Document on Answers to Opinions given by Dr. Moran about the Conga Project

Below are the answers to the 29 comments made by Dr. Robert Moran in his report on the Conga Project, submitted on Thursday, March 8, 2012. These answers have been prepared by our environmental consultants and we publish them so they become available to all interested parties.

Comment 1. The Conga Environmental Impact Assessment (EIA) does not represent an example of uninterested science and neither an independent opinion. This text is focused on technical topics. Nevertheless, it is important to note that the Conga EIA was prepared by companies that have an economic interest in ensuring that the Conga Project goes on. All the data and technical information for this project were collected by mining companies or by consultants and contractors paid and directed by these companies. Opinions on the EIA in relation to future impacts of the project also come from the companies or from their paid contractors.

Answer:

The use of independent consultants with specialized knowledge in the different disciplines for the preparation of Environmental Impact Assessments (EIA) is a standard industry practice both in developed and developing countries. The Conga EIA independent consultants are authorized and registered in the Ministry of Energy and Mines (MEM, in Spanish) to conduct environmental studies in Peru and they also follow and comply with ethical codes and standards established both in their consulting contracts and in those contracts established by their respective professional associations. The violation to the ethical standards would result in serious negative consequences for its certifications and reputation. It is important to mention that no violation to the codes of ethics has been denounced to the consultants that have worked for the Conga Project. The Peruvian government and its regulatory agencies have carefully reviewed all the information contained in the EIA document to ensure that it complies with the established statutory requirements. The thorough review by the regulatory agencies of the Peruvian government has been evident in the 219 observations made to the EIA and received by the mining holder. Minera Yanacocha has also complied with all the citizen participation process as part of the approval of the EIA.

Comment 2. The Conga EIA includes a lot of useful information, but frequently omits “inconvenient” details and contains half truths and opinions wrongly interpreted. In many ways, this EIA is basically a document of public relations, addressed to facilitate the
acquisition of the necessary permits for the project. All the opinions in the EIA are marked by the absence of an approach that is economically disinterested.

Answer:

The EIA of the Conga Project includes very useful information, as established in the opinion. This information is presented according to the technical guidelines established by the national competent authority, which are consistent with the international practices for such documents. Minera Yanacocha considers that the assertion by Dr. Moran that the Conga EIA omits “inconveniences” does not have any grounds. The data and the information presented in the EIA are collected, analyzed, interpreted and summarized by experienced professionals who work for independent consultants. The results and conclusions are carefully examined by regulatory authorities. Quality assurance and quality control are used to ensure that the samples and data have the highest quality. Biological baseline information, for example, presented in the EIA section 3.3, is based on a combination of the reviews of the existing literature and the specific field studies. These researches are designed to determine the presence or absence of species and habitats identified during the review of the information, as well as their abundance and the existence of species not registered previously. In addition, resources such as water, soils and geological strata are extensively assessed through the collection of samples and analyses of them by certified laboratories. Copies of the reports that contain the results of the analyses issued by certified laboratories are included in the EIA and have been carefully assessed by regulatory authorities. Mining and processing plans are designed to avoid, minimize impacts or restore sensitive natural resources, maintaining the economic viability of the project and the social development opportunities of nearby communities. The opinion that the EIA is basically a “document of public relations” is an attempt to reduce the true meaning of an environmental and social management instrument for a project of the size of the Conga Project. Besides, this opinion misinterprets the task of the Peruvian government in the assessment process of the Conga Project, which is not in line with the technical, participatory and transparent process in which the Environmental Impact Assessment of the project has been conducted.

The EIA presents and analyzes impacts and alternatives associated with the type of mining proposed and its processing operations. Other permits and authorizations are prepared and assessed independently from the EIA document by different authorities, including but not limited to the Ministry of Energy and Mines (MEM), the Ministry of Agriculture (MINAG) and the National Water Authority (ANA).

Comment 3. This EIA does not provide measurements or data about the quality that would be needed so that the population, regulatory agencies and investors can appropriately assess the future impacts. In developed countries, it would not be acceptable that an EIA so inappropriate from the technical point of view obtains the corresponding licenses.
Answer:

The EIA has been developed in accordance with Peruvian rules and laws, which include or favorably compare to international standards. The endless laws and regulations related to mining projects in Peru are summarized on pages 2-14 to 2-27 of the EIA. In addition, the standards established by the U.S. Environmental Protection Agency (USEPA), the World Health Organization (WHO), the United Nations Environment Programme, and other recognized authorities were applied in many cases as established throughout the EIA. In its different sections and annexes, the EIA includes high-quality baseline information, which was collected during a period of 15 years, like for example Sections 3.2.10, 3.2.11, 3.2.12 and 3.2.13 of the EIA, which present the analyses of high-quality baseline information and the amount of surface water and groundwater. A data collection period of this duration goes beyond the requirements in Peru or any other country in the world.

Comment 4. In the long term, all mining projects similar to this will unavoidably generate significant negative impacts on water resources, and there is no reason to think that the Conga Project will not do something similar.

- The Executive Summary of the EIA implies and establishes that there will be no significant long-term impact on water resources. This is incorrect, as we will see below.

- The authors of the EIA describe future impacts which are too optimistic, using theoretical predictions, promises and subjective assessments, instead of focusing on real data of Conga or on real experiences and impacts of the hundreds of mining facilities all over the world.

- The EIA establishes that the topography of the area will not be impacted significantly. However, it also reports the following:
  
  - Perol waste rock dump height = 180 to 200 m
  - Chailhuagón waste rock dump height = 165 m
  - Perol Pit Maximum Depth = 660 m
  - Chailhuagón Pit Maximum Depth = 468 m
  - Height of the Main Tailings Dam = 101.5 m
  - Toromacho Tailings Dam Height = 66.5 m
Therefore, more importantly is that the population takes into account a wide perspective on
the problem as a whole, and that financial audit mechanisms and guarantees are
implemented to ensure that the unavoidable impacts are paid by mine operators and not by
the society in general.

Answer:

The comparison to other mining projects is not a valid approach to justify that “significant
negative impacts on water resources will be unavoidably generated.” The assessment of the
feasibility of a mining project must be done case by case taking into consideration not only the
technical characteristics of the proposed infrastructure and the future operation but also the
environmental and social reality of the area of influence. In addition, the EIA clearly
establishes the potential impacts on water resources together with the appropriate
mitigation and compensation measures included in the Environmental Management Plan (EMP) of the
project.

The commitment to meet the specific base flows in the receiving ravines during the dry
season, from June to October, is designed to avoid impacts on the amount of water outside
the project area. Water diversion structures will be implemented around disturbed areas,
sedimentation embankments and four reservoirs to collect and deliver water to the ravines.
The storage capacity of reservoirs doubles the water volume in the lagoons that will be
affected. In addition, the water discharge from reservoirs will be regulated by discharge
devices.

