

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	7
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Câmpeni, 26.07.2006
RMGC internal unique code	MMGA_0026

Proposal The human's health will be destroyed on a 100Km radius.

Based on a complex assessment (volume 5), the health status of the population will be not affected on a 100 km radius.

The assessment of possible risks for human health has been carried out on the basis of the estimated concentration distribution of hazardous substances in Roşia Montană, taking into account more than 40 localities in the neighboring area, covering more than 200 km². The assessment considers the known current distributions and concentrations of hazardous substances within the study area, and the future predictions with relation to the proposed mining activities. It is clear that the estimated concentrations, which are lower than the maximum permissible concentrations (MPC), do not cause significant adverse effects on the local population's health [1].

Solution

However, while the proposed mining activities have not started at Roşia Montană, the local population is currently faced with health problems, in the sense that the health status of the local residents in the commune is deficient as compared to that of the neighboring population groups. Consequently, clear measures must be taken to improve the health of the Roşia Montană local residents. At the same time, as mentioned above, sitting and operating the proposed mine will not cause any other supplementary adverse effects on the local population's health, as long as the distribution of the pollutant concentrations that have been studied complies with the dispersion models shown in the present study (EIA).

Reference:

[1] Chapter 6.6, *Results and Discussions*, page 124-129, vol. 5, *Health Baseline Report*

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	80
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Câmpeni, 26.07.2006
RMGC internal unique code	MMGA_0198
Proposal	Although RMGC speaks about historic pollution, there are people of 80, 90 years old who live in Roşia Montana
Solution	<p><u>Historic pollution do not exclude people aged 80, 90 living there, and despite the presence of people aged 80 or 90 within Roşia Montană population, the commune shows the lowest life expectancy in the area [1].</u></p> <p>The assessment of the population's health status in the Roşia Montană commune, as well as in other localities situated nearby or farther away, has shown a higher frequency of severe chronic diseases in the case of the Roşia Montană local population. This population group is characterized by deficient health in comparison with the population groups living in its immediate vicinity or in localities situated farther away. Some of the investigated diseases have been significantly linked to the current quality of the environment. It should be noted that in some polluted areas in Romania (Copşa Mica, Baia Mare), in Europe, or all over the world, people can sometimes reach the age of 80 or 90. Nevertheless, despite the presence of people aged 80 or 90 within the Roşia Montană population, the area shows the lowest life expectancy in the whole region, compared both to urban zones (Abrud, Câmpeni), rural areas (Bistra) or to data collected at regional and national level [1]. In conclusion, the existence of people aged 80 or 90 in a community is irrelevant when researching the average lifespan of people living in a locality. What is important is an indicator such as life expectancy, allowing a comparison between different population groups coming from different places.</p> <p>Reference: [1] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic data</i>, page 14-15, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	104
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Câmpeni, 26.07.2006
RMGC internal unique code	MMGA_0237
Proposal	Is there a risk related to the fact that women may give birth to babies with congenital malformations due to pollution with cyanides or complex metals, like uranium?
Solution	<p>Hazardous substances considered within the EIA to be a risk (including cyanides) have been assessed according to the concentrations that are predicted to be present as a result of the proposed mining activities.</p> <p>With regard to human health risks (including congenital malformations) predictions made as part of the risk assessment have indicated no harmful effects [1] in relation to the concentrations of these substances within the environment if the concentrations in question are predicted to be below the permissible maximum concentrations, as it was estimated in the EIA.</p> <p>The EIA report does not mention the presence of uranium within the local environment. Therefore, it was not the case to carry out an assessment of the local population's health with regard to uranium exposure.</p> <p>Reference: [1] Chapter 6.6, <i>Results and Discussions</i>, page 124-129, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	123
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Alba Iulia, 31.07.2006
RMGC internal unique code	MMGA_0278
Proposal	Health issue must be dealt very seriously, for the reason that Alba County is the most polluted county in the country due to the formaldehydes from Sebes and to the stripping activities developed at Rosia Montana.
Solution	<p>The formaldehyde generated by Sebeş plant has definitely no impact on the local residents from Roşia Montană and nearby area. The health risk assessment has been carried out for Roşia Montană area impacted by the mining project, and has not taken into account other industrial facilities located in Alba county.</p> <p>The health issue has been and continues to be dealt with very seriously. In this respect, health baseline conditions have been assessed for Roşia Montană commune as well as for other areas located nearby or farther away. Thus, the assessment has taken into account all chronic diseases and most of the acute diseases for a period of five years [1] and for more than 40 localities [2] situated in the investigated area. Medical data has been collected from all general practitioners in the area, as well as from the two hospitals in the study area. Demographic data has also been collected to assess the dynamics of important indicators such as: life expectancy, mortality, birth rate etc. The findings have shown that the population from Roşia Montană has the lowest life expectancy when compared to other localities in the area, as well as when compared at regional and national level [3]. At the same time, the commune presents a high mortality rate [4] and low natality rate [5] as compared to the nearby area. Also, the assessment of the population's current health status shows a higher frequency of severe chronic diseases (respiratory, cardiovascular) in the local residents from Roşia Montană as compared to the residents from the other forty or so localities situated in the investigated area [6].</p> <p>In conclusion, it is quite clear that the health assessment for the population living in the investigated area is a comprehensive one [7], and also the fact that the afore mentioned population health status is currently deteriorated.</p> <p>References: [1] Subchapter 5.1.2, Chapter 5, <i>Morbidity Study</i>, page 54, vol. 5, <i>Health Baseline Report</i> [2] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, vol. 5, <i>Health Baseline Report</i> [3] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic Data</i>, page 14-15, vol. 5, <i>Health Baseline Report</i> [4] Table 3-3, Figure 3.3, Chapter 3, <i>Demographic Data</i>, page 16, vol. 5, <i>Health Baseline Report</i> [5] Table 3-1, Figure 3.1, Chapter 3 <i>Demographic Data</i>, page 13, vol. 5, <i>Health Baseline Report</i> [6] Annex, page 137, vol. 5, <i>Health Baseline Report</i> [7] Vol. 5 <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	130
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Alba Iulia, 31.07.2006
RMGC internal unique code	MMGA_0299

