

## **Explanatory Note to Chapter 2 – Technological Processes**

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**Date**

**25<sup>th</sup> October 2004**

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## Detailed Contents:

### 1. Assessment of the Impact of Changes in the Relevant Legal Framework on the Project and/or the EIA Report

As the chapter on “Processes” focuses on a presentation of the technological processes<sup>1</sup> associated to all the stages of the Project lifetime (construction, operation and decommissioning/closure) (under Order No. 863/2002), and the regulatory documents that establish the applicable framework for these technologies (best available techniques – BAT) have not been amended, the development of the legal framework since the submission of the EIA Report will not involve an impact on the Project. Moreover, as the design level considered in the EIA Report is basic, not requiring detailing of all the technical parameters provided by the technical design standards and norms for various plants and structures, legislative changes occurring over time in the content of such regulations (standards and norms) will not affect the description of the processes as presented in the EIA Report. The regulations underlying the writing of this Chapter (other than those considered in more detail on other relevant chapters of the EIA Report) and not reviewed for the impact of legislative amendments, include, among others:

- Guidelines on the Best Available Techniques for the Management of Tailings and Waste-Rock in Mining Activities, (European Commission, General Directorate of the Joint Research Centre, Seville), (finalised on 2004 and adopted in 2009). Note that this document has not been amended since the submission of the EIA Report and according to the community and national provisions on the integrated pollution prevention and control, irrespective of the availability of alternative technologies, a Project Titleholder must implement the technology that the community bodies declared to be the best technically available. For this Project, the technology proposed for operations will stay the same after the review of the legal framework.
- International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in The Production of Gold; it is worth mentioning that Gabriel Resources (the majority shareholder) and RMGC are signatory party to this Code, which means they are committed to follow the Code’s Principles and to implement its Good Practice Standards.
- The Draft Directive on the management of waste from extractive industries has become, since the submittal of the EIA Report, into Directive 2006/21/EC, transposed into national legislation by Governmental Decision no. 856/2008, which regulates an area not especially or separately regulated under the national legislation at the time the EIA Report was submitted – the management of waste from extractive industries.

As at the time of drafting the EIA Report the provisions of the above-mentioned draft directive had already been considered, the publication of Government Decision No. 856/2008 will not impact on the Project (the Directive and subsequently the Government Decision transposing the contents of the draft Directive). The regulation sets a special legal framework for measures and procedures to prevent or reduce negative effects on the environment and human health, generated from the management of waste from extractive industries (by way of exception to Government Decision No. 349/2005), the Project complying with all these newly instituted provisions.

- Directive No. 96/61/EC on integrated pollution prevention and control, (the IPPC Directive) transposed into national legislation by EGO No. 152/2005<sup>2</sup> the IPPC Directive was repealed by Directive No. 2008/1/EC on the integrated pollution prevention and control. The new Directive does not bring substantive changes, its role being to codify the provisions of the IPPC Directive as further amended by updating the cross-references to the articles of the act and the change/linguistic adaptation of some terminology. In this context, it is worth noting that the IPPC Directive has not been amended since 2003. Therefore, in the assessment of the Project, consideration was also given to the norms currently applicable internally. After the adoption of Directive 2008/1/EC, EGO No. 152/2005 was slightly amended in April 2010, meant to provide accurate transposition of some cross-references, replace some phrases and complete some phrases, or use more adequate translations.
- Directive 96/82/EC on the control of major accident hazards involving dangerous substances, (SevesoII Directive) transposed into national legislation by GD No. 804/2007<sup>3</sup> The Decision was amended in 2009, in order to implement into national legislation the provisions of Directive No. 2003/105/EC (Seveso III) amending the Seveso II Directive in the sense of accident hazards involving dangerous substances. The legislative changes brought about by GD No.804/2007 and GD No. 79/2009 do not influence the Project, as at the time of drafting the EIA Report the provisions of Directive 2003/105/EC had already been taken into consideration.

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<sup>1</sup> The relevant environmental impact assessment is provided in Chapter 4 “Potential Impacts”.

<sup>2</sup> Government Emergency Ordinance No. 152/2005/EC on the integrated pollution prevention and control published in the Official Monitor No. 1078 of 30.11.05.

<sup>3</sup> Governmental Decision No. 804/2007 on the control of major accident hazards involving dangerous substances, published in the Official Monitor Part I No. 539 of 08.08.07.

