The comparison from 2002 and 2006 urbanism (PUZ) document

1. The PUZ for the Industrial Development Area Roşia Montană Gold Corporation S.A. has been initiated, elaborated and approved for the first time in 2002. For this plan all the necessary permits and agreements have been obtained according to the law. PUZ, approved eventually by the Local Council of the Roşia Montană parish, the Local Council of the Abrud town and by the Council of the Alba County. Also, based on the environmental analysis as an integer part of the PUZ, IPM Alba Iulia issued the environmental approval no. 181/03.07.2002 for this plan.
2. The PUZ elaborated and approved in 2002 establishes for the considered area the following functions: industrial area, storage area, communication channels area, technical and public works rigging area, protection area and living area.
3. In this area the execution of the Roşia Montană Project has been proposed, consisting of:
   - Mining the gold-silver ore in quarries;
   - Storing the production wastes – waste rock and tailings in specific facilities, respectively heaps of tailings and settling pond;
   - The processing of the gold-silver ore in a processing plant, by a modern technology dedicated to recovering precious metals from the ore;
   - The collection, storage and treatment of the acid waters in view to reuse them and/or ensure the salubrious flow in the Roşia and Corna valleys;
   - The construction of the access roads and the technical roads (ore and tailings transport).
4. During the process of environmental impact assessment for the Roşia Montană Project there have been carried out modifications of the mining project in order to mitigate the negative impact of the proposed mining and processing activities, especially on the protected area and on the natural monuments from the area. The main *modifications of the Roşia Montană project* are *minor* and have *a positive impact on the natural and built environment and* consist in:
   - Mining the ore in four quarries instead of two. To this extent it is specified that the PUZ for the Roşia Montană parish and the PUZ of the Roşia Montană Industrial Development Area elaborated and approved in 2002 analyze only a period of 5 years, the validity period of a PUZ. In the PUZ elaborated in 2002 the Jig and Orlea quarries have been taken into account as a future stage of the mining development, as they are to be commissioned in a subsequent period of the validity of the PUZ. The indubitable proof that these quarries were taken into account in the PUG and the PUZ from 2002 is the stating of the annual production capacity of 13 million tones / year of extracted ore, for a period of 17 years, capacity that can only be ensured by the mining of the four quarries. Both PUZ's refer to the feasibility study elaborated for the Roşia Montană deposit, where there are distinct determinations of the areas to be mined, the four quarries respectively: Cetate, Cârnic, Jig and Orlea.
   - The redesign of the mining quarries in order to enlarge the Historical Area from 15 ha (in PUZ 2002) to 135 ha currently.
   - The diminishing of the Cetate and Cârnic tailings heaps surfaces, taking into consideration the new provisions of the Closure Plan of the future operation and of the environmental rehabilitation of the affected areas by refilling the Cârnic, Orlea and Jig quarries with the tailings resulted from mining. The only quarry to remain open is Cetate, as a result of the legal provisions contained by the Mining Law no. 85/2003, that forbid blocking of mineral resources by redumping.
   - Redesigning the course of some industrial roads by getting round the protected area, in order to reduce the impact on the Roşia Montană historical centre.
   - Construction of a water supply pipe from the Aries River.

- The mitigation of the area of Roşia Montană Project in favour of the establishment and increase of the protection area.

5. In order to ensure the legal framework to achieve the proposed modifications by the new version of the Roşia Montană Project, in 2006 a new PUZ was elaborated, "PUZ Modification for the Roşia Montană Industrial Development Area" respectively. In this PUZ the development of long term industrial activities was evaluated, of approximately 25 years, corresponding to the Roşia Montană mining project, for all the stages: construction, operation, closure / rehabilitation and post-closure.
6. For the regulation from the environmental point of view, for the Roşia Montană Project the Report to the environmental impact assessment study was elaborated, submitted to APM Alba on the 15th of May 2006. The environmental impact assessment study took into consideration mining the ore in four quarries (Cetate, Cârnic, Orlea and Jig), its processing in the processing plant, the storage of tailings in three storages and two quarries by refilling, the storage of the tailings in the settling pond, the collection, storing and treatment of the acid waters, the internal transport. The study has also assessed in detail the environmental impact of the proposed activities in all the lifetime stages of the project: construction, operation, closure / rehabilitation and post-closure, for a period of about 25 years.
7. According to the provisions of the law (Government Decision no. 1076/2004), for the approval of PUZ "PUZ Modification for the Roşia Montană Industrial Development Area" and for the issuance of the environmental permit, an environmental assessment and the elaboration of the Environmental Report would be necessary. By comparing the requirements of Government Decision no. 1076/2004 regarding the content and level of detail of the Environmental Report with the content of the Report to the environmental impact assessment study elaborated for the Project, it turns out that the latter covers all the requirements related to the environmental assessment necessary for obtaining the environmental permit for the PUZ.