Proposal EIA presents a series of inconsistencies such as, for example, these two health baseline conditions.

There are no internal inconsistencies in the report.

This is a comprehensive study, one of the few spatial representations of this kind in the whole country.

The *Health Baseline Report* is scientifically representative because it involved the study of the entire local population from more than 40 localities [1] across a very large area of more than 200 km² - not just a sample group. The volume is made up of two parts. The first one describes in detail the current health status of the population from the study area. The assessment of the population's health status in the study area has considered 87 international ICD 10 classification codes (*International Classification of Diseases Revision 10*) [2] elaborated by World Health Organization. Health assessment for these population groups was carried out by collecting all medical data from all local general practitioners and from the two hospitals in the study area over a period of 5 years [3]. The analysis of the frequency of diseases researched was undertaken using a computerized geographic system which indicates the differences between various localities, clearly showing variation in the frequency of diseases from one place to another [4]. The *Health Baseline Report* also comprises a chapter considering a number of habits, workplace exposures etc, based on a questionnaire applied to 141 people from the investigated area; however this type of information was not used in the assessment of the local population health status [5].

Solution

The *Health Baseline Report* also comprises a chapter considering demographic data which shows that Roşia Montană is characterized by the lowest life expectancy [6] as well as a higher frequency of severe chronic diseases when compared to the other localities.

The second part of the study consists of the correlation between the investigated diseases and the environmental conditions carried out based on the baseline health conditions and on baseline and predicted quality of environmental factors. The assessment did not show any significant increase in the frequency of the investigated diseases after starting the mining activities [7].

References:

- [1] Table 5-1, Subchapter 5-1, Chapter 5, *Morbidity Study*, page 52-53, vol. 5, *Health Baseline Report*.
- [2] Table 5-3, Chapter 5, *Morbidity Study*, page 54-56, vol. 5, *Health Baseline Report*.
- [3] Subchapter 5.1.2., Chapter 5, *Morbidity study*, pages 54, vol. 5, *Health Baseline Report*.
- [4] Annex, page 137, vol 5, *Health Baseline Report*.
- [5] Subchapter 4.1.3., *Questionnaire of chapter 4*, pages: 23-51 vol. 5, *Health Baseline Report*.
- [6] Table 3-2, Figure 3-2, Chapter 3, *Demographic Data*, page 14-15, vol. 5, *Health Baseline Report*.
- [7] Chapter 6.6, *Results and Discussion*, pages 124-129, vol. 5, *Health Baseline Report*.