The water quality will be protected by the installation of sedimentation embankments and a
number of erosion control measures in the areas of intervention (construction and operation).
Water treatment facilities are also included in the plan and budget to ensure that the water quality complies with the applicable standards during and after operations.

The EIA does not provide any specificity with regard to the declaration of "excessively optimistic, future impacts through theoretical predictions." Specific information on the place and a number of scientifically accepted models were actually used to predict potential impacts on water, air and noise. This is a standard industry practice and the models normally overpredict the impacts.

In addition, the EIA referred to as "optimistic" by Dr. Moran is really based on residual negative impacts which remain after a systematic assessment of impacts, impact management, and mitigation measures. An impact assessment which does not recognize management and mitigation measures would be an unreal assessment of impacts in an unexpected scenario.

In terms of topographic modifications, the EIA clearly reveals the heights and depths of the project facilities, as stated in this comment. As such, the reader has the opportunity to judge the importance of disturbances, which are based on real changes in the topography. Graph No. 1 by Dr. Moran is confusing because it mistakenly includes a horizontal scale that shows the Santa Apolonia Hill and the San Francisco Church as adjacent to the project when they are actually in the city of Cajamarca, which is located more than 35 km from the Conga Project in straight line. A similar mistake is shown in Graph No. 2.

**Comment 5.** The EIA is focused on short-term impacts –about 10 to 30 years in the future– but at all times it avoids discussing long-term consequences, those with probability to occur hundreds or thousands of years in the future, when impacts and costs will be left to the public sector.

**Answer:**

The EIA analyzes "short, temporary and permanent" impacts, as defined in Table 5.2.7 and analyzed in Tables 5.2.9 and 5.2.10 for the construction and operation stages, respectively. The effects which are reversible, irreversible and recoverable are also shown in these two tables. The Conceptual Closure Plan in Chapter 10 of the EIA also presents the measures to be taken during the closure and post-closure periods which are expected to extend until at least 2049. The management, monitoring and maintenance will continue during this period. The costs of these activities will be included in the financial guarantees established for the project.

Also, the closure plan clearly establishes that the water treatment and maintenance of the Perol pit and the waste rock dump will be necessary in the long term. The closure plan considers all the necessary long-term measures and the maintenance of the facilities that will continue in operation. The costs for the long-term closure have been presented in the Closure Plan for the Conga Project, which has been presented to the Ministry of Energy and Mines in
October 2011, as required by the Peruvian regulations for mining projects (S.D. No. 033-2005-EM), which establishes that the Mining Holder must submit a Closure Plan in a term of 12 months after the approval of the EIA.

Comment 6. The electronic version of the EIA has at least 9030 pages, plus if all large-size figures are included. The most important information is scattered in a disorganized manner throughout these thousands of pages, making it hard for the population or the regulatory agencies to understand it. It may be thought that this disorganization has been made on purpose.

The information and the most important data on water are not mentioned or summarized in the Executive Summary in a way that it is easy to understand, for example through tables or figures. The Executive Summary is the only section of the EIA that most people of the population is going to read. Therefore, it should summarize all the most important data and topics. This EIA does not. Many of the potential Conga investors are from English-speaking countries. Nevertheless, the only part of the EIA accessible to the public in English is the Executive Summary, which is totally inappropriate.

Answer:

The EIA format and content have the purpose of meeting the Peruvian legal requirements according to the size and importance of the Project and have generally followed the organization and detail level of similar documents in other countries. The EIA includes the project description, baseline information, impact assessments, management and mitigation measures, closure and other aspects of the project in chapters separated in a logical and orderly manner. Studies conducted by various independent consultants are included as annexes together with the results of modelings. Data, laboratory reports with analysis results and other relevant information are also included as support information of the EIA. This provides a complete package for review by regulatory authorities and the public in general. The executive summary includes the main aspects of the project, baseline information, environmental impacts, and management and mitigation measures. Tables, graphs and figures necessary to understand the fundamental matters related to the project are included in the executive summary. The complete official version of the EIA in Spanish is available a long time ago on the web page of Yanacocha: http://www.yanacocha.com.pe/operaciones/proyecto-conga/. The English version of the text, graphs, tables and figures is available at http://newmont.com/south-america. Finally, the 14 hard copies of the EIA delivered to the different offices of the relevant authorities were available during the review and approval process, which concluded in October 2010.

Comment 7. With regard to the topic of water, throughout the years the EIA tasks have been divided between so many different people that there is no continuity in the procedures or
individual responsibility for the specific conclusions of the study. The authors of some of the annexes are mentioned by name, but the reader does not know who the people responsible for the final version of the EIA actually are.

Answer:

First of all, it should be made clear that the methodologies and procedures are independent from the specialist or company that generated the information. Although different companies have prepared some components of the EIA, the process for the integration of the information demanded an interdisciplinary work, that is, beyond a mere multidisciplinary effort. It was sought that the different components of the environmental baseline characterization are related to each other.

We have, for example, that engineering designs and management plans were developed to ensure that the downstream communities receive the appropriate quantity and quality of water, so that the commitments undertaken are met. They were based on a rigorous collection of data and studies conducted by independent consultants, as follows:

Water studies were conducted for the Conga Project by internationally recognized experts, such as Golder Associates, Knight Piesold, Water Management Consultants and Schlumberger.

- Golder Associates - Founded in 1960, it has 7000 experts who operate in 160 offices around the world, including Peru.

- Schlumberger Water Services – Formerly Water Management Consultants, it has experience in the management of water in Peru and all over the world for over 20 years.

- Knight Piesold Consulting Engineers and Scientists – International consulting company with more than 750 experts in offices all over the world, including Peru.

Knight Piesold Lima, with the assistance of Knight Piesold Denver, were responsible for collecting and interpreting more than 15 years of design engineering and studies related to water that were included in the EIA.
Comment 8. Several sections of the EIA discuss hydrogeology topics. However, the Peruvian government has allowed the company Yanacocha to delay the delivery of the official hydrogeology studies until March 30, 2013, even though the official approval of the EIA was granted on October 27, 2010.

Answer:

The information provided in this opinion is not correct. As of the delivery date of the EIA, it had a complete Hydrogeological Study, which included baseline collection, data analysis and 3 calibrated hydrogeological models: two FEFLOW models developed for the tailings storage facility and the pits and one model for the project area using the internationally recognized groundwater modeling program called MODFLOW, developed by the U.S. Geological Survey (USGS). These models are included in Annexes 3.12, 5.6 and 10.1 of the EIA. These predictive models are internationally accepted both for the interpretation of specific information of the site, impact assessment and engineering design considerations. In addition, as a usual and necessary practice in the mining industry, the hydrogeological model is being updated as part of the EIA commitments, which includes a FEFLOW model of all the project area with the information collected in 2010 and 2011.

