




Amulsar Gold Project
Community Health and Safety Plan
Management Plan
Version 4
June 2016

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Revision	Date	Details	Prepared	Checked	Approved
Draft 1	July 31 2013	Initial draft for inclusion in ESIA 8D	Geoteam		
Version 1	July 31, 2013	Final version	CAB/CPB	CN	
Version 2	August 2014	Updated final version for ESIA v9	Geoteam	CPB	
V3	12 Feb 2015	Revision incorporating lender feedback on ESIA v9f	CN		
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Plan approved by _____ Date _____


Health, Environmental, Safety and Security Manager

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GLOSSARY

AMR – HSEC Annual Monitoring Report for IFC & EBRD
CHIS – Community Health Information Service
EBRD - European Bank of Reconstruction and Development
EHA – Environmental Health Area
EIA – Environmental Impact Assessment
ESIA – Environmental and Social Impact Assessment
ESMS – Environmental and Social Management System
HCS – Hazardous Chemical Substances
HIV – Human Immunodeficiency Virus
HSEC – Health, Safety, Environment and Community
IEC – Information, Communication and Education
IFC - International Finance Corporation
IFIs – International Financial Institutions (includes IFC and EBRD)
MoH - Ministry of Health of RA
NCD – Non-communicable diseases
OHSMS – Occupational Health and Safety Management System
PAC – Project Affected Communities
PCM - Participatory Community Monitoring
RA – Republic of Armenia
RTA – Road Traffic Accidents
STI – Sexually Transmitted Infections
TB – Tuberculosis
VPSHR - Voluntary Principles on Security and Human Rights -
Project – Amulsar Gold Project

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1 INTRODUCTION

Lydian International Ltd (Lydian) and its wholly-owned Armenian subsidiary, Geoteam CJSC (Geoteam), are developing the Amulsar Gold Project (the Project) in the central part of the Republic of Armenia (RA). The proposed Project will exploit the gold deposit via open-pit mining and heap-leach processing using dilute cyanide solution.

A Mining Right (MR) for the Project was granted by the RA government in November 2014. This was based, in part, on the approval of the regulatory Environmental Impact Assessment (EIA) for the Project in October 2014. Some permits also exist for ongoing exploration and development activities with additional permits required for the construction and operation phase. The Project is currently in the early stages of development, with construction activities planned to start during the second quarter 2016 subject to financing.

In parallel with the EIA, an Environmental and Social Impact Assessment (ESIA) was undertaken in compliance with, amongst others, the Performance Standards (PS) of the International Finance Corporation (IFC) and the Performance Requirements (PR) of the European Bank for Reconstruction and Development (EBRD).

In mid-2015, a Value Engineering (VE) and Optimization process was initiated, with Lydian commissioning Samuel Engineering Inc. (Samuel) and other consultants to perform engineering design on several identified VE and Optimization concepts. The objective was to reduce capital expenditure without increasing operating costs or increasing environmental and social impacts. The results from this work done in 2015, which were published in the NI “43-101 Technical Report: Amulsar Value Engineering and Optimization” in November 2015, included reduced capital and operational costs, making the Project more viable in a challenging economic environment.

Changes to the Project design as a result of the VE and Optimization work have resulted in the need to prepare a revision to the new EIA approved in October 2014 and amend the ESIA completed and disclosed in April 2015. The EIA was approved on 28th April 2016. The Project has also been subject to various health, safety, environmental and community/social (HSEC) commitments arising from the ESIA undertaken in compliance with the IFC PS and EBRD PR. The final version of the ESIA, denoted v10, published for public review and comment in June 2016, follows a series of public consultations and disclosure meetings in May & June 2016.

Both the EIA and ESIA make a number of commitments pertaining to the mitigation and management of E&S impacts. These commitments and requirements must be fulfilled as the Project moves forward. To facilitate implementation, all commitments made in the ESIA have been compiled into a full Commitments Register (CR) which will be used by Lydian for tracking purposes throughout the Project. Although many of the commitments apply to E&S management during Project implementation (construction, operation and closure), some apply to the Project design and engineering phase and must be addressed before construction works starts on site. The implementation of many of the commitments depends not only on the ESMS but also on the actions of full Project team.