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	130
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Alba Iulia, 31.07.2006
RMGC internal unique code	MMGA_0302
Proposal	<p>The Health Baseline Study is not relevant; there is no sampling rate, it has no scientific basis. The medical records which have been analysed (141 records) can't describe the entire community. The questioner requests a written answer to be sent by a statistician and sociologist in this regard</p>
Solution	<p><u>The Health Baseline Study is representative, there is no sampling rate because, it involved all the population in the area. The data from the medical records were collected for the entire population in the area, not for a 141 population sample.</u></p> <p>The <i>Health Baseline Report</i> is scientifically representative because it involved the study of the entire local population from more than 40 localities [1] across a very large area of more than 200 km² - not just a sample group. Health assessment for these population groups was carried out by collecting all medical data from all local general practitioners and from the two hospitals in the study area over a period of 5 years [2]. The assessment of the population's health status in the study area has considered 87 international ICD 10 classification codes (<i>International Classification of Diseases Revision 10</i>) [3] elaborated by World Health Organization.</p> <p>Consequently, specific morbidity indicators have been calculated on the basis of the entire number of medical records, for the majority of diseases reported on a large area. The <i>Health Baseline Report</i> also comprises a chapter considering a number of habits, workplace exposures etc, based on a questionnaire applied to 141 people from the area investigated; however this type of information was not used in the assessment of the local population health status [4].</p> <p>We want to stress the fact that the health indicators presented are based on medical records corresponding to a long period of time (5 years), registered with all general practitioners present in the area and with the two local hospitals. Considering that the health assessment has been carried out by taking into consideration the entire local population with medical records and so not just a sample, we believe that there is no other more comprehensive approach possible in this respect.</p> <p>References: [1] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, vol. 5, <i>Health Baseline Report</i>. [2] Subchapter 5.1.2, Chapter 5, <i>Morbidity Study</i>, page 54, vol. 5, <i>Health Baseline Report</i>. [3] Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54-56, vol. 5, <i>Health Baseline Report</i>. [4] Subchapter 4.1.3, <i>Questionnaire of Chapter 4</i>, pages: 23-51, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	193
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0374
Proposal	<p>Who do Romanian authorities defend; do they defend the Canadian company or the population and their health?</p> <p>The <i>Health Baseline Report</i>, with its assessments of baseline health conditions and of risks, does not protect or defend RMGC (the 'Canadian company?').</p> <p>The <i>Health Baseline Report</i> is a scientifically representative analysis involving the study of the entire local population from more than 40 localities [1] across a very large area of more than 200 km² - not just a sample group. The volume is made up of two parts. The first one describes in detail the current health status of the population from the study area. The assessment of the population's health status in the study area has considered 87 international ICD 10 classification codes (<i>International Classification of Diseases Revision 10</i>) [2] elaborated by World Health Organization. Health assessment for these population groups was carried out by collecting all medical data from all local general practitioners and from the two hospitals in the study area over a period of 5 years [3]. The analysis of the frequency of diseases researched was undertaken using a computerized geographic system which indicates the differences between various localities, clearly showing variation in the frequency of diseases from one place to another [4]. The <i>Health Baseline Report</i> comprises a chapter considering a number of habits, workplace exposures etc, based on a questionnaire applied to 141 people from the area investigated; however this type of information was not used in the assessment of the local health status [5].</p>
Solution	<p>The <i>Health Baseline Report</i> also comprises a chapter considering demographic data which shows that Roşia Montană is characterized by the lowest life expectancy [6] as well as a higher frequency of severe chronic diseases (the frequency of severe chronic respiratory and cardiovascular diseases is higher in Roşia Montană when compared to the other localities). The second part of the study consists of the correlation between the investigated diseases and the environmental conditions, carried out based on the baseline health conditions and on baseline and predicted quality of the environmental factors [7].</p> <p>The human health risk assessment shows that the proposed mining operations do not have the potential to cause health problems for the local population [8] as long as the concentrations of hazardous substances in the environment are kept within the limits mentioned in the EIA.</p> <p>References:</p> <p>[1] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, vol. 5, <i>Health Baseline Report</i>. [2] Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54-56, vol 5, <i>Health Baseline Report</i>. [3] Subchapter 5.1.2, Chapter 5, <i>Morbidity Study</i>, page 54, vol. 5, <i>Health Baseline Report</i>. [4] Annex, page 137, vol. 5, <i>Health Baseline Report</i>. [5] Subchapter 4.1.3., <i>Questionnaire of Chapter 4</i>, pages: 23-51 vol. 5, <i>Health Baseline Report</i>. [6] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic Data</i>, page 14-15, vol. 5, <i>Health Baseline Report</i>. [7] Chapter 6 <i>Risk Assessment</i>, pages 60-129, vol.5, <i>Health Baseline Report</i>. [8] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, vol.5, <i>Health Baseline Report</i>.</p>

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MMDD's item no. for the question which includes the observation identified by the RMGC internal code	193
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0375
Proposal	In 1929 Baia Mare had 950 cancer patients, in 2004, and following Transgold activity Baia Mare had 1,500 cancer patients due to cyanide usage in closed circuit, open environment.
Solution	<p><u>The Health Baseline Study was carried out for Roşia Montană area not for Baia Mare.</u></p> <p>During the 20th century there was a significant increase in the number of cancer cases reported worldwide. This is due to two reasons: first because of improved diagnosis techniques developed by the end of the 20th century as compared to the beginning of the century; and second, there was a true increase in the occurrence of the disease throughout the century.</p> <p>There are no clear evidences in the medical literature in order to show a correlation between the significant increase in the number of cancer cases and the community's exposure to cyanide at the cyanide concentrations estimated in the EIA report.</p>

