

Lydian International's response to the Pan-Armenian Environmental Front petition on change.org

13th October 2016

Lydian International is concerned that the petition launched by the Pan Armenian Environmental Front in opposition to the Amulsar project is based on misleading information. We understand that negative social and environmental legacies from some older Armenian mining operations developed to lower standards has contributed to a lack of trust between business and civil society. But such a trust deficit is best addressed through transparency and on the basis of rigour about the information deployed in discussion. In this note we seek to set the record straight on key issues and to highlight our willingness to engage with all interested parties.

Amulsar will be the first mine in Armenia to be designed, built and operated in accordance with modern international best practice standards. This commitment, which reflects Lydian's values, is underpinned by the financing requirements of two of our shareholders, the International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD) whose participation is conditional upon the project implementing strict environmental and social standards. These standards have been put in place and will be respected throughout the mine's lifecycle.

We have conducted a thorough and extensive Environmental and Social Impact Assessment (ESIA), which was overseen by independent experts and which is aligned with international best practice standards going above and beyond Armenian legal requirements (available [online](#)). The ESIA provides extensive and publicly-available information on the issues raised in the petition. Detailed responses are provided below:

▪ **Jermuk's environment and reputation**

The project has been designed to ensure that water sources will not be negatively impacted by our operations. All contact waters, for example, will be managed according to the Contact Waters Management Plan to safeguard any and all surrounding water resources. In addition to incorporating all necessary mitigation measures into the mine design, a comprehensive isotope study was conducted by international experts in 2013 which demonstrates that Jermuk's spring water comes from an entirely different aquifer system to that with which the Amulsar project could interact. Simply put, there is no physical connection between the water sources. This information was shared with local stakeholders.

Studies by local and international experts have also been carried out to show that possible impacts from noise, vibration and dust generated by the mine will be minimal due to the significant distance between the mine and the town of Jermuk (approximately 14km). Some portions of the mining operations will be visible from Jermuk, but extensive measures have been put in place to minimise the visual impact. For example, thousands of trees have already been planted on the Gndevaz highway to minimise line-of-sight impacts.

Internationally, there are many examples of mines operating safely next to towns. Newmont's Cripple Creek and Victor mine in Colorado, for example, is less than 1km from the town of Cripple Creek. There is no reason why, with strong mitigation measures in place, Amulsar should not operate successfully without negative impacts on Jermuk's environment and reputation and that is what we are committed to doing.

▪ **Water resources**

The ESIA demonstrates that local water resources will not be impacted by our operations. The heap leach facility (HLF) and runoff from the barren rock storage facility (BRSF) and pits are designed and will be operated, to ensure that no contaminants seep into the natural environment.

The ESIA also demonstrates that Lake Sevan, which is a precious national resource for Armenia and is located 40km from Amulsar, will not be impacted. The project meets the legal requirements that

processing facilities are located outside the Lake Sevan Immediate Impact Zone and the government-appointed Lake Sevan Committee has endorsed the project's design. Indeed, at an earlier stage of the mine's permitting, the Government tightened regulations so as to address perceptions of potential risks arising from interactions between the mine and a water tunnel that runs to Lake Sevan, as a result of which the location of the BRSF was changed.

It is important to emphasise, as shown by the ESIA, that the lack of impact on Lake Sevan or any other water resources is not determined by where the project is located but by how it is managed. Our water management strategy is based on one important principle: any water that comes into contact with project infrastructure will not be discharged into the environment unless it is treated and/or tested and shown to be in compliance with Armenian water discharge quality standards. Thus all surrounding natural receptors – whether soil, water or air – will be strictly protected.

An extensive programme of water monitoring will be carried out throughout all phases of the mine's lifecycle. This will include monitoring at groundwater observation wells installed specifically to detect water quality impacts down-gradient of the open pits, BRSF and HLF. All process water will be recirculated through the HLF. Sufficient storage capability will be available in the event of extreme rain or snow-melt events. Storage ponds will be double geo-synthetic lined with leak detection, collection and recovery systems installed between the layers. We will invite and train local community representatives to scientifically monitor water, air and soil quality to track any changes in conditions and ensure results are within allowable ranges.

▪ **Flora and fauna**

As a result of over seven years of baseline studies and detailed research, and in collaboration with renowned Armenian and international institutions and experts, a comprehensive Biodiversity Management Plan has been produced. The overall aim of the plan is to ensure that the mine results in no net loss of biodiversity. Like any major infrastructure investment, mine development involves some changes to the habitats of local flora and fauna. However, we will minimise these through proactive measures.