In addition, in accordance with MEM report No. 1056 20120 MEM-AAM/MLI/CAG, which rectifies the date established in the directorate resolution that approves the EIA, it is clearly specified that the delivery date for the update report of the hydrogeological study is March 30, 2012. Minera Yanacocha formally delivered the update report of the hydrogeological study on Thursday, March 22, 2012.

Comment 9. In November 2011, the Ministry of the Environment delivered a report to the Premier back then, which had many criticisms and recommendations related to the water topic, observations similar to those of this report. Essentially, it said that the EIA needed to be redone again. No attention was paid to this report, and later a new Minister of the Environment said that the report did not exist officially. In this way, the Peruvian government has basically neutralized the Ministry of the Environment (and other regulatory agencies), damaging the public evaluation process which is supposed to be transparent.

The EIA was approved even though it did not contain any detailed hydrogeological or seismic information for the area of the Blue lagoon, where one of the main waste rock dumps would be located. According to a Multisectoral Meeting held in Lima on January 18, 2012, the Peruvian government would allow Minera Yanacocha to deliver this information on the area of the Azul Lagoon in September 2012, a lot later than the approval of the EIA.
The opinion regarding which the EIA was approved even though it did not have any detailed hydrogeological or seismic information for the area of the Blue Lagoon is not correct.

The EIA was approved with detailed hydrogeological (Section 3.2.12 and Annexes 3.12, 5.6 and 10.1 of the EIA) and seismic (Annex 3.5 of the EIA) information, as shown in the dossier of the EIA, which contains the area of the basin of the Alto Jadibamba River and, therefore, the Blue Lagoon. The request made by the reviewing authorities was addressed to an update of the hydrogeological models based on the new data obtained from the monitoring program of the 2010 - 2011 period, which is usual from a good practice in the mining industry. On the other hand, the Ministry of the Environment (MINAM, in Spanish) at no time requested to prepare the EIA again.

Furthermore, Minera Yanacocha does not know about the multisectoral meeting mentioned by Dr. Moran in this opinion.

**Comment 10.** Most of the project is located within an area considered as a “fragile ecosystem” by the Peruvian laws. The Conga project is located in the headwaters of five important basins, and it is a wet zone (average precipitation of 1150 mm per year) covered by wetlands and lagoons. Unlike many other areas where metal mining is developed, it is not an arid and isolated region. The groundwater level is generally little deep (often less than 2.0 m under the soil) and the project area has more than 600 springs, which are used by residents.
The rivers have rainbow trout (sown) in several places; the prairies have pastures for animals; and the area is a source of water for numerous villages and cities.

Answer:

The fragility of the ecosystem has been considered in accordance with the provisions set forth in Article 99 of the General Environmental Law, which literally says: “In the exercise of their functions, public authorities adopt special protection measures for fragile ecosystems, taking into account their singular characteristics and resources; and their relationship to special weather conditions and natural disasters.” According to the content of this Article, both high-Andean lagoons and bogs are considered as fragile ecosystems.

As established in the EIA, approximately 103 hectares of bogs will be intervened by the project, which represents about five percent of the total area of intervention, as shown in Graph 5.2.11 of the EIA. As such, 95% of the project area are high-Andean lands consisting of scrubland (higher than 85% of the total area), agricultural soils (4%), bushland (2%) and other. On the other hand, most of the bog and scrubland areas have been overgrazed, burned periodically or turned into crop lands, as mentioned in Annex G of the 1st Round of the Clearing of Observations of the Ministry of Agriculture. These practices have changed the characteristics of vegetable formations within the project area. Furthermore, the impacts attributable to the implementation of the Conga Project will be mitigated through the creation of 120 ha of bogs / wetlands on the surface of the tailings storage facility at the closure stage, as presented in the Clearing of Observations of the Ministry of Energy and Mines (Observations 193 and 195). In addition, all the efforts necessary to improve the opportunities for the creation of bogs / wetlands around the four reservoirs will be made with the purpose of providing this particular habitat to the environment, as established in Section 6.1.7 of the EIA.

In the case of springs, 11 springs have been identified in the Area of Direct Influence (ADI) of the Conga Project, as shown in Observation No. 74 of the Clearing of Observations of the Ministry of Energy and Mines. These springs are part of water supplies for the communities, which will be mitigated and compensated, as presented in Chapter 6 of the EIA (Environmental Management Plan). Any indirect impact as a consequence of the pumping of pits or other project activities has been considered within the mitigation flows that will be discharged into the ravines involved (Section 6.1.5 of the EIA).

With regard to “rainbow” trout, as mentioned by Dr. Moran, they are mainly found in rivers and ravines and are species that have come from North America. However, these species are not capable of breeding efficiently in the lagoons involved in the project.
Comment 11. In the project area, surface water and groundwater, as well as springs, are basically interconnected. Beneath a large part of the project area, there are volcanic and karstic rocks, with faults and fractures, together with glacial sediments, all of which conducts water. Satellite imagery and structural geological studies show that many of the lagoons in the area are located on faults and fractures, some possibly related to collapsed volcanic structures (calderas). All this information shows that surface water and subsoil water would be interconnected, especially if they are submitted to a long-term hydraulic stress.

PHOTO No. 2: Karstic Environment in Basin of the Jadibamba River

Source: File GRUFIDES, 2012

Answer:

As established in exhaustive hydrogeological investigations, there are two hydrogeological or groundwater systems: the shallow (sub-surface) or local system, and the regional or deep system. The shallow system consists of the upper layer of the crust consisting of organic, alluvial and morainal soils, which is porous, permeable and of limited thickness. In the shallow system, the rain infiltrates at little depth and mainly feeds springs and seepage at the local level. This system retains water as long as there is a water source (rain), and once this source does not exist, the system cannot provide water to the springs and seepage. For this reason, most of these water bodies get dried during the low-water season.

With regard to the regional or deep system, given its nature formed by very low permeability rocks, it has an insignificant connectivity with the shallow system in hydraulic terms.
With regard to the lagoons of the project area, these lagoons are of glacial origin, depressions in low-permeability rock as a result of the end of the last glacial period. Out of the 4 lagoons disturbed by the project, the Azul and Chica lagoons are located on very low permeability volcanic rock and are fed by the direct rain, the runoff and the upstream local seepage of each of them. The Perol lagoon is located on very low impermeable picota diorite and the Mala lagoon on very low impermeable marble. The Chailhuagón lagoon, which will be expanded both in area and in volume with the creation of a reservoir of the same name, is located on limestone. Moreover, all lagoons have clay and silt layers which have been deposited from their formation. Finally, according to field assessments, there is no evidence that these lagoons seep, discharge or lose considerable flows into the deep groundwater system.