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MMDD's item no. for the question which includes the observation identified by the RMGC internal code	196
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0384
Proposal	<p>The number of cancer occurrences in the area increased due to the open cast mining of Eurogold in Rosia Montana; the polluting effect will amplify and will supplement the existing pollution. The blasting generates golden dust which is drawn by the air flow and spread on large distances; this generates a hazard of Pneumoconiosis for the population.</p> <p>If the questioner is suggesting that an increase in the occurrence of cancer has occurred then this can not be linked to the proposals because implementation has not yet begun. If the questioner is suggesting that the occurrence of cancer will increase then this is not supported by the scientific evidence produced in the <i>Health Baseline Report</i>.</p> <p>Predictions on the population's health status with regard to specific diseases have shown that once the proposed operations begin there will be no significant increase in the frequency of the investigated diseases [1].</p>
Solution	<p>The human health risk assessment has not taken into consideration subjective situations (e.g. questions related to blasting operations) but objective, measurable situations, such as the concentration distribution of the investigated hazardous substances in the environmental media characterizing the residential areas, as a result of the activities developed in the exploitation area as they were predicted. If the concentrations estimated to occur in the residential areas had the potential to cause adverse effects on human health, data provided by literature as well as the maximum permissible concentrations would have to be reviewed at international level.</p> <p>Reference: [1] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	214
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0441
Proposal	The questioner speaks to the young ladies, underlying the fact that this project will lead to deliveries of children with malformations or even miscarriages.
Solution	<p>The assessment has taken into account all age groups, including the group mentioned in the question (young ladies). The risk assessment has concluded that exposure of the population to the hazardous substances in the study will not cause any adverse effects to the health of local residents based on estimated concentrations in the environment.</p> <p>Hazardous substances considered within the EIA to be a risk (including cyanides) have been assessed according to the concentrations that are predicted to be present as a result of the proposed mining activities. With regard to human health risks predictions made as part of the risk assessment have indicated no harmful effects [1] in relation to the concentrations of these substances within the environment if the concentrations in question are predicted to be below the permissible maximum concentrations, as it was estimated in the EIA.</p> <p>The second part of the study consists of the correlation between the investigated diseases and the environmental conditions, carried out based on the baseline health conditions and on baseline and predicted quality of environmental factors. The assessment did not show any significant increase in the frequency of the investigated diseases after starting the mining activities [2].</p> <p>References: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, vol. 5, <i>Health Baseline Report</i> [2] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, vol. 5, <i>Health Baseline Report</i></p>