E&S commitments are being managed by Lydian and Geoteam using the Environmental and Social Management System (ESMS). The ESMS includes the Management Plans (MPs), such as this one, that detail requirements that Geoteam and its contractors will follow in order to fulfil the Project's environmental and social commitments. For the purpose of this MP, "Contractor" means any all project participants, including contractors working in the field on the project including but not limited to drilling contractors, construction contractors, camp service contractors, engineers, fabricators, suppliers, etc. Contractors should implement parts of the plans relevant to their activities, issuing their own management plans in line with the Geoteam ESMS.

2 PURPOSE

This Community Health and Safety Plan (CHSP) has been prepared to define how to manage potential risks and impacts relating to:

- Community health;
- Community safety; and
- Community security.

These risks and impacts during the life of the Project will be managed, in particular during the construction of the Project. The CHSP applies to all aspects of the Project. The CHSP addresses management procedures and application of relevant mitigation measures identified in both the EIA required for state approval, and the ESIA v10 recently undertaken.

Community health security and safety management activities will be developed based on a risk assessment. This will include emergency preparedness and response plans for both

community related accidents and for the workplace. This must include a fire, rescue and chemical spill response capability, as well as medical emergency response plans.

The CHSP also provides a mechanism for assessing the HSEC performance and for maintaining records of any changes in the scope of the Project. It aims to record data that is required for inclusion in the Amulsar Annual Monitoring Report (AMR) and the forthcoming Lydian Sustainability Report, prepared annually regarding progress and performance.

3 SCOPE, BACKGROUND AND CONTEXT

The objectives of this Plan are to:

- Avoid or limit risks to, and impacts on, the health, safety and security of the community during the construction and operation of the Amulsar mine both from routine and non-routine circumstances. This will be achieved through implementing targeted prevention programmes to reduce risks, along with the implementation of an effective monitoring and evaluation program; and
- Ensure that safeguarding of personnel and property is conducted in an appropriate manner that avoids or limits risks to the community's safety and security.

The CHSP will apply to all activities being undertaken during construction, operation and closure of the Project. This current version is focused mainly on construction phase of the Project based on the description in the Project Execution Plan (PEP) and impact assessment and the mitigation measures identified in the ESIA.

This Plan addresses health, safety and security from a community perspective only. Additional relevant plans relating to Community Health and Safety include:

- Emergency Preparedness Response Plan - EPRP;
- Occupational Health and Safety Management Plan – OHSMP;
- Transport Management Plan – TP;
- Cyanide Management Plan – CMP;
- Amulsar Site Security Plan – ASSP (to be prepared);
- Worker Accommodation Management Plan – WAMP; and
- Stakeholder Engagement Plan – SEP.

4 LEGAL AND OTHER REQUIREMENTS

With regard to community health, safety and security, the Amulsar Project will comply with applicable Armenian laws and regulations; applicable IFIs requirements; Lydian corporate policies; and applicable treaties and conventions. These are presented in detail on the ESMS Legal register and laid out in Appendix 1.

4.1 ARMENIA REQUIREMENTS


Although there is no explicit requirement within Armenian legislation to undertake a health impact assessment, the Law on Population Protection in Emergency Situations is particularly relevant to community safety and security. This outlines a series of responsibilities of RA citizens and the government to victims of major accidents. These are mainly perceived to be accidents caused by natural disasters, pandemics and weapons research activities, but some aspects and procedures will have relevance to emergency planning at Amulsar Project. These include the nature of the rights of victims to have access to information in emergency situations and for all to be made aware of protection mechanisms to both prevent and address emergency situations. The Project will use the Awareness and Preparedness for Emergencies at the Local Level (APELL) process to achieve this, in accordance to the Emergency Preparedness Response Plan updated in January 2016.

The RA laws and regulations states that in the emergency situations enterprises, institutions and organisations must:

- Provide the protection of their employees; and
- Support the implementation of rescue and urgent activities and establish necessary forces to fulfil relevant activities.

A high priority is to provide immediate warning and protection of the population living in the zone of possible dangerous impact.

The government of RA is responsible for directing action in emergency situations and monitoring its implementation. State regional bodies and local authorities are those who organise emergency response activities on the ground, including population protection work and restoration projects that seek to reduce the effects of emergency situations. It is the

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responsibility of the republic-level body authorised to deal with population protection to gather funds and organise procedures under this law.