On the other hand, while there are some types of karstic formations in the surroundings of the project at low elevations, limestone formations within the project area show few signs of surface erosion, such as those shown in the Photo of Opinion No. 11 (PHOTO # 2: GRUFIDES, 2012). The main facilities of the project, Perol and Chailhuagón pits and the tailings storage facility will be developed on intrusive rocks, Skarn deposits in marble or on low permeability volcanic rocks. In the cases in which karstic formations were found during the development of the EIA of the Conga Project, plans were made to modify and avoid these formations, like for example the Perol waste rock dump, which was especially designed to avoid contact with the karstic area.

In addition, various modelings were conducted, such as:

- MODFLOW hydrogeological model
- HFAM hydrological model
- FEFLOW hydrogeological model

As a result of these assessments and models calibrated with data taken in the field, it was possible to first define the characterization and behavior of surface water and groundwater and later assess correctly the residual impacts (after having implemented management measures). As conclusions of impact assessments, it was stated that the sub-surface water or shallow system and the deep regional system have a very low interconnection between both systems.

**Comment 12.** Numerous factors contribute to creating ways for the entry of contaminants into the water of the Conga area: the natural permeability of the rock due to faults and fractures; an increase in the fracturing as a result of explosions in the mine; wells and blasting that have been left open; the high permeability of sediments in the area; the long-term degradation of tailings and other remnants of the mine; and finally the seismic activity.
First of all, all the facilities of the Conga Project will have various systems and appropriate infrastructure for their environmental management, as established in the EIA, and which have been widely detailed and discussed. Furthermore, there are calibrated predictive modelings that estimate the rates and directions of underground flows in the project area.

The hydrogeological models assessed the flows and directions of the tailings storage facility and the Perol waste rock dump. Thanks to this, it was possible to know that seepages are heading to the seepage collection system, which is located immediately below the tailings storage facility, and thus be able to plan, design and implement the appropriate control and compensation measures with the purpose of not generating significant impacts on the environment (seepage collection and liner systems, if necessary, according to permanent field assessments). The results of this model have determined low pumping rates from pits due to the low permeability of the rock mass, which will allow the hydraulic sump effect management to prevent impacts on groundwater.

In case of the Chailhuagón pit and tailings storage facility, they will not generate acid drainages. Consequently, a mitigation of the potential seepages has not been taken into consideration.

With regard to the tailings storage facility, it was designed as a high-risk structure, according to the Canadian Dam Association, that is the peak ground acceleration factor used is 0.42g, which corresponds to an event with an associated occurrence probability of 10,000 years. In addition, the management plan for the tailings storage facility is to avoid that tailings become acid both at the operation stage and at the closure stage. The tests conducted to date (Annex 5.5 of the EIA) and the tailings disposal plan (Annex 4.6 of the EIA) have shown that as long as there is sufficient neutralization of tailings, which will be achieved with the addition of lime in the processing plant and the mixture with the ore of the Chailhuagón pit, the tailings storage facility will remain with a neutral pH. At the closure stage, the cover of tailings will prevent the entry of oxygen, so that the tailings storage facility remains neutral and stable in the long term.

Comment 13. The EIA does not have any type of evidence if exploration wells have been properly closed or if they have simply been abandoned. At least hundreds of holes have been drilled during decades of exploration in the area of the Conga Project. These holes have created ways between one area and another, allowing the vertical movement of water, which can also be later moved laterally.

Answer:

The EIA is an environmental management instrument for Mining Exploitation and not for Mining Exploration. In case of Mining Exploration for the Conga Project, the corresponding Semi-Detailed Environmental Impact Assessment (SD-EIA) was submitted, which is the permit required by the relevant authorities for this type of activity (Mining Exploration).
Therefore, in the EIA of the Conga Project, neither the impacts of an exploration project nor information on exploration wells are addressed since this had already been submitted in previous environmental permits.

The activity for the sealing of borings and the rehabilitation of disturbed areas is contained in the drilling program, which establishes that, after finishing the drilling, the borings are sealed, and after the Department of Geology obtains the results of borings, it grants the authorization for the closure and rehabilitation of them.

The commitments referred to this activity are the following:

*At the end of drilling, the borings implemented will be sealed, as detailed in the procedure: "Drilling Well Sealing." (Page 7 of 118 of the 2nd Mod. SD-EIA Volume II - Folio: 000987)*

**Comment 14.** The EIA presents inconsistent data on the water volumes that would be pumped from the pits to allow mining. The Conga ore will be mined from two open pits (and possibly from others too), one with a maximum depth of approximately 468 meters (Chailhuagón Pit) and the other of approximately 660 meters (Perol Pit). One prediction on the sustained water flow of the Chailhuagón Pit is 10 liters / second = 315,360,000 liters a year. Another estimate for the pumping of the Perol Pit is between 158 liters per second (year 2014) and 379 liters per second (year 2026), which is equivalent to about 59,800 million and 143,400 million liters during only 12 years of pumping. The pumping rate would probably increase during the 17 years of the Life of Mine.

The experience of numerous mining projects in different parts of the world shows that there will be no reliable measurements of the pumping volume until several years later of the commencement of operations.

PHOTO No. 3: El Perol Lagoon

Source: Eng. Segundo Sánchez Tello, 2010

The EIA establishes that the acid water treatment plant can treat 850,000 liters per hour. If the Conga Project has to pump 379 liters per second, this implies treating approximately 1.4 million liters per hour, which broadly exceeds the capacity of the treatment plant. It is clear
that the plant proposed could not be able to treat all this water or treat it at an appropriate chemical level for human consumption or for the aquatic life.

**Answer:**

This is an inexact opinion with regard to pumping rates. The maximum pumping rates established of the Perol and Chailhuagón pits are 95 L/sec. and 10L/sec., respectively. These figures are conservative (Annex 10.1 of the EIA). The possible excess water at the Perol pit will be contained in the same pit. All this is included in the water balance and was taken into consideration when the size of the treatment plant was designed (Annex 4.14 of the EIA). The water of the Perol pit will be sent to the treatment plant, treated in accordance with applicable standards and returned to the environment. The tailings storage facility has been designed to store water during the rainy season, so the treatment plant can treat at a constant flow throughout the year to comply with the water quality standards applicable to the project. The water treatment plant has been designed to ensure that the discharge from the lower reservoir complies with all applicable standards during the wet and dry seasons.