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MMDD's item no. for the question which includes the observation identified by the RMGC internal code	252
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0516
Proposal	<p>The questioner makes the following observations and comments :The Health Baseline Report is not representative. The questioner would like to know what localities were considered for this report. The questioner states that the criteria for the selection of the localities and inhabitants considered in the report were not complied with because the subjects were not selected accordingly and their distribution is not justified.</p>
Solution	<p>The <i>Health Baseline Report</i> is a scientifically representative analysis because it involved the study of the entire local population from more than 40 localities [1] across a very large area of more than 200 km² - not just a sample group. The volume is made up of two parts. The first one describes in detail the current health status of the population from the study area. The assessment of the population's health status in the study area has considered 87 international ICD 10 classification codes (<i>International Classification of Diseases Revision 10</i>) [2] elaborated by World Health Organization. Health assessment for these population groups was carried out by collecting all medical data from all local general practitioners and from the two hospitals in the study area over a period of 5 years [3]. The analysis of the frequency of diseases researched was undertaken using a computerized geographic system which indicates the differences between various localities, clearly showing variation in the frequency of diseases from one place to another [4]. The <i>Health Baseline Report</i> also comprises a chapter considering a number of habits, workplace exposures etc, based on a questionnaire applied to 141 people from the area investigated; however this type of information was not used in the assessment of the local population health status [5].</p> <p>The <i>Health Baseline Report</i> also comprises a chapter considering demographic data which shows that Roşia Montană is characterized by the lowest life expectancy [6] as well as a higher frequency of severe chronic diseases when compared to the other localities.</p> <p>The second part of the study consists of the correlation between the investigated diseases and environmental conditions, carried out based on the baseline health conditions and on baseline and predicted quality of environmental factors. The assessment did not show any significant increase in the frequency of the investigated diseases after starting the mining activities [7].</p> <p>This is a comprehensive study, one of the few spatial representations of this kind in the whole country.</p> <p>References: [1] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, vol. 5, <i>Health Baseline Report</i>. [2] Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54-56, vol 5, <i>Health Baseline Report</i>. [3] Subchapter 5.1.2, Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54, vol. 5, <i>Health Baseline Report</i>. [4] Annex, page 137, vol. 5, <i>Health Baseline Report</i>. [5] Subchapter 4.1.3., <i>Questionnaire of Chapter 4</i>, pages: 23-51, vol. 5, <i>Health Baseline Report</i>. [6] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic Data</i>, page 14-15, vol. 5, <i>Health Baseline Report</i>. [7] Chapter 6.6, <i>Results and Discussions</i>, pages124-129, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	254
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Cluj Napoca, 07.08.2006
RMGC internal unique code	MMGA_0527
Proposal	<p>The Health Baseline Report comprises a reference to a survey on the health condition of the population in the area, but these data are not correlated to the environmental impact of the project.</p> <p>A correlation of the general health status of the population with the predicted environmental impact of the project is presented in the second part of the <i>Health Baseline Report</i> [1].</p> <p>The <i>Health Baseline Report</i> is a scientifically representative analysis involving the study of the entire local population from more than 40 localities [2] across a very large area of more than 200 km² - not just a sample group. The volume is made up of two parts. The first one describes in detail the current health status of the population from the study area. The assessment of the population's health status in the study area has considered 87 international ICD 10 classification codes (<i>International Classification of Diseases Revision 10</i>) [3] elaborated by World Health Organization. Health assessment for these population groups was carried out by collecting all medical data from all local general practitioners and from the two hospitals in the study area over a period of 5 years [4]. The analysis of the frequency of diseases researched was undertaken using a computerized geographic system which indicates the differences between various localities, clearly showing variation in the frequency of diseases from one place to another [5]. The <i>Health Baseline Report</i> also comprises a chapter considering a number of habits, workplace exposures etc, based on a questionnaire applied to 141 people from the area investigated; however this type of information was not used in the assessment of the local population health status [6].</p>
Solution	<p>The <i>Health Baseline Report</i> also comprises a chapter considering demographic data which shows that Roşia Montană is characterized by the lowest life expectancy [7] as well as a higher frequency of severe chronic diseases when compared to the other localities.</p> <p>The second part of the study consists of the correlation between the investigated diseases and the environmental conditions, carried out based on the baseline health conditions and on baseline and predicted quality of environmental factors. The assessment did not show any significant increase in the frequency of the investigated diseases after starting the mining activities [8].</p> <p>This is a comprehensive study, one of the few spatial representations of this kind in the whole country.</p> <p>References:</p> <p>[1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, Vol. 5, <i>Health Baseline Report</i></p> <p>[2] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, Vol. 5, <i>Health Baseline Report</i></p> <p>[3] Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54-56, Vol. 5, <i>Health Baseline Report</i></p> <p>[4] Subchapter 5.1.2, Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54, Vol. 5, <i>Health Baseline Report</i></p> <p>[5] Annex, page 137, vol. 5, <i>Health Baseline Report</i></p> <p>[6] Subchapter 4.1.3., <i>Questionnaire of Chapter 4</i>, pages: 23-51, Vol. 5, <i>Health Baseline Report</i></p> <p>[7] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic Data</i>, page 14-15, Vol. 5, <i>Health Baseline Report</i></p> <p>[8] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, Vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	397
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	București, 21.08.2006
RMGC internal unique code	MMGA_0845
Proposal	<p>Concerning cyanide, the questioner emphasizes that it is an accumulating toxic substance, i.e. it accumulates in human tissues, especially in the fat tissues. What is LD50 for cyanide?</p>
Solution	<p>Cyanide is not a cumulative contaminant therefore it does not accumulate in the human body.</p> <p>All aspects related to cyanide action upon entering the human body (e.g. cyanide toxic effects and aspects related to cyanide absorption, metabolism, distribution and excretion) -vary from one type of cyanide to another. Cyanides are chemical compounds that inhibit the use of oxygen at cellular level and display relatively low toxicity threshold levels considering the acute effects (including death) which may result and in the case of certain types of exposure.</p> <p>Cyanides have mainly acute toxicity - and less chronic toxicity - except for some cases of occupational exposures, different from community exposure.</p> <p>There are several norms on cyanide LD50 as follows: the LD50 for gaseous hydrogen cyanide is 100-300 parts per million. Inhalation of cyanide in this range results in death within 10-60 minutes, with death coming more quickly as the concentration increases. Inhalation of 2,000 parts per million hydrogen cyanide causes death within one minute [1]. The LD50 for ingestion is 50-200 milligrams, or 1-3 milligrams per kilogram of body weight, calculated as hydrogen cyanide. For skin exposure, the LD50 is 100 milligrams (as hydrogen cyanide) per kilogram of body weight [1].</p> <p>At the same time, despite the potential to cause acute toxic effects, the presence of cyanide in the environment does not necessarily involve harmful effects on the human body. For these effects to occur, cyanide needs to reach a certain level of concentration and also enter the human body. This explains the existence of internationally-approved maximum permissible concentrations (MPC): for example, the MPC for free cyanides in drinking water is 10 microg/l and the MPC for total cyanides in drinking water is 50 microg/l.</p> <p>For the concentrations predicted to occur as a result of the proposed activity, no significant health effects have been predicted [2].</p> <p>References: [1] Data provided by 2006 International Cyanide Management Institute, 1200 G Street, NW, Suite 800, Washington, DC 20005, USA [2] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, vol. 5, <i>Health Baseline Report</i></p>