4.2 INTERNATIONAL GUIDANCE


Various international standards and guidelines apply to community health, safety and security. Those that are relevant to the Project are listed in Appendix 1. Lydian is committed to conducting business in a way that protects the security of its personnel, facilities and operations and respects human rights, and is in the process of becoming a signatory to the Voluntary Principles on Security and Human Rights.

Additional international standards, guidelines and good international practice that will be referenced by the Project, relevant to community health, safety and security include:

- Voluntary Principles on Security and Human Rights - VPSHR (2013 version). Established in 2000, the Voluntary Principles on Security and Human Rights are a set of principles designed to guide companies in maintaining the safety and security of their operations within an operating framework that encourages respect for human rights. The full text is available at:
http://www.voluntaryprinciples.org/wp-content/uploads/2013/03/voluntary_principles_english.pdf
- Protect, Respect and Remedy Guideline (United Nations, 2011);
- Code of Conduct for Law Enforcement Officials (United Nations, 1979);
- Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (United Nations 1990);
- Guidelines for Drinking Water Quality, 4th Edition (World Health Organisation, 2011);
- Introduction to Health Impact Assessment (International Finance Corporation, 2009); and
- Projects and People: A Handbook for Addressing Project Induced In-Migration (International Finance Corporation, 2009).

4.3 LYDIAN CORPORATE POLICIES

Lydian Code of Conduct provides guidance in translating the Company's core values into how the Company, its personnel and its Business Partners conduct themselves in the workplace, marketplace, and in the environment and communities where the Company operates. The core values include:

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- Honest and ethical conduct in everything we do;
- A workplace where all individuals are treated with respect and dignity, free from discrimination, harassment and violence;
- Compliance with applicable laws, rules and regulations;
- Avoidance and ethical handling of conflicts of interest;
- Understandable, accurate and timely public disclosure of information; and
- Mutual respect and understanding in partnering for sustainable development.

Figure 4-1 provides a graphical representation of the Lydian governance framework.