The value of 379 L/sec., stated by Mr. Moran, refers to a storm event of 24 hours of 1 every 20 years and was used as part of the feasibility study. Therefore, this would be the extreme scenario for which the water, as mentioned in the paragraph above, would be temporarily stored in the sumps of the Perol pit to be later sent to the acid water treatment plant. Moreover, in the Water Balance for the location area of the Conga Project (Annex 4.14), it is shown that the total annual volume to be pumped from the Perol pit, as a maximum, is 3,884,473 m³. The acid water treatment plant has a capacity of 850 m³/hour, which in annual terms is 7,446,000 m³, so the capacity of the treatment plant will be sufficient.

**Comment 15.** The Conga EIA does not show reliable data that indicate that the rock under the proposed waste rock dumps (waste rock and tailings) is waterproof. As a matter of fact, practically all similar dumps in mines around the world discharge contaminated effluents in the long term. It may occur that effluents are appropriately collected during mine operations (as we see in metal mines of similar scale), but they often cause contamination after the mine closure.

**Answer:**

As shown in the EIA and its annexes, hydrogeological studies have been conducted in the area of the tailings storage facility and the Perol waste rock dump for more than 15 years. These studies are included as annexes of the EIA (Annexes 3.10, 5.6 and 10.1). The hydrogeology in the project area has very low permeability bedrock in depth. In addition, the project has included engineering controls, such as diversion channels to limit the amount of contact water, an acid water treatment plant and sediment control structures to prevent the discharge of water with sediment contents. The tailings storage facility will be protected with a liner system below the supernatant pond, a seepage collection system to recover any
seepage and a monitoring system to ensure that these controls are working effectively. In the unlikely case that an eventual seepage reaches groundwater, the project has taken into consideration the installation of contingency pumping wells to recover an eventual seepage and return it to the system.

Finally, with regard to closure, the necessary measures will be taken; first of all, to avoid the generation of acid water in the tailings storage facility (through the potential neutralizer of the Chailhuagón rock in operation and through a cover that would avoid the entry of oxygen and, therefore, the generation of acidity); and second of all, to appropriately manage and treat any discharge or effluent before being released into the environment. This has been presented both in the EIA and in the Observations to this study and; therefore, no contaminating discharges will be generated in the environment after mine closure and at no stage of the project.

Comment 16. The hydrogeological data in the EIA mentions that lagoons are groundwater discharge areas. However, the authors do not quantify the discharge rate appropriately and do not define either the areas or the recharge rate. The EIA does not contain any type of integrated hydrogeological discussion on the extension and the characteristics of the areas that contain water and, in general, the interactions between groundwater and surface water, for example, in springs of local and regional areas. As a consequence of this, it becomes impossible to develop a reliable water balance of the project.

Answer:

The statements presented in Opinion No. 16 are incorrect. The project has developed several models to assess the water balance between surface water and groundwater. This is included in Annexes 3.12, 5.6 and 10.1 of the EIA. Moreover, Graph 5.2.3 of the EIA shows an excellent calibration between surface water and groundwater models. On the other hand, as mentioned in previous answers, there is a very minimum discharge by lagoons to groundwater because lagoons are fed by precipitation.

Water balances made to support engineering designs and the EIA estimated that the discharge into the groundwater system by reservoirs will be 3% of the average annual precipitation, according to results of modelings, groundwater assessments and base flows presented in the EIA. In the same manner, it is important to highlight that water balances have been modeled under different scenarios, such as extreme dry and important flood periods. This has been confirmed by the baseline data collected in the rainy and low-water seasons during the 15 years of information collection.

Comment 17. The EIA is still not able to prove that the underground and surface aquifer system is not interconnected and that it does not operate as a single system under stress conditions in the long term. Since the Conga Project is located in the headwaters of five...
different basins and that the data of the EIA (as well as the data of other mining projects similar to it) shows that surface water and groundwater systems are interconnected, the project has the potential to negatively impact both the quantity and quality of water in some or in all these basins. As a minimum, the EIA has not been able to duly prove that such impacts will not occur in the long term.

Answer:

As described in the Answer to Opinion No. 15 and in the EIA of the Conga Project, underground and surface systems are well described in the project area and the interconnection between these two systems is little significant due to their characteristics. It has been broadly stated that sub-surface water is recharged from precipitation and that it has an interconnection with the surface water system; while the deep system, due to its nature formed by rocks of very low permeability, has an insignificant connectivity, in hydraulic terms.

In addition, the non-existence of aquifers to be used in the area of the Conga Project is highlighted throughout the EIA due to the low permeability and the presence of discontinuous fractures in the deep system and the limitations -in extent and thickness- in the shallow system, which translates into little significant water volumes in the local hydrogeological context. Furthermore, the different studies and annexes presented in the EIA (Annex 3.10, Annex 3.12, Annex 5.6) show the relationship between precipitation, runoff and seepages in the project area, and it can be observed that the recharge of groundwater into the regional deep system is approximately 3% as a maximum, of which we can conclude that the interconnection between the shallow (sub-surface) and underground system is almost null or insignificant.

In case of the Conga Project, all the necessary prevention, control, mitigation and compensation measures have been taken to avoid significant negative impacts and to properly manage the environment. All these measures are included and detailed in the Environmental Management Plan (EMP) of the EIA, Chapter 6.

With regard to the specific topic of the amount of water, it has been duly proved that, in order to manage the impacts related to surface water and sub-surface water, the project includes the construction and operation of reservoirs. The volume of reservoirs will allow doubling the unused volume of the lagoons to be affected, achieving a positive social impact for the communities.

Finally, with regard to water quality management, there are a number of measures designed to avoid the impact on the water resource downstream the infrastructure site. These measures include sedimentation ponds, acid water treatment plants, mining facilities with effective seepage control systems at the tailings storage facility, containment systems at the concentrator plant and an entire contact and non-contact water management system.
Comment 18. The experience of many other metal mines of similar scale indicates that pumping activities will probably dry many, or even most, of the springs in the area, and will possibly degrade spring water quality. Unfortunately, the EIA does not have any type of data on the flow of springs or on the quality of their water. Therefore, it would not be possible that the population can prove if changes have actually occurred.

Answer:

The EIA presents flow data of springs (Table 3.2.97) collected in collaboration with the Irrigation District Technical Administration (ATDR, in Spanish) in Cajamarca. In coordination with MYSRL, a participatory inventory of water resources in the basins of the Alto Jadibamba River, Chugurmayo Ravine, Alto Chirimayo Ravine, Chailhuagón River and Toromacho Ravine (ATDR Cajamarca 2006) was conducted.