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MMDD's item no. for the question which includes the observation identified by the RMGC internal code	398
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Bucureşti, 21.08.2006
RMGC internal unique code	MMGA_0855
Proposal	In case of soil pollution, drinking water and food supplies will also be polluted. The impact upon people's health is visible and it also alters people's social behaviour.
Solution	<p>The EIA has been undertaken to assess the risks for specific diseases associated with the quality of the environmental factors, including those caused by current soil pollution, pollution of underground water and drinking water, with regard to the hazardous substances under investigation. Also, the report presents detailed predictions on the local population's health status in the area under investigation, in relation to specific diseases associated to soil and water pollution. Predictions have been made for several time periods during the life time of the mine project [1].</p> <p>In other words, the assessment of health risks, associated with soil and water quality, is based on medical and environmental data taken from, and predicted for the affected area, with regard to the distribution and concentration of hazardous substances identified and studied as a result of the initiation of mining operations. This data forms the basis of the health assessment.</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	419
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Bucureşti, 21.08.2006
RMGC internal unique code	MMGA_0893
Proposal	<p>The questioner quotes from Volume 5, Health Baseline Report, page 91, where it is said that the cyanide existing in the soil has positive correlations with the ischemic heart disease, and that the effect of cyanide existing in the soil upon blood pressure reduces with the increase in the pollutant concentration. The same effect appears in the case of cerebral vascular anaemia. Anaemia increases insignificantly or even reduces in the presence of the cyanide existing in the soil. On page 135 it is stated that, according to the statistics, the cyanide concentration in the soil, in all areas, has no significant correlation with any of the diseases investigated. The questioner underlines that no comment is made in the report regarding the effect of the salts of hydrogen cyanide in higher concentrations.</p>
Solution	<p>The health baseline report also describes a correlation between the occurrence of specific diseases and the quality of the environmental media, taking into account current data collected before the beginning of the mining operations. Pages 78-80 (91-94 in the Romanian version) present a correlation between soil cyanide concentrations and a number of diseases (ischaemic heart disease, hypertension, cerebrovascular diseases, anaemias, polyneuropathies and hepatopathies). However, for all the investigated diseases, the test has had no statistical significance ($p < 0.05$) [1]. These findings are summarized at page 126 (135 in the Romanian version). The risk assessment has been carried out on the basis of concrete data, taking into account cyanide concentrations in environmental media as indicated in the measurement tests described in the EIA. Obviously, if a different exposure scenario is applied, the findings related to the population's health status will also change.</p> <p>In conclusion, the assessment of the population's health status is the result of the interpretation of the data, as measured and predicted in the EIA study.</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, <i>Cyanides</i>, pages 78-80, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	419
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	București, 21.08.2006
RMGC internal unique code	MMGA_0894
Proposal	In the following paragraph, 6.6.7 – Predictions for the Rosia Montana historic area – it is stated that the prevalence of diseases decreases in the years 9 and 14 of operation, in the case of 7 diseases, among which asthma, etc. The questioner notices the absence of any comment regarding the permanent effect of inhaling aerosols from the sodium cyanide lake, and the millions of cubic meters of slurry containing cyanide, which will remain forever behind the 180-meter high dam of the sinister cyanide plant.
Solution	Indeed, several paragraphs in the <i>Health Baseline Report</i> deal with the predictions concerning the frequency of specific diseases including asthma. Predictions refer to two time periods -year 9 and year 14 from the beginning of the mining operations [1]. We would like to emphasize that the risk assessment of the population's health status in relation to the presence of these hazardous substances in the environment is done strictly on the basis of specific data regarding the spatial distribution of these concentrations in residential areas. The concentrations used in the assessment of health risks are the ones resulting from the dispersion models. Reference: [1] Chapter 6, <i>Risk Assessment</i> , pages 60-129, vol. 5, <i>Health Baseline Report</i> .