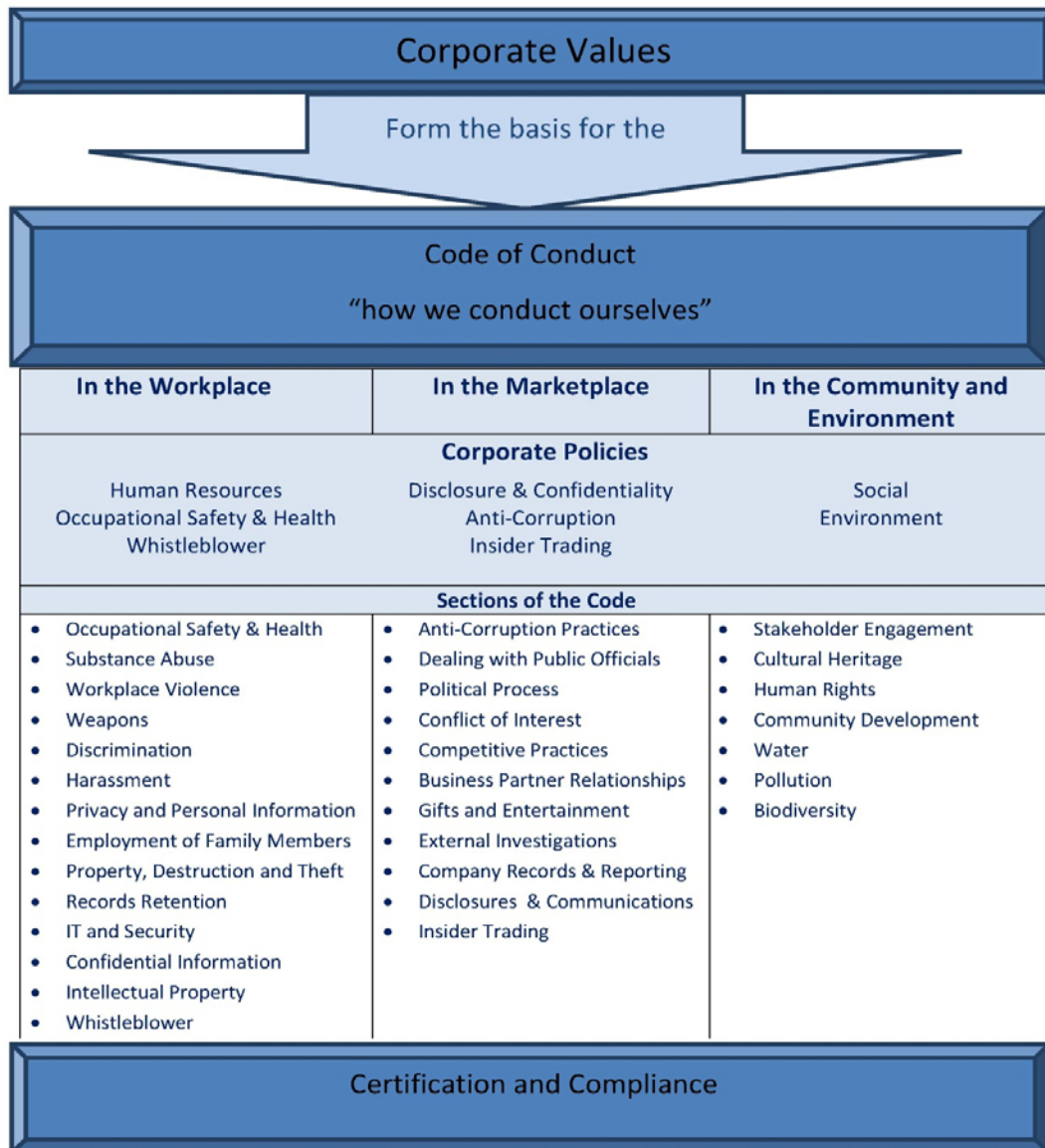


Figure 4-1: Lydian governance framework

In its social policy, Lydian recognizes good management of social considerations as a highest corporate priority and is committed to the establishment of sustainable relationships with its stakeholders, in particular with those communities surrounding its projects. Lydian seeks relationships which demonstrate mutual respect and understanding, active partnership and long-term commitment. Recognition of human rights is further committed through the Lydian Social Policy which states:

Lydian supports human rights consistent with the United Nations Declaration of Human Rights. The Company expects its operations to reflect the UN Guiding Principles on Business and Human Rights, based upon a due diligence approach to human rights; and

The Company's security procedures are consistent with this commitment and require endorsement of the Voluntary Principles on Security and Human Rights by all its operations.

4.4 COMMITMENTS FROM THE IMPACT ASSESSMENT

Various social and environmental commitments have been developed as part of the ESIA to manage and minimise potentially significant adverse effects to acceptable levels and to enhance Project benefits.


The ESIA is accompanied by a Commitments Register (CR) as an internal document which lists in one place all of the actions that need to be undertaken by the Project with respect to environmental and social issues. For the purpose of implementing community development activities, a number of commitments are listed below, which reflect relatively standard good practice management measures, already included or to be included in the various social plans, biodiversity plans and environmental management plans per the ESMS. Key commitments from Lydian pertaining to the CHSP are listed below:

- Effective communication strategies will be developed on the role and responsibility of the Project in supporting health-care service delivery in the area.
- Vector-borne diseases are not anticipated to be a significant risk and no mitigation is required. However, health records could be monitored to ensure no changes are occurring to the health profile of the region as a precaution.
- Infrastructure and systems will be developed, and locations selected, to ensure that domestic water usage, sewage and domestic waste management by the mine will not adversely affect available water supplies in the PACs.
- Lydian has a clear policy on HIV/AIDS in the workplace and community that establishes non-discrimination for anyone who may have the disease, as well as providing clear and accurate information on the spread of the disease, as well as other sexually transmitted infections.
- Truck stop development within local communities will be minimised. Either transport workers will be accommodated in the construction camp or a procedure will be developed to limit overnight stops in local communities, including Jermuk.