With regard to Roşia Montana PUZ approved in 2002, this one was elaborated in parallel with the 2002 PUZ, all the provisions from PUG being also taken over in PUZ. Also the approval procedure took place in parallel.

The comparison between Rosia Montana and Baia Mare

Item	**Baia Mare TMF[1]**	**RMGC TMF [2]**	**BAT [3]**	**Comments**
Tailings Pond				
Cyanide Concentration	CN_t aprox. 400 mg/l CN_{wad} 120-400 mg/l CN_{free} 100-120 mg/l	Please, replace with: CN_t aprox. 7-10 mg/l CN_{wad} aprox. 5-7 mg/l	Maximum 10 mg/L WAD	WAD cyanides are the species most significant in terms of potential environmental impact
Re-use of CN	CN re-use after storage in TMF	CN recovered at plant prior to CN detox facility	Re-use of CN is BAT	Decreases use and storage of NaCN
Total CN stored in TMF	> 50 tonnes	7 tonnes[6]		
Capacity to store water in TMF	Capacity to store any event of extreme rain up to 118mm	Capacity for 2 PMP (PMP = 450mm),	1 PMP	The ability to store the PMP is a key issue to minimize potential failure of the dam
Operational flexibility if discharge of water is necessary	"zero discharge facility", no detoxification (detox) facility for CN	facility to discharge if necessary including second backup facility to detox CN	Discharge of water from TMF is BAT if positive water balance exist	Both Baia Mare and Rosia Montana have positive water balance under specific scenarios
Embankments	Baia Mare TMF[1]	RMGC TMF [2]	BAT [3]	Comments
Material of Construction	Coarse fraction of tailings materials	Centerline method of construction using mostly borrowed rockfill and waste rock, with	Centerline method of construction is BAT and BEP[4]	At Rosia Montana, the quality of construction material will be monitored and controlled.

Item	Baia Mare TMF[1]	RMGC TMF [2]	BAT [3]	Comments
		consolidated tailings being used only on the upstream side.		
Capacity to increase the height of the embankment	Limited by, and dependent on, the rate of tailings production from processing plant	Very flexible as borrowed material is readily available		The capacity to increase the height of the embankment to ensure appropriate freeboard (storage capacity) is critical. Rosia Montana will maintain capacity for 2 consecutive PMP events.
Protection against overtopping	No protection	Downstream face of the dam made entirely out of rockfill		Risk of structural damage due to overtopping at Rosia Montana is very low
Controlled phreatic surface and seepage	Exfiltrations controlled only thru the original tailings deposition method	Free draining structure above starter dam, with specified granular filters zones.	Accelerated consolidation of deposited tailings using under-drains and pumps is BAT.	Seepage waters are controlled and monitored, with collection at the toe of the dam.
Management	Baia Mare TMF[1]	RMGC TMF [2]	BAT [3]	Comments
Classification of TMF	Category C	Category A		Category C does not require special surveillance and monitoring
Cyanide Management Plan (CMP)	Not mentioned in UNEP Report	CMP complying with International Cyanide Management Code	CMP is BAT	A CMP formalizes best procedures to ensure safe handling and use of cyanide

Item	Baia Mare TMF[1]	RMGC TMF [2]	BAT [3]	Comments
Emergency preparedness, Emergency response and public communications measures (APELL[5])	Not formally	As part of the Environmental and Social Management Plan (ESMP)	APELL is BAT	APELL procedures ensure that in a case of emergency all relevant stakeholders are informed as soon as possible and drilled emergency procedures are site in motion therefore minimizing impacts
Capacity to adapt project to new circumstances	Not formally After January 2000 event has been improved	Standard Operating Procedures such as WT-01 Preparation, Review and Update of Project Water Balance		Procedures to ensure that if circumstances change, the operation will be changed accordingly (commitment to continuous improvement)