The EIA correctly estimated that the water quality of springs would replicate the characteristics of surface water, which is being confirmed with regular monitorings after the delivery of the EIA, which will be kept during the construction and operation stage. The EIA transparently establishes that the development of the project will mainly have a local effect on surface and sub-surface water resources in the project area. This localized impact is the result of the underlying geology in the area. Besides, the project will mitigate these impacts with the construction of four reservoirs, three of which will be exclusively used by the community and the fourth reservoir will be shared during the life of the Conga operations, after which it will be delivered to the communities for their exclusive use.

In addition, the costs associated with the construction, operation, monitoring and maintenance of reservoirs will be incorporated into the general costs of the project. The costs for the care and maintenance of reservoirs in the long term were included in the Closure Plan, which is currently being reviewed by the MEM. Moreover, the management of reservoirs, in the long term, will be decided between the authorities and the communities with the support of the project.
Comment 19. The water, pumped from both pits, will be contaminated by the chemical interaction with the mineralized rock, which will be facilitated by the increase in the population of microbes that accelerate the pace of chemical reactions. The EIA recognizes this fact for the water of the Perol Pit. Nevertheless, the water of the Chailhuagón Pit will also be contaminated in relation to the baseline of the chemical composition (statistically speaking) of the groundwater. The authors of the EIA disregard the experience of many similar mines in different parts of the world, in which the pit water, neutral or with an alkaline pH, get contaminated in the long term. Furthermore, predictions on the future quality of the pit water are based on little reliable geochemical techniques [such as the use of synthetic precipitation leaching procedures (SPLP) and short-term humidity cell tests], and present too optimistic predictions on the quality of water in the long term.

PHOTO No. 4: Chailhuagon River Valley

Answer:

As stated by Dr. Moran, the Perol pit is a potential acid generator (PAG), so engineering designs and operational controls, as well as closure plans, have been included to properly manage and mitigate this impact, as described in the EIA.

The information presented for the Chailhuagón pit was based on the standard tests of the sector, which included both long-term kinetic tests (26 weeks) and short-term leaching tests and acid-base accounting (ABA) tests, as shown in Section 3.2.6 of Chapter 3 and in the Answers to Observations of the EIA (Observation No. 204 of the Clearing of Observations of the Ministry of Energy and Mines). The tests conducted for the Chailhuagón pit and dump included 111 static samples and 11 long-term humidity cells.
The results of tests showed that more than 80% of the Chaillhuagón rock is non-PAG (non-generator of acidity). The hydrogeochemical model of the Chaillhuagón lagoon (Annex 10.2 of the EIA), which would be formed at the Chaillhuagón pit, in the long term, took this into consideration and added a small percentage of PAG material on the wall of the pit. Due to the great neutralizing potential of the limestone, it is estimated that the lagoon formed at the Chaillhuagón pit will be of an acceptable quality for the environment. In this model, no elements that may be soluble with neutral pHs, such as As, Se and Mo, are observed. Therefore, the result of the model for the Chaillhuagón pit is technically defendable based on the information available and, like any project, this information will be updated as there is more information available. It is the commitment and also the legal obligation of the project to mitigate the impacts on water, so if additional mitigation is necessary based on the continuous studies, it will be included by the project.

Comment 20. Newmont reports that a Financial Feasibility Study has been completed, but nothing of the contents of such study has been published in this EIA. The data about the mineralogical tests of a feasibility study like that would have provided much more reliable approximations of the effluents of tailings and waste in the future than the predictions appearing in the EIA. However, the results of these feasibility tests have not been revealed to the public.

Answer:

The Environmental Impact Assessment is based on a Feasibility Study developed for the project in 2009, as well as several of the Annexes of the dossier of the EIA (Annex 3.5, 4.1, 4.14, 5.6, 6.2, 6.3, among others). The information on the Feasibility Study has been used to calculate the production of tailings and waste. In addition, this Feasibility Study was used to decide not only the environmental and social costs of the project, but for the feasibility from an economic perspective with regard to operational and capital costs. These costs have been supplied to the MEM as part of the EIA process. This data will be supplemented with more tests or assays obtained during the construction and operation stages.

Comment 21. On average, Conga will use between 2,026,890 and 2,239,920 cubic meters of fresh water (from reservoirs) a year for ore processing and other uses.

The exact prices paid for the water in the area of Conga, Yanacocha and Cajamarca are not known and apparently the EIA avoids discussing these topics. Nevertheless, in most places of the world it is normal that farmers and users of drinking water municipal systems pay any fee for water, while in developing countries mining companies often pay little or nothing, especially when water is extracted from the subsoil through wells.
Answer:

Although Dr. Moran correctly states that approximately 2 million cubic meters of fresh water will be annually used, what he does not say is that the project is committed to recycling and reusing water. More than 90% of the water used in processing will be recycled. In addition, the excess water in the hydrological system is about 70% of the annual average flows. The project is committed to providing base flows from reservoirs during the dry season (from June to October), which means that the downstream user will have more water available in the dry season than what he or she currently has. Reservoirs have been sized to increase the stored water capacity in more than double. This is the case of water that can be used for the development of the community with the supervision of competent water authorities and the community participation.

Comment 22. Groundwater and surface water in the area of the Conga Project will probably be contaminated in the long term through a combination of ground rocky material, toxic chemical substances used in immense amounts during processing, toxic fuels, explosive residues (such as toxic ammonium), oils and greases, and other toxic chemical substances (herbicides, pesticides, among others). These materials are discharged into the environment, unavoidably and in the long term, in mines similar to it. Since the Conga baseline data is so inappropriate, it will be difficult for regulatory agencies and for the population in general to prove the presence of this contamination, if it occurs.

The effluents in mining copper / gold / silver operations typically contain the following chemical components, which are a reason for concern: excessively high or low pH, aluminum, antimony, arsenic, barium, cadmium, copper, chrome, cobalt, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, sulfate, nitrate, ammonia, boron, fluorine, chlorine, and natural radioactive components (uranium, thorium, potassium-40, total alpha and beta activity), cyanide and related degradation compounds (cyanide metallic complexes, cyanate, thiocyanate), organic carbon, as well as oils, greases and many other organic compounds. Many of the components mentioned here do not appear in the EIA baseline data of Conga.

The EIA does not contain base data sufficiently detailed or statistically appropriate in relation to the quantity and quality of surface water and groundwater, as well as springs. Therefore, the population does not have an appropriate base to define which the conditions prior to the project are or a criterion to prove if there have been changes or not.

Answer:

The Conga EIA has taken into consideration all the necessary prevention, control, mitigation and compensation measures to avoid significant negative impacts and duly manage the
environment. All these measures are included and detailed within the Environmental Management Plan (EMP) of the EIA, Chapter 6.

The Conga Project presented information with more than 10 years of aging in relation to the quality and quantity of water, which is significantly higher than for many other projects.