- Support programmes for women working in hotels and other recreational establishments will be developed to reduce risk of transactional sex. Women's empowerment and education programmes to avoid the temptation to be involved in forms of transactional sex work will be supported.
- A baseline of current commercial sex work (CSW) activities will be established. Monitoring will identify any increase, especially in Jermuk. Lydian will work with local authorities to find a practical solution in terms of commercial sex work (including on uphold legislation).
- A Community Health Information System (CHIS) on key HIV and STI indicators will be developed from longitudinal data sources. Local information, education and communication (IEC) campaigns on HIV and STI awareness that promote behaviour change will be supported.
- Lydian will support the development of a CHIS to monitor specific key health indicators on communicable diseases from longitudinal health data from the local health services. This will be in the form of a basic database with key indicators captured from each health centre/hospital. This CHIS will be used to monitor indicators for both impacts and success of interventions.
- There will be widespread availability and social marketing of condoms in the workplace and accommodation areas. Condom distribution programmes in local restaurants and entertainment areas where sexual transactions are likely to take place will be considered, with appropriate engagement with communities.
- The functionality of the local health care services will be supported so that the communities attend the facilities for the effective management of STIs.
- Specific nutritional surveillance will be undertaken in children and adults using data from the local health centres. This data should be fed into the CHIS.
- Workplace pandemic preparedness policies and programmes will be developed and maintained to reduce the impact of any suspected or confirmed outbreak of disease at the local level. These will include effective surveillance mechanisms.
- A baseline biomedical study in the PACs will be undertaken in 2016 to determine the current exposures to heavy metals (study limited to arsenic and lead) that occur naturally in soil and water. This study will be performed with a local partner and preferably in association with the local health/environmental authorities. In addition, a statistical

sample size will be essential to enable future comparisons and analysis of samples must be completed at a laboratory with international accreditation.

- An effective monitoring system will be developed that tracks potential environmental exposures from heavy metals. This can be supported by serial sampling of humans based on the same methodology applied in the baseline studies. However, the basis for surveillance using human sampling is to determine the effectiveness of environmental concerns, and is not a control in its own right due to ethical considerations.
- A workplace TB management policy and programme for the workforce (including contractors and short term labourers) will be developed. This will be integrated into the project's HIV policy. Programmes will be based on and integrated into national programmes.
- Effective communication programmes will be developed in the Project-affected communities to report on water and soil quality as well any results linked to human sampling. It will be done mainly through the Participatory Community Monitoring (PCM) being implemented.
- Lydian will work with the Marz and national health authorities in remedying any health concerns or conditions identified as part of the baseline examination or serial surveillance.
- Demographic changes in the immediate project area will be monitored, and Lydian will work with local health authorities to determine if the available health facilities are adequate for the needs of the community based on the changes that have been created by the project. This will require support from the planning section of the MoH.
- Opportunities to partner with donor agencies or NGOs to improve health care services in the broader area will be sought. These should be managed and run separately from the Project, but the Project can consider elements of support. This will build on existing programmes being undertaken with Oxfam and their partners.
- Lydian will work with local authorities and law enforcement authorities in the area to promote adherence to road traffic laws and to inform community members of the legal speed limits. Surveillance of Road Traffic Accidents (RTA) and non-accidental injuries (assault) will be supported in the CHIS.

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5 ORGANISATION

Geoteam will ensure that sufficient resources are allocated on an ongoing basis to achieve effective implementation of this Plan. Chief responsibility for this Plan is shared between departments, based on the nature of the mitigation required.

The basic division of responsibility will be:

- Community Security – Security department;
- Community Safety – Health and Safety department; and
- Community Health – Community Relations department, with support from the Health and Safety department including accessing expertise from the Mine Doctor and paramedics as appropriate.

The oversight will be the responsibility of the Executive Vice President, Sustainability.

6 MITIGATION MEASURES

Community safety and security impacts were identified through the general ESIA process, as the communities are receptors of potential impacts. Additional specific community health impacts were identified through a Rapid Health Impact Assessment, which was conducted by Shape Consultants in 2011-12. This Health Impact Assessment used the internationally recognised Environmental Health Area (EHA) approach. Twelve, separate Environmental Health Areas have been defined and are summarised in the tables below:

Table 4.1 – Identified Environmental Health Areas

Number	Environmental Health Area
1	Communicable diseases linked to overcrowding and poor environmental/social health conditions – Acute respiratory infections (bacterial and viral), pneumonias, tuberculosis, including Multi-drug resistant tuberculosis and Extremely drug resistant tuberculosis; respiratory effects from housing, overcrowding, housing inflation, immunisation coverage.
2	Vector-related disease – Malaria, dengue, chikungunya, lymphatic filariasis, tick-related diseases and ectoparasites etc.
3	Soil, water and sanitation related diseases – Geohelminths, e.g. giardia, hook and pin worms, etc.
4	Sexually transmitted infections (STIs) – HIV/AIDS, syphilis, gonorrhoea, chlamydia, hepatitis B.
5	Food and nutrition related issues – Changes in subsistence practices, stunting, wasting, anaemia, micro-nutrient diseases (including folate, Vitamin A, iron, iodine), gastroenteritis (bacterial and viral) and food inflation.
6	Non-communicable diseases – Hypertension, diabetes, stroke, and cardiovascular disorders.
7	Accidents/injuries – Road traffic accidents as well as accidental and non-accidental injury
8	Veterinary medicine and zoonotic diseases
9	Environmental health determinants
10	Social determinants of health: social cohesion, lifestyle and well-being
11	Cultural health practices – Role of traditional medical providers, indigenous medicines and unique cultural health practices.
12	Health services infrastructure and capacity – Physical infrastructure, staffing levels and competencies, technical capabilities of health care facilities, immunisation programs.