(1) Report "Spill of Liquid and Suspended Waste at the Aurul S.A. Retreatment Plant in Baia Mare", United Nations Environment Programme (UNEP)/ Office for the Co-ordination of Humanitarian Affairs (OCHA), Assessment Mission Romania, Hungary, Federal Republic of Yugoslavia, 23 February – 6 March 2000, Geneva, March 2000

(2) Feasibility Study, Rosia Montana Gold Corporation

(3) Best Available Techniques for Management of Tailings and Waste-Rock in Mining Activities. EUROPEAN COMMISSION, DIRECTORATE-GENERAL JRC JOINT RESEARCH CENTRE, Institute for Prospective Technological Studies, Technologies for Sustainable Development, European IPPC Bureau, Final Report, July 2004 (http://eippcb.jrc.es/pages/FActivities.htm)

(4) HELCOM recommendation 13/6: definition of Best Environmental Practice, adopted 6 February 1992, having regard to Article 13, Paragraph b) of the Helsinki Convention

(5) APELL is "Guidance for the Mining Industry in Raising Awareness and Preparedness for Emergencies at Local Level" developed by the United Nations Environmental Programme (UNEP). See Technical Report 41. The APELL programme is a process which helps people prevent, prepare for and respond appropriately to accidents and emergencies.

(6) The normal operating volume of the TMF pond is 1 million cubic metres. The normal volume multiply by the concentration of total CN indicates the total tonnage of CN store in the TMF. An increase in the volume of the TMF pond will not lead to an increase in the total tonnage of CN store because the increase in volume is likely to be due to climatic events.

Mines of Australia using/used cyanide in the recent past.
Note some of the details have changed, this data is circa 2001

Mine Name	Commodities	Ownership
Ballarat	Gold	Ballarat Goldfields NL, NM Rothschild & Sons
Beaconsfield	Gold	Allstate Explorations NL, Beaconsfield Gold NL
Bendigo	Gold	Bendigo Mining NL
Bluebird	Gold	St Barbara Mines Limited
Brocks Creek	Gold	AngloGold Ltd
Bronzewing	Gold	Normandy Mining Limited
Browns Creek	Gold, Copper	Durban Roodepoort Deep Ltd
Cadia	Gold, Copper	Newcrest Mining Limited
Cadia - Ridgeway	Gold, Copper	Newcrest Mining Limited
Challenger	Gold	Dominion Mining Limited
Cowal	Gold	Rio Tinto
Cracow	Gold	Sedimentary Holdings Ltd, Newcrest Mining Limited
Darlot-Centenary	Gold	Homestake Mining Company
Ernest Henry	Gold, Copper	MIM Holdings Ltd
Fimiston	Gold	Homestake Mining Company, Normandy Mining Limited
Golden Grove	Gold, Copper, Lead, Zinc	Normandy Mining Limited
Golden Grove - Gossan Hill	Gold, Copper, Zinc	Normandy Mining Limited
Granites, The	Gold	Normandy Mining Limited
Granny Smith	Gold	Placer Dome Inc., Delta Gold Ltd
Henty	Gold	Goldfields Limited
Kalgoorlie Super Pit	Gold	Homestake Mining Company, Normandy Mining Limited
Kanowna Belle	Gold	Delta Gold Ltd
Kundana	Gold	Goldfields Limited
Norseman	Gold	WMC Limited
Northparkes	Gold, Copper	Rio Tinto, Sumitomo Metal Mining Co. Ltd, Sumitomo Corporation
Olympic Dam	Gold, Copper	WMC Limited
Osborne	Gold, Copper	Placer Dome Inc.
Pajingo	Gold	Newmont Mining Corporation, Normandy Mining Limited
Paulsens	Gold	Taipan Resources NL
Peak Gold	Gold, Copper, Lead, Zinc	Rio Tinto
Rosebery	Gold, Copper, Lead, Zinc	Pasminco Limited
St Ives	Gold	WMC Limited
Stawell	Gold	Mining Project Investors Pty Ltd, Pittston Mineral Ventures Company
Tanami	Gold	Otter Gold Mines Limited, AngloGold Ltd
Telfer	Gold, Copper	Newcrest Mining Limited
Thunderbox	Gold	LionOre Mining International Ltd, Dalrymple Resources NL
Wiluna	Gold	Normandy Mining Limited

Dear Mr. Minister, Attila Korodi

Re: Environmental Financial Guarantee for the Rosia Montana Project

In the questions and comments resulting from the Public Consultation of the Rosia Montana Project's Environmental Impact Assessment, and submitted to us by the Ministry of Environment and Waters Management on the 31 January 2007, there are multiple references to the Rosia Montana Project's Environmental Financial Guarantee (EFG). Questions and comments concerning the EFG have also arisen from the International Group of Independent Expert's (IGIE) report.