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	445
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	Deva, 23.08.2006
RMGC internal unique code	MMGA_0945
Proposal	<p>The questioner is a representative of the AntiParkinson association and points out that research in the field has showed greater incidence of the disease in case of exposure to toxic substances, such as cyanide (according to an American study).</p>
Solution	<p>The risk assessment, based strictly on well researched data with regard to exposure intensity (concentration), frequency and duration, clearly states that for the concentrations predicted, Roşia Montană Project does not have the potential to cause a high frequency of this specific disease [1].</p> <p>There are a very large number of diseases, that can be associated with the presence of various hazardous substances in the environment, but the occurrence of such diseases depends strictly on the characteristics of the exposure, namely on its frequency, duration and on the levels of concentration to which the human body has been exposed. This means the presence of a hazardous substance in one or several environmental media does not necessarily lead to disease. There are maximum permissible concentrations for particular hazardous substances in air, drinking water, soil, the workplace etc ensuring the protection of human health.</p> <p>Consequently, the mere presence of a hazardous substance in an environmental medium will not necessarily lead to disease.</p> <p>Reference: [1] Chapter 6.6, <i>Results and Discussions</i>, pages124-129, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	3113
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 112981/25.08.2006
RMGC internal unique code	MMGA_1374
Proposal	<p>The questioner does not agree to the Rosia Montana gold and silver mining operation proposal formulating the following remarks and comments:</p> <p>Recent researches demonstrated that an exposure at different toxic substances as cyanide or pesticides is associated with an increased risk of Parkinson disease occurrence</p>
Solution	<p>The human health risk assessment shows that the population groups from the areas affected by the project will not develop specific adverse health effects [1] as a result of the development of the mining operations, for the concentrations of hazardous substances predicted to occur in the environmental media and presented in the EIA report.</p> <p>Exposure to various hazardous substances present in the environmental media may cause adverse effects on human health leading to higher frequency of specific diseases. However, the occurrence of such adverse effects depends strictly on the characteristics of the exposure, namely on its frequency, duration and on the levels of concentration to which the human body has been exposed. This means that the presence of a hazardous substance in one or several environmental medias does not necessarily lead to disease. The concentrations in question are predicted to be below the permissible maximum concentrations.</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	3113
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 112981/25.08.2006
RMGC internal unique code	MMGA_1375
Proposal	The presence of cyanides in big quantities within this area will be a factor of increased occurrence of Parkinson disease
Solution	<p>Based on health risk assessment, Roşia Montană project will not significantly increase the frequency of specific diseases for those concentrations predicted to occur in the environment, at different stages of the operations, as they have been described in the EIA.</p> <p>Three aspects have been taken into account in the assessment of risks on human health:</p> <ul style="list-style-type: none"> - The health baseline conditions with regard to the entire population from more than 40 localities, based on data collected from all general practitioners and the two local hospitals; - The current quality of the environmental factors, before the development of mining activities; - Predictions concerning the distribution of hazardous substances in the environmental media, elaborated for specific periods of time after the beginning of the mining project. <p>Consequently, the health risk assessment is based on specific data, namely the spatial distribution of the concentration of contaminants, exposure frequency and duration etc, and not on subjective data such as 'large quantities'. There were no significant correlations in terms of increasing the frequency of the investigated diseases [1] for the predicted environmental concentrations of the investigated hazardous substances within the study area.</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, <i>Cyanides</i>, pages 78-80, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	3113
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 112981/25.08.2006
RMGC internal unique code	MMGA_1376
Proposal	<p>Although the project provides a technology for the cyanide destruction with sulphur dioxide, this technology itself introduces a supplementary polluting agent with direct effect on the population health</p> <p><u>The health risk assessment has shown that there will be no adverse health effects on the population in the area after starting the mining activities.</u></p>
Solution	<p>The health risk assessment comprises two parts. The first part includes an exhaustive description of the health baseline data collected in more than 40 localities [1], as they are now, before the beginning of the mining operations. The data are correlated with the current state of the environmental media. The second part comprises an estimate on the frequency of the diseases researched, based on the information presented in the first part and on the estimated distribution of hazardous substances in the environmental media. This part also takes into consideration the exposure to sulphur dioxide [2]. The assessment of risks on human health, associated with exposure to a given hazardous substance, in this case sulphur dioxide, is based on complex information as the air concentrations of the toxic substance, and also other aspects such as the frequency and duration of exposure, as well as the nature and the size of the exposed population.</p> <p>In conclusion, the assessment of risks associated with exposure of local population to sulphur dioxide has taken into consideration specific aspects (concentrations, distribution, population etc), and not subjective and unquantifiable aspects as are related to the sources that generate this substance. In other words, the health risk assessment took into consideration the final concentrations to which the population groups are exposed, considering all the sources that generate those concentrations.</p> <p>References: [1] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, vol. 5, <i>Health Baseline Report</i>. [2] Chapter 6, <i>Risk Assessment</i>, pages 60-129, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	3113
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 112981/25.08.2006
RMGC internal unique code	MMGA_1379
Proposal	The cyanide neutralization products, although less toxic, have negative effects when are accumulated in big quantities
Solution	<p>The health risk assessment has shown that for the concentrations of cyanide and cyanide compounds that have been measured and predicted in the EIA there would be no significantly increase of the frequency of diseases within the study area [1].</p> <p>Basically, it is the dose - to which the human body is exposed or which enters the human body - that determines the toxicity. As a consequence, international rules are imposing maximum permissible concentrations for the various substances present in the environment. The concentration levels for such substances may vary as a magnitude order from one environmental factor to another depending on the probability of the human body to come in contact with that environmental media. This also applies to the various types of cyanides and their chemical compounds. In other words, it is not their simple presence in the environment (e.g. the maximum permissible concentration of cyanides in drinking water which emphasize that even this chemical substance can be found in drinking water up to a certain concentration) that may develop adverse health effects but the exposure (intensity, frequency, duration) and the characteristics of the exposed population (size, susceptibility).</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, <i>Cyanides</i>, pages 78-80, vol. 5, <i>Health Baseline Report</i></p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	3114, 3122
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 112980/25.08.2006, No. 112979/25.08.2006
RMGC internal unique code	MMGA_1383
Proposal	There is no an evaluation of the health risks generated by the losses of forest land and destruction of the vegetal belts(barrier against the polluted air)
Solution	<p>The health risk assessment is based on specific data only, and not on subjective aspects such as "the destruction of the green belts".</p> <p>The health risk assessment has been carried out taking into account three categories of information, namely:</p> <ul style="list-style-type: none"> - the health baseline conditions, resulting from the assessment of all medical records available from all general practitioners and from the two hospitals in the area, referring to the entire population from more than 40 localities; - the quality of the environmental media with regard to the distribution of the hazardous substances under investigation, before the development of mining operations; - predictions on the distribution of the contaminants' concentrations in the environmental media, for different time periods during the life time of the project [1]. <p>The health risk assessment has taken into account predictions on the distribution of hazardous substances concentration in the environmental media, as they have been presented in the EIA, and not the causes and/or factors that have contributed to those concentrations.</p> <p>Reference: [1] Chapter 6, <i>Risk Assessment</i>, pages 60-129, vol. 5, <i>Health Baseline Report</i>.</p>