Below is a list of reports that were used for the analysis of surface water and groundwater in the baseline conditions:

- Surface Water Quality Baseline Study (Klohn Crippen – SVS - 1998).

28 surface water flow monitoring stations, 46 surface water quality monitoring stations and 96 groundwater monitoring wells (Figures 3.2.16, 3.2.19, 3.2.20 and 3.2.21 of the EIA) were implemented and the results of which were presented in the EIA in Annexes 3.11 and 3.13 and in Tables from 3.2.75 to 3.2.102. This data was validated by Peruvian laboratories.

Comment 23. The EIA compares the water base quality to the national environmental quality standards (EQS) for irrigation water and cattle breeding water only, without comparing the data to the standards for human consumption or aquatic life, which are more strict.

Apparently, the water coming from the pumping of the pit and from the effluents of waste rock and tailings will be collected and treated in the Acid Water Treatment Plant, but only up to the appropriate levels for irrigation water. Therefore, the treated water will probably not be appropriate for human consumption or comply with the criteria for aquatic life. Unfortunately, the EIA does not detail the chemical composition that its treated water would have. Since most of the water in the Conga area is pretty pure in its chemical composition, this means that it would be allowing that the mine degrades the current quality of water.
The EIA misleadingly states, over and over again, that the water in the rivers, lagoons and springs existing in the Conga area is already contaminated and useless. This is false. Most of this water has very low concentrations of total dissolved solids (TDS). Some of the water in bogs and wetlands has a slightly acid pH, which is normal due to the emission of organic acids. Many of this water undoubtedly contain high concentrations of fecal bacteria, impacted by waste coming from people and animals. However, this water is currently used by an important number of residents for all kinds of uses, including drinking water.

**Answer:**

The Peruvian regulations require that the project complies with Category 3 EQS standards, not drinking water standards or aquatic standards. Category 3 EQS standards are intended for agriculture and livestock, as stated by Dr. Moran. The current baseline conditions in the project area establish that many of the surface water are contaminated with total and fecal coliforms and, as such, do not comply with EQS standards at present. It was also identified that many of the monitoring stations, at least in one occasion, exceeded the EQS standards for metal content. Several of the lagoons in the project area have not complied with Category 3 EQS standards either, at least in one occasion, during the baseline assessment. The project has committed to complying with Category 3 EQS standards in the discharge of reservoirs and sediment control embankments. The project baseline assessment establishes that the drinking water for the three communities in the surroundings of the project comes from springs and not from ravines. As part of the Social Development Program proposed for the project, expansions of existing drinking water systems and the construction of additional drinking water systems have been included, which are being implemented.

**Comment 24.** Mine waste dumps, that is, waste rock and tailings (and pits) will remain in the area forever. The discharges of Conga waste rock and tailings will have to be collected and treated forever. It is considered that the seismic activity in the Conga area is moderate, and rains can be extreme. Therefore, the Conga area will require an active maintenance of the remaining facilities, as well as the operation of active (not standby) water treatment plants, not simply for 50 or 100 years after closure, but forever.

Minera Yanacocha proposes that four existing lagoons are destroyed and replaced by four reservoirs, thus increasing the total amount of water available. Apart from the evident loss of lagoons, wetlands and habitats linked to them, the explanation of Minera Yanacocha avoids discussing the following negative factors: 1. The probable desiccation of numerous springs; 2. The reduction in the flows of natural drainages in the area; 3. The probable contamination of groundwater and surface water; 4. The activity proposed gives effective control of local and regional water resources to a private company; 5. Once the mine closure occurs, what entity will pay, operate and maintain this complex engineering system?

It is clear that it is impossible to guarantee that a corporation like Newmont or Buenaventura, or any other company, will continue to exist even between now and one hundred years –
much less in perpetuity. In the United States (and probably in Canada, the European Union, and most developed countries), the approval of permits for the operation of a mine that requires a perpetual water treatment would not be legally allowed.

Consequently, the future costs for the maintenance of facilities and for the collection and treatment of contaminated water will be subsidized by the population and by all future generations.

PHOTO No. 5: Raviatadas Lagoons

Answer:

The project has envisaged active treatment during the time required to protect downstream water resources both during operation and closure stages. It is known that in the United States there are actually precedents of financial guarantees for perpetual treatment in mining operations.

In reference to the five points regarding which Dr. Moran says that the EIA does not deal with, the following answers are provided:

1. The probable desiccation of numerous springs;

As mentioned in the EIA (Chapters 5 and 6), the assessed impacts and the mitigation included in the Environmental Management Plan of the EIA, he recognizes that the Conga Project will have a primarily local impact on springs in the area, as has been explained in the answer to Comment 10. This local impact depends both on the project characteristics and the hydrological and hydrogeological characteristics of the project area (see Sections 3.2.10, 3.2.12 and Annexes 3.10, 3.12 of the EIA), as has been explained in the answer to Comment 11. Therefore, the loss of flows of the springs identified will be mitigated by the discharge from
the proposed reservoirs that will ensure more water for the communities during the dry season.

2. The reduction in the flows of natural drainages in the area;

As mentioned in the EIA (Chapters 5 and 6), the assessed impacts and the mitigation included in the Environmental Management Plan of the EIA, he recognizes that the Conga Project will generate a reduction in the flows of natural drainages near the project area. Therefore, the loss of flows will be mitigated by the water discharge from the proposed reservoirs that will ensure more water for the communities during the dry season.

3. The probable contamination of groundwater and surface water;

The project has analyzed the potential impacts on the quality of surface water and groundwater in the area. The mitigation to avoid these impacts includes (but it is not limited to) the liner of the supernatant pool of the tailings storage facility, underdrain and seepage collection systems, application of grouting at the bottom of each of the embankments of the tailings storage facility, a water treatment system, sediment control structures in the Chailhuagón and Chirimayo basins.

4. The activity proposed gives effective control of local and regional water resources to a private company;

As presented in the EIA, the control of reservoirs and water resources associated with them will be in the hands of the national competent authority in coordination with local communities and will not be managed by a private company as referred to in Opinion No. 26. The Conga Project will bear the construction, operation and maintenance cost during the life of mine and will establish the sufficient financial guarantees of reservoirs for all the useful life of them (approximately 100 years).

5. Once the mine closure occurs, what entity will pay, operate and maintain this complex engineering system?

As required by the Peruvian law, a closure plan was presented to the MEM one year after the approval of the EIA. This plan is currently under review by the MEM. Closure guarantees will be established by the competent authority and Conga before the commencement of operations.