- Law No. 107/1006, was substantially amended by Emergency Government Ordinance No. 3/2010, such amendments being justified by the legislator *expressis verbis* by the necessity to fully and correctly transpose the Community norms.

However, considering that, at the time of drafting the EIA Report, the experts had directly considered the Community framework legislation and compliance with it (therefore in excess of the national legal provisions, not fully transposed at that time) the amendments of Emergency Government Ordinance No. 3/2010, to Law No. 107/1996 will not impact the Project in any way.

## **2. Updates to Chapter 2 – “Technological Processes”**

### **2.1. Introduction**

It will not require updating due to passage of time or changes of legislative framework.

### **2.2. General Project Description**

In comparison with the general description of the Project provided in the EIA Report, it is worth noting that, meanwhile, the Cetate pit, near the RosiaMin branch of CNCAF MinVest SA Deva was closed down on 15th May 2006 and a Closure Plan has been developed for the site. Closure of the mine operated by Minvest - RosiaMin branch was published in GD 644/20/06/2007, with allocated total closure costs of RON 98.701 million. The PIA was designed in consideration of the fact that on the Rosia Montana site, the titleholder of the concession license for operation is RMGC, in the stage of obtaining the permits for the mining complex developed on the Rosia Montana site Closure and cleanup operation will be phased in depending on the development of the mining Project supported by RMGC, as provided in the PIA, Annex I:

“Closure and ecological restoration works for the facilities on the project impact area will be correlated with the Production Decision of the License Titleholder Rosia Montana Gold Corporation SA. Thus:

- (a) if Rosia Montana Gold Corporation SA fails to obtain the necessary permits for the mine Building Program, closure and environmental reconstruction works for the facilities on the site will be conducted under the relevant approved budget.
- (b) if Titleholder Rosia Montana Gold Corporation SA obtain the necessary permits, under the law, for the Rosia Montana Mining Project, it will notify the date of the Decision to Produce as provided by Operation License No. 47/1999, including to the National Agency for Mineral Resources, and the existing mining activities on the site, including for closure and environmental rehabilitation following mining activities conducted by the affiliated Minvest – Branch of Rosiamin will cease, and the equipment and installations will be moved off site as provided by the License”.

Furthermore, note that currently, the shareholder structure of RMGC consists of 3 shareholders: Gabriel Resources (Jersey) LTD – 80.4570 % of the equity capital, COMPANIA NAȚIONALĂ A CUPRULUI, AURULUI ȘI FIERULUI “MINVEST” S.A – 19.3142 % of the equity capital and FORICON S.A. – 0.2285 % of the equity capital. The occurrence of the two events since the development of the EIA Report, i.e. the closure of Minvest activities and the change of RMGC shareholder structure are not conducive in any way to amendments to Section 2.2. – General Description of the Project.

### **2.3. Construction Phase**

During 2007-2010, some data have been updated in regard to labour required for the Project in all its 3 stages: construction, operations and closure, consisting of new jobs created both in the RMGC and new employment opportunities in the companies working exclusively for the Project. The update on new jobs is detailed in the Feasibility Study for the capitalisation of gold and silver resources on the site of Rosia Montana, County of Alba, and in the Social Impact Assessment Study and the Social Impact Mitigation Plan after the Closure of Rosia Montana Mine, in Alba County, developed by SC Ipromin SA. Both documentations were submitted to the National Agency for Mineral Resources (ANRM) in February 2010. Excerpts of these documents, regarding personnel structures, are presented to the CAT members, with the agreement of ANRM. In summary, the newly created jobs during the construction phase include: 2,338 direct jobs and 4,200 indirect jobs during the operations phase: 842 direct jobs and 2,300 indirect jobs during the closure phase: 270 direct jobs and 1,500 indirect jobs. The change of the number of jobs in the three stages of the Project – construction, operation, and closure - occurred since the development of the EIA Report are not conducive in any way to amendments to Chapter 2 – Technological Processes, Section 2.3 – Construction Stage.