Domain	HEALTH
MMDD's item no. for the question which includes the observation identified by the RMGC internal code	54
MMDD's identification no. for the question which includes the observation identified by the RMGC internal code	No. 114731/25.09.2006
RMGC internal unique code	MMGA_1497
Proposal	<p>The questioner does not agree to the Roşia Montana project implementation formulating the following remarks and comments: Flora and fauna were partially destroyed and the inhabitants are affected by the diseases caused by cyanide and silicosis;</p> <p>This comment appears to refer to the population's current health status and not to the population health status in relation with the future development of mining activities.</p> <p>The health component of the EIA comprises an exhaustive presentation of the population's health status in more than 40 localities [1], using all medical records collected from all general practitioners and from the two local hospitals [2], as well as demographic data for the same area. All these data show that Roşia Montană population is characterized by the lowest life expectancy in the investigated area, and also as compared to data collected at regional and national level [3]. In addition, Roşia Montană shows a higher frequency of severe chronic diseases (respiratory, cardiovascular) as compared to some other localities in the area [4]. However, predictions made for specific periods of time during the life time of the project, with regard to the distribution of diseases researched have shown no significant increase in their frequency [5].</p>
Solution	<p>In conclusion, the Roşia Montană population is in poorer health when compared to other population groups in the area, according to present data, before the development of the proposed mining activities. In addition, the development of mining activities will not cause a significant increase of the frequency of the investigated diseases, for the concentrations of hazardous substances predicted to occur in the environment in the study area [6].</p> <p>References: [1] Table 5-1, Subchapter 5-1, Chapter 5, <i>Morbidity Study</i>, page 52-53, Vol. 5, <i>Health Baseline Report</i> [2] Subchapter 5.1.2, Table 5-3, Chapter 5, <i>Morbidity Study</i>, page 54, Vol. 5, <i>Health Baseline Report</i> [3] Table 3-2, Figure 3-2, Chapter 3, <i>Demographic Data</i>, page 14-15, Vol. 5, <i>Health Baseline Report</i> [4] Annex, page 137, Vol. 5, <i>Health Baseline Report</i> [5] Chapter 6, <i>Risk Assessment</i>, pages 60-129, Vol. 5, <i>Health Baseline Report</i> [6] Chapter 6.6, <i>Results and Discussions</i>, pages 124-129, Vol. 5, <i>Health Baseline Report</i></p>