Lydian has committed, for example, to the establishment of a “biodiversity offset”, which is a conservation programme to compensate for non-mitigatable impacts and which is unprecedented in Armenia. For endangered “Red Book” species we are taking additional measures: these include a detailed research programme implemented by experts from the Armenian Institute of Botany in conjunction with the University of Cambridge Botanic Garden into how to move *Potentilla porphyrantha* plants from the mountain, cultivate them, and return them post-mining; and an extensive baseline study looking at the presence of brown bears, *Ursus arctos*, in the wider region. We are also developing ambitious plans with a range of stakeholders for a national park at Jermuk to offset impacts on local wildlife habitats. This may produce both environmental and economic benefits for the region.

▪ **Tourism and agriculture**

Amulsar is not a long-life mine: thus we recognise the crucial importance of its development not compromising other livelihoods. We are confident, based on international experience and our own management plans that a responsibly-operated mine can co-exist with a successful tourism industry in Jermuk and the broader region.

Beyond mitigating negative impacts, Lydian is already taking additional measures to ensure its presence delivers broader socio-economic benefits. We are investing in the socio-economic development of the region through carefully designed programmes aimed at ensuring sustainable alternative sources of income for communities. The company has already invested approximately US\$2.5m into community development and livelihood activities. The vast majority of this investment is aimed at economic development via new technologies, technical know-how and building local capacities. For example, a livelihoods restoration plan is being implemented, which includes: animal husbandry training;

horticulture development through greenhouses and high-yield gardening; support for local herders in pasture management; and skills training and support to small business start-ups in local villages.

- **Social impacts**

Over the last seven years Lydian has made regular and significant community investments to ensure the mine's presence becomes a driver of economic development. Specific measures are being put in place to strengthen female employment through women's participation in business training, skills development and livelihood activities, including within the mine's supply chain. Thus, contrary to the contention in the petition, the mine's presence is intended to have a positive impact on women's employment opportunities.

In addition, the ESIA includes full consideration of community health and safety, including project-induced risks related to communicable and vector-related diseases, sexually transmitted diseases and infections, food and nutrition-related issues, accidents and injuries, primary health services infrastructure, etc. These risks are associated with any large-scale development project and it is common practice for responsible companies to assess these kinds of risks and to design mitigation measures upfront. A comprehensive Community Health and Safety Plan has been produced as part of the ESIA; this details the mitigation and management measures that will be implemented to safeguard public welfare. As noted, no health risks associated with contamination of surrounding natural receptors are expected as the mine is designed to prevent any contamination of water, air or soil. The ESIA provides extensive detail on the health baseline study and findings: an additional scoping study is planned for Autumn 2016, to update the baseline data.

- **Cyanide and waste management**

Cyanide is used at gold mines in many countries including OECD members such as the US, Australia, Chile and Canada. Although it is a toxic chemical, cyanide is used extensively in other industries, including cosmetics, chemicals and pharmaceuticals. Cyanide does not pose significant risks provided rigorous management processes are in place. A cyanide management plan has been developed at Amulsar in line with the International Cyanide Management Code. In September 2016, Lydian became a signatory to the Code. At Amulsar's HLF, a dilute cyanide solution will be used to extract gold from crushed rock. Once mixed with water, the cyanide will enter a closed system, with pH (acidity) controlled by the addition of lime to prevent the formation of hydrogen cyanide gas. Leak detection equipment and gaseous cyanide detectors will be in place, and routine monitoring of air and groundwater quality will be undertaken around the HLF to confirm that no cyanide is leaking into the environment.

The land required for Amulsar's heap leach facility (HLF) and safety buffer, was acquired through a process aligned with IFC/EBRD best practice standards and landholders were given a choice between cash compensation or land-for-land. We have put in place livelihoods restoration programmes for the affected landowners and a wider pool of farmers. HLFs operate safely across the world, including in proximity to communities and we will ensure Amulsar's HLF is operated according to international best practice standards.

Through its commitment to international best practices, Amulsar presents a unique opportunity for Armenia. As one of the largest private sector investments in the country's history, Amulsar will generate hundreds of local employment opportunities, significant supply chain opportunities and taxes to boost the Armenian economy, while applying internationally recognised benchmarks to the management of environmental and social risks.

Lydian has consistently sought to engage proactively and transparently with stakeholders and our commitment to these values is evidenced by our strong and active role in promoting the adoption of the Extractive Industries Transparency Initiative in Armenia. We have held a series of roundtables and expert discussions with national stakeholders, including as part of our ESIA process, have put in place a grievance mechanism, and continue to

conduct regular community meetings to share information, respond to concerns and ensure stakeholder feedback is integrated into our activities. We remain open to constructive dialogue with the Pan-Armenian Environmental Front and with national and international stakeholders who have an interest in the Amulsar project. We strongly believe that our project breaks new ground in Armenia in its adherence to widely-supported and authoritative international environmental and social standards and will create significant benefits for the country, local communities, the workforce and investors.