A seismic analysis was made as support to the engineering design. All high risk structures (reservoirs and dams of the tailings storage facility) have been designed for the maximum credible earthquake. These structures have also been designed to be stable under the probable maximum precipitation scenario.
Finally, seismic and precipitation conditions in the area, taking into consideration extreme situations, have been included in the design to prevent or mitigate the consequences of an impact on the environment. The seismic design factor corresponds to the maximum credible earthquake (MCE) of 8 Mw, while the probable maximum precipitation (PMP) was presented in Table 3.2.57 of the EIA.

Comment 25. The cost of building high-technology treatment plants in metal mines similar to Conga with high volumes of effluents often amounts to a minimum between US$ 10 million and US$ 30 million dollars (capital costs). Construction costs in Conga could be much higher given the remote location. Operation and maintenance costs of a plant vary a lot, but they could easily be between US$ 1 million and US$ 5 million dollars a year, possibly in a perpetual manner.

I have professional experience in several mines where water treatment costs have exceeded the hundreds of million dollars and where, however, contamination problems and the collection and treatment of effluents continue. For example, Summitville, Leadville, Eagle Mine, Crested Butte (Colorado, United States of America); Clark Fork and Zortman-Landusky (Montana, United States of America); and Bingham Canyon-Kennecott (Utah, United States of America).

Answer:

According to the Peruvian regulations (Regulations of the Law on the Environmental Impact Assessment System (EIAS) S.D. No. 019-2009-MINAM Article 50), the EIA has the status of a sworn statement, that is, all the commitments declared have the status of a legal obligation and have to be met regardless of their cost. The EIA of the Conga Project has committed to treating and managing water in the project area in such a way that reservoir discharges comply with the EQS for Water – Category 3 and, therefore, the impact or contamination of the project area is not expected, as mentioned in Opinion No. 25.

Comment 26. The activities related to water, which are proposed in the Conga EIA, effectively cede the control of collective water resources in the region to a private company.

Answer:

As presented in the EIA, the control of water resources managed through reservoirs will be in the hands of the National Water Authority, through the Marañón Administrative Water Authority. In accordance with the regulations in force, such entity will be in charge of granting the water use rights requested by those who want to access the water resources involved and coordinating with local communities, as the case may be. Water resources will not be managed by a private company, as mentioned in Opinion No. 26, because that is the responsibility of the National Water Authority and its decentralized bodies.
Comment 27. There is no credible evidence to think that regulatory agencies in Peru have the personnel or the appropriate budget, or the necessary political influence, to appropriately supervise and enforce the corresponding standards in the case of Conga. There are a lot of standards but really little evidence of compliance.

Answer:

Chapter 6 of the EIA presents the necessary monitoring requirements to support the impact analyses proposed in Chapter 5 and the respective mitigation proposed in Chapter 6. As mentioned in Chapter 6 (Environmental Monitoring Plan) of the EIA, if the mitigation proposed to mitigate the impacts identified was not enough, additional mitigation must be implemented. Like all Environmental Monitoring Plan, this is a document which is updated periodically to show the real conditions during all the phases of the project.

In addition, the presence and active participation of the supervising agency (Environmental Assessment and Oversight Agency - OEFA) represent the credible evidence that the process will be carried out transparently.

The OEFA is the governing body of the National Environmental Assessment and Oversight System. The OEFA is responsible for ensuring the compliance with the environmental legislation by all individuals or corporations, public or private. The OEFA schedules visits to the mining units to verify the strict compliance with the commitments of EIAs, SD-EIA and DIAs, as well as the Peruvian environmental laws in force, like for example ECAS, LMPs, etc.

If they find non-compliances during the visit, they inform us so we can answer these observations. In the first file attached, you will be able to find an example of how we answer these observations.

Subsequently, the OEFA evaluates if we have not met a commitment or infringed the Peruvian law and files a sanctioning proceeding (fines) against us, like for example the second file attached. This may occur even though we have remedied the observation because the non-compliance was already found. Then, we can still try to answer the observations so these faults are archived, but if the OEFA ratifies itself, then sanctions are applied.

Comment 28. It is totally unrealistic to discuss the Conga impacts on water if we do not also talk about the cumulative impacts of several other mining projects currently in operation or which are being developed in the headwaters of the same basins. As a minimum, these include Yanacocha / Newmont and their future expansions of Amaro and La Carpa; the Galeno Project of Lumina Copper (China), and the Michiquillay Project of Anglo American (South Africa and the United Kingdom).
Cumulative impacts for air and water quality have been discussed in the EIA since baseline conditions represent the existing activities carried out in the surroundings of the project area (for example, cattle herding, agriculture, fish breeding, among others), which are expected to continue and be combined with the foreseeable impacts of the Conga Project.

There are no other projects proposed in or near the Conga Project that would contribute to cumulative impacts for air or water quality. The Galeno and Michiquillay Projects, as well as the existing Yanacocha operations, do not contribute to impacts on air or water due to their distance and location in relation to the Conga Project. In addition, the two Amaro and La Carpa exploration projects have not moved forward enough to allow the quantification of the possible cumulative impacts. Likewise, cumulative noise, vibration and visual effects are not expected from other projects due to the distance from the Conga Project. Impacts on the vegetation and habitat of fauna attributable to the existing herding, agriculture and other land uses were discussed in the EIA together with the foreseeable impacts associated with the development of the Conga Project. There are no other reasonably foreseeable activities beyond the uses of the existing land and project disturbance impacts that would contribute to cumulative impacts on the vegetation or habitat of the existing fauna. As such, the effects of current and future impacts as a whole were taken into consideration in the Conga EIA.

Comment 29. All the factors mentioned above indicate that the water uses projected by the mine do not represent long-term sustainable activities. In view of all technical uncertainties, the population and regulatory entities should adopt actually conservative assumptions regarding the future impacts on water resources, not the optimistic and little realistic assumptions presented in this EIA.

Answer:

The conservation, reutilization and recycling of water are important components in the water management program of the Conga Project. The commitment undertaken to maintain the specific base flows during the dry season, from June to October, recognizes the importance of water for agricultural activities and other uses in the areas located downstream the project. These water delivery commitments are long term commitments and will mean more water for the communities during the dry season. Sediment control structures, treatment systems, seepage collection systems and other effective measures will be used to ensure the protection of water quality. The rehabilitation, closure, management, maintenance and supervision of activity areas, after operations, foresee a long-term presence and the capacity to face problems or undesired consequences. Any technical uncertainty that may exist will be able to be managed with minor adjustments to the existing assessment and contingency plans and risks. In addition, the hypotheses used to predict impacts will be examined and appropriate adjustments will be made during the Life of Mine (operation) as new information is collected. This is typical of any mining operation or other industrial activities. According to all these
factors, it is clear that the Conga Project will protect the well-being of the communities, human health and the environment.