAT 7 MS (30 m), dating from 2000 and 2003; a satellite image with prioritary programming SPOT 5 SuperMode color (2,5 m resolution-19 July 2004); all data have been included in a comprehensive GIS program, a first in the Romanian archaeological research.

In the case of archaeological monuments that are located close to industrial facilities, plans have been redesigned to ensure that the archaeological remains in question will not be affected. Where appropriate, the archaeological monument was preserved in situ and restored, i.e. the circular funerary monument at Hop-Găuri (see The "Alburnus Maior" monograph series, volume II, Bucharest, 2004). Another example in this respect is the Carpeni Hill, designated an "archaeological " reserve, and the Piatra Corbului area. In 2004, after being thoroughly investigated, these areas have been included on the List of Historic Monuments. Add to this the areas where ancient mining remains will be preserved, such as the Cătălina Monulești gallery and the mining sector Păru Carpeni, as well as the protected area Roșia Montană Historic Center, including a number of heritage assets (35 historic monument houses).

We emphasise in this respect that the identified and researched structures have been published in preliminary form in the Archaeological Research Chronicle of Romania, after every archaeological research campaign, as well as in volume 1 of the Alburnus Maior monographic series. We mention here the areas where Roman habitation structures have been identified and researched, as well as the references to be consulted for further information: Hop-Găuri, Carpeni, Tăul Țapului (CCA 2001 (2002), p. 254-257, no. 182; 261-262, nr. 185; 264-265, no. 188; 265-266, no. 189. Alburnus Maior I, 2003, p. 45-80; 81-122; 123-148; CCA 2001 (2002), 257-261; CCA 2003 (2004) ,280-283; Alburnus Maior I, 2003, p. 387-431, 433-446, 447-467).

For further details related to the applicable legal framework, the responsibilities of the Project titleholder, or for a detailed description of the preventive archaeological researches undertaken to date and of the Cultural Heritage Management Plans, please see Annex called "Information on the Cultural heritage of Roşia and Related Management Aspects". In addition, the annex includes supplementary information with regard to the researches undertaken as part of the "Alburnus Maior" National Research Program between 2001 and 2006.

In conclusion, the area mentioned by the questioner has been researched in accordance with the Romanian legal requirements, as well as with European standards and practices in the field.

Note that the type of research undertaken at Roşia Montană, known as preventive/rescue archaeological research, as well as other related heritage studies, are done everywhere in the world in close connection with the economic development of certain areas. Both the costs for the research and for the enhancement and maintenance of the preserved areas are provided by investors, in a public-private partnership set up in order to protect the cultural heritage, as per the provisions of the European Convention on the Protection of the Archaeological Heritage (Malta-1992) [1].

### References:

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In 2000, in the context of the proposal of a new mining project in the Roşia Montană area, the Ministry of Culture and Religious Affairs approved a series of studies to be conducted in order to research the archaeological and architectural heritage of the area. And at the end of that year, the Design Centre for National Cultural Heritage (now the National Institute for Historical Monuments) presented the preliminary results of these researches to the National Commission for Historical Monuments and of the National Commission of Archaeology. Based on these results, in 2001, the Ministry of Culture and Religious Affairs initiated the "Alburnus Maior" National Research Program (the Order no. 2504 / 07.03.2001 of the Minister of Culture and Religious Affairs) in compliance with the Law 378/2001 (as subsequently amended by Law 462/2003 and by Law 258/2006 and Law 259/2006). Thus, since 2000, the Ministry of Culture and Religious Affairs – directly or through its subordinate institutions - has fulfilled its duties with regard to the management of the issues related to Roṣia Montană's heritage.

Thus, the preventive archaeological researches have been conducted by the representatives of 21 national institutions and 3 others from abroad under the scientific coordination of the National Museum of History of Romania. They have been carried out based on the annual approval of the National Commission of Archaeology of the Ministry of Culture and Religious Affairs. In accordance with the legislation in force, this research program is carried out with the financial support provided by RMGC (the company that plans to expand and continue to mine the gold-silver deposit in Roşia Montană). Thus, large-scale preventive investigations have been conducted or are underway in the RMP impact area. A proposal will be made based on the results thereof either for the archaeological discharge of some researched perimeters from the project perimeter or the preservation in situ of certain representative structures and monuments, in compliance with the legislation in force. In the case of the areas proposed for conservation and the ones for which the archaeological discharge measure was applied, the decision was made based on the surveys conducted by specialists and on the analysis of the National Commission of Archaeology. In the period 2000-2005, the mining project underwent a series of modifications designed to promote the implementation of the decision regarding the conservation of the local heritage. Examples of these include: extending the duration of the field investigations on several years (e.g. Tarina, Pârâul Porcului, Orlea) and changing the location of some elements of infrastructure in order to allow the conservation of the archaeological remains found in the Carpeni, Tău Găuri and Piatra Corbului areas.