Our company is committed and ready to meet all its commitments in this regard as per:

- The Mining Law no. 85/2003, as amended;
- The Methodological Norms no. 1208/2003 for the enforcement of the Mining Law, as amended;
- The NAMR Technical Instructions of 25.02.2004;
- The Waste Directive 2006/21/EC;

We wait for your instructions as to the timing and content of when you wish to establish the EFG amount, form and timing.

With kind regards,

Ioanis Roditis
Chief Operational Officer

Certified Author of the EIA Study

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ICPA- Research Institute for Soil Science and Agrochemistry Radu Lacatusu www.icpa.ro	Bucharest, , Bd. Marasti 61, sector 1, Bucuresti Tel: 0212241790; Fax 2225979 **EIM-12-066/14.12.2004**	Subchapter 4.4: - Soil
CRAIM – THE Regional Center for Major Industrial Accident Prevention, Alexandru Ozunu www.chem.ubbcluj.ro/~aimre/craim/craim.php	Cluj-Napoca, Str. Donath, nr.67, Tel: 0264/420590, Fax: 0264/316398 **EIM-12-125/01.04.2005**	Chapter 7: - Risks Subchapter 4.8: - The social and economic environment of Rosia Montana – Risk assessment for health; Social risk assessment
INCD-ECOIND - National Research and Development Institute for Industrial Ecology, Margareta Nicolau www.incdecoind.ro	Bucharest, Sos. Panduri 90-92 Tel. 4106716 Fax 4100575 **EIM-06-024/24.09.2004**	Subchapter 4.1: - Water Chapter 2: - Technological processes – Wastewater treatment processes
EHC - Environmental Health Centre Cluj-Napoca, Eugen Gurzau www.ehc.ro	Cluj-Napoca, Str. Cetatii, nr.23, Tel. 0264432979, Fax 0264534404 **EIM-05-022/24.09.2004**	Subchapter 4.8: - The social and economic environment of Rosia Montana – Potential impact on the health of the population
GIE - Group of Independent Experts Adina Relicovschi www.gieltd.com	Bucharest,Bd Natiunile Unite,nr.8 sect 5 **EIM-07-318/11.04.2006** Şos. Pantelimon, nr. 291A, sector 2 Mobil: 0788/480532 E-mail: costing.zaharia@gieltd.com	Chapter 1: - General information Chapter 5: - Assessment of the Alternatives Chapter 8: - Description of difficulties; Chapter 10: - Transboundary impacts; Subchapter 4.10: -Transportation
ICAS - FOREST RESEARCH AND MANAGEMENT INSTITUTE, Iovu Biris www.icas.ro	Bucharest, Ilfov, Sos Stefanesti nr. 128, Telefon: 2406095 Fax 2406845 **EIM-05-020/24.09.2004**	Subchapter 4.6: - Biodiversity Subchapter 4.7: - Landscape
Minesa - Mining Research and Design Institute, Toma Prida www.minesa.utcluj.ro	Cluj-Napoca, , Str. Tudor Vladimirescu, nr.15-17, Tel: 0264/435015, Fax 0264/435030 **EIM-06-122/09.05.2005**	Chapter 2: - Technological processes Subchapter 4.5: - Geology
USPI – Unity of Support for Integration Sergiu Mihut	Cluj-Napoca, , Str. Dorobantilor, nr.109/114, jud. Cluj, Tel/Fax: 0264/411230 **EIM-02-207/01.07.2005**	Subchapter 4.6: - Biodiversity

[1] names of team members available on request

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Adina Rebeleanu	Cluj-Napoca	Sustainable development plan of the community
Angela Glover	Australia	Public consultation and disclosure plan
Carry Connor	USA	Relocation and resettlement action plan
Gabriela Bodea	Cluj-Napoca	Sustainable development plan of the community
Flavius Rovanaru	Cluj-Napoca	Sustainable development plan of the community
Frederic Giovaneti	France	Relocation and resettlement action plan
Mihaela Salanta	Cluj-Napoca	Sustainable development plan of the community
Prof. Gogu Mircea	Bucharest	Baseline study for biodiversity – vertebrates

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