### **2.4. Operations**

As specified in the EIA Report of 2006, in Chapter 2 – Technological Processes, mercury is a by-product of the gold recovery process proposed to be used at Rosia Montana. The ore contains small quantities of mercury and an

insignificant quantity of this material is recovered in metal form in the recovery process. The quantity of mercury will vary depending on the ore supply to the processing plant. Estimations based on the main mercury concentration on the ore and the anticipated level of extraction based on metallurgical tests conducted to date suggest that about 117 kg of metallic mercury will be annually recovered, on average, during the first seven years of operations. As mercury has high specific weight, the recovered volume of mercury will be about 9 litres/year. Initially, it was intended that the mercury dissolved in the Rosia Montana ores should be collected and sold as impure “waste”, providing a minor income. The method provides a final use for the recovered mercury, and isolation thereof from the materials in its close proximity, without requiring any additional processing. However, considering the legislative amendments expected as of 2011, regarding the sale of mercury, and considering the small quantities that will be recovered, other options are also available for mercury, as follows:

- Long-term storage at a suitable waste disposal facility – considered to be a practical method, for the small amount of mercury involved.
- Reacting mercury with sodium sulphide to turn mercury into the form known as cinnabar, a mineral of the sulphide class, a mercury sulphide which is probably the original form in which the mercury is present in the ore. This sulphide mineral can be stored in the TMF and rejoin the ore from which it originated.
- Reacting the mercury with a reagent used in setting it, such as reagent TMT15. The TMT15 reagent will react, for example, with mercury, to form a very stable complex of the metal, that may be stored in the TMF or sent to a waste disposal facility for unlimited disposal. This reagent is commonly used in treating mercury-contaminated spills at both the European and the international level.
- Identification of compounds that might be used in turning mercury into a stable compound, that cannot be mobilised into the environment.

This change may occur if the European regulation is adopted and may not amend in any way the contents of Chapter 2 – Technological Processes, Section 2.4 – Operations.

## **2.5. Closure Phase**

During 2007-2010, some data have been updated in regard to the closure and environmental rehabilitation works required for the Project. US\$ 7 million, the number included in the EIA Report, was based on the technical design and unit prices established in late 2005. Between early 2006 and mid 2008, the costs of equipment, materials, consumables and goods increased considerably. This required the Company to revise its cost estimates for the Project, including the operating costs, as well as the upfront, support and closure costs. Based on these, the updated closure cost was calculated in March 2007 for the amount of US\$ 128 million. A detailed presentation of these costs is found in Annex *NE\_Cap 2\_01*.

The increase of total closure and ecological reconstruction works for the Project since the time of EIA Report submittal is not conducive in any way to amendments to Chapter 2 – Technological Processes, Section 2.5 – Closure Stage.

## **2.6. Use of Best Available Techniques (BAT)**

It will not require updating due to passage of time or changes of legislative framework. A detailed description of how the Project considered the BAT provisions is given in Volume 2, in response to the first question addressed by the Ministry of Environment and Forests.

## **2.7. Plans**

It will not require updating due to passage of time or changes of legislative framework.

## **3. Updates to Chapter 2 – “Cyanide Management Plan”**

### **3.1. Introduction**

Compared to the information contained in the EA Report (where RMGC had committed to become a signatory of the International Cyanide Management Code), note that, based on this commitment, Gabriel Resources and RMGC have become Parties to the Code. The following is a quotation of the acceptance document and we can also make available to the members of the CAT the whole document translated from the English and legalised by the Notary Public, reflected in Annex *NE\_Cap 2\_02*.

*“On behalf of the Board of the International Cyanide Management Institute (“ICMI”), we hereby formally confirm the receipt of the application submitted by Gabriel Resources Ltd., on 13 March 2006, asking to become a signatory of the International Cyanide Management Code for the Manufacture, Transport, and Use of Cyanide in the Production of Gold. (“The Code”). The activities identified in Annex A are included in your application. These activities have been submitted to the ICMI in your application, and Gabriel Resources Ltd. has thus agreed for ICMI to display the information on such activities on the ICMI website (n.n. <http://www.cyanidecode.org/signatorycompanies.php>).*

*By becoming a signatory, Gabriel Resources Ltd. is committed to abide by the Principles of the Code and implement its Standard Practices, in the case of cyanide manufacturers and transporters, the Principles and Practices referred to in the Verification Protocols and applicable thereto.”*

Implementation of the Code will demonstrate that RMGC will use the international best management practices (BMP) in the management of cyanide. RMGC accession to the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in The Production of Gold is only the fulfilment of a commitment made prior to the submission of the EIA Report and will not trigger any amendment to the Cyanide Management Plan.

The remaining chapters and sections of the Cyanide Management Plan do not require updates, as a consequence of time or amendments in the legal framework.