The architectural and town-planning surveys have been conducted, in accordance with the legislation in force, by companies certified by the Ministry of Culture and Religious Affairs, while the town-planning documentations drafted by these companies and the restoration and conservation works undertaken so far have been approved by the National Commission for Historical Monuments. Thus, the town-planning documentations have been approved and implemented in accordance with current legislation, and the company has agreed to these decisions and modified the mine development plans accordingly:

**Extensive ethnographic research** was conducted in the Roṣia Montană-Abrud-Corna area in the period 2001-2004 coordinated by a team of specialists for the Romanian Village Museum "Dimitrie Gusti" (a National Museum directly under the coordination of the Ministry of Culture and Religious Affairs). Moreover, a broad series of oral history interviews was conducted in the period 2001-2002 by the

Romanian Radio Broadcasting Company through the "Gheorghe Brătianu" Oral History Centre, Bucharest (SRR - CIO).

In compliance with the requirements of the Ministry of Environment and Waters Management and the Ministry of Culture and Religious Affairs, specific management plans have been drawn up for the management and conservation of the heritage remains from the Roşia Montană area, in the context of the implementation of the mining project. These plans have been included in the documentation prepared for the Report on the Environmental Impact Assessment Study. (see EIA Report, volume 32-33, Plan M-Cultural Heritage Management Plan, part I –Management Plan for the Archaeological Heritage from Roşia Montană Area; part II-Management Plan for the Historical Monuments and Protected Zone from Roşia Montană; part III- Cultural Heritage Management Plan).

These management plans comprise detailed presentations of the obligations and responsibilities regarding the protection and conservation of the heritage remains from the Roşia Montană area, which the company has assumed in the context of the implementation of the mining project, according to the decision of the central government. These heritage remains include: archaeological remains above and under the ground, historic buildings, protected areas, intangible heritage assets, cultural landscape items, etc. In this context, it should be noted that besides the works for the protection and preservation of the archaeological heritage, works are being carried out for the rehabilitation and conservation of the protected area Historical Centre Roşia Montană (comprising 35 historic buildings, and projects for the restoration of 11 of these buildings are currently being drafted), Tăul Mare, Tăul Brazi and Tăul Anghel as well as remains of the surface mining works form the Vaidoaia area and the creation of a modern museum dedicated to the history of mining in the Apuseni Mountains area. This museum will be established in the coming years and it will include exhibitions of geology, archaeology, industrial and ethnographic heritage as well as an underground section organized around the Cătălina Monulești gallery.

Moreover, representatives of the Directorate for Culture, Religious Affairs and National Cultural Heritage of Alba County have visited Roşia Montană many times in order to collect information and to check the situation. The same administrative body was the intermediary for the specific stages of acquisitions of historic buildings made by RMGC. The Ministry of Culture and Religious Affairs expressed its pre-emption right regarding the acquisition of these buildings.

Note that apart from the obligations undertaken by RMGC as regards the protection and conservation of the archaeological remains and historical monuments, there are a whole series of obligations, which rest with the local public authorities from Roşia Montană and from Alba County and with the central public authorities, namely the Romanian Government.

These aspects are further detailed in the Cultural Heritage Management Plans included in the EIA Report (see EIA Report, volume 32, *Management Plan for the Archaeological Heritage from Roşia Montană* Area, pages 21-22, 47, 52-53, 66-67-Romanian version/ 22-24; 47; 55-56; 71-72 English version) and the EIA Report, volume 33- *Management Plan for the Historical Monuments and Protected Zone from Roşia Montană* pages 28-29, 48-50, 52-53, 64-65, page 98 – Annex 1- Romanian version/ 28-29; 47-50; 51-53; 65-66; 103- Annex 1- English version).