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Table 6.1 presents a summary of the potential risks and impacts related to community health, safety and security, together with mitigation measures to avoid or reduce these impacts. Mitigation measures will be implemented prior to and during construction, where possible. As with all ESMS plans, this CHSP should be considered a live document and will be continually improved as the Project develops.

Table 6.1 Inherent and Residual Community Health, Safety and Security Impacts and Mitigation Measures

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
EHA #1- Communicable disease linked to the living environment		
<p>Tuberculosis (TB) is not commonly reported in the study area, but the high national prevalence of multi-drug resistant TB is a concern locally.</p> <p>The community have a reported poor health seeking behaviour that may limit the case detection ability for certain communicable diseases.</p>	<p>The incoming workforce has the potential to introduce communicable diseases into the area. This can include conditions such as TB and influenza amongst others.</p>	<p>Community health information system (CHIS) to monitor health statistics of acute and chronic respiratory disease and TB.</p> <p>Health systems strengthening (HSS) to improve TB case detection and case management in local dispensaries.</p> <p>Develop and maintain site based TB policies and programmes, which can include TB screening at pre-employment.</p> <p>Maintain outbreak/pandemic preparedness and response plans, to be developed prior to construction.</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>Housing in the study area is characterised by poor indoor air quality and high humidity that lends to damp and mould in certain communities. There is the added challenge that poverty is limiting the ability to build new houses or maintain/expand existing structures.</p>	<p>This inability to expand houses may lead to overcrowding. The Project may develop local economic growth that may increase the local ability to afford better housing.</p> <p>In-migration may occur to the area from returning residents or job seeking migrants. This may place pressure on available housing.</p>	<p>Ensure adequate accommodation facilities in worker accommodation. The Project is providing enough accommodation for workers, as well as encouraging further development as part of Community Development Programs (ref GEOTEAM-SOC-PLN0153).</p> <p>Consider the risks for in-migration as part of the social management plans and based on results of monitoring for in-migration impacts.</p>
<p>EHA #2- Vector related diseases</p>		
<p>The risk for transmission of vector related diseases in the study area is low.</p>	<p>The Project will not create any direct or indirect impacts due to vector related diseases.</p>	<p>Monitor the statistics in the health facilities in the area in relation to vector related disease.</p>
<p>EHA #3- Water, sanitation and waste related disease</p>		
<p>The prevailing access to improved water and sanitation facilities in the study area is limited.</p>	<p>It is understood that direct abstraction from surface water sources is not used to supply</p>	<p>Water quality and environmental management and surveillance from project which includes water quantity and quality monitoring (Ref GEOTEAM-ENV-</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>While access to piped water was adequate water quality was reported to be poor.</p> <p>The sewerage systems in most of the villages in the study area were in a poor condition. Garbage removal was also limited.</p>	<p>potable water to any of the municipalities in the vicinity of the mine.</p> <p>The use of water by the HLF will increase the demand for water and have potential impacts for any discharges required. The camp will also produce solid and liquid waste as well as garbage. Due to the limited local capacity, the Project must develop the capacity to supply potable water and manage its own waste in an effective manner.</p> <p>During construction water will be abstracted from the Vorotan River and during operation, water will be abstracted from the Arpa River.</p> <p>In-migration may increase demand on these scarce resources and may lead to disease outbreaks and social discord.</p>	<p>PLN0225) and communication with stakeholders, through Stakeholder Engagement Plan (Ref GEOTEAM-SOC-PLN0150).</p> <p>The Project will be operated as a zero discharge site during the operational period. Less than 5% of the flow of both the Arpa and Vorotan will be abstracted by the Project, which will be checked through the monitoring plan (Ref GEOTEAM-ENV-PLN0225)</p> <p>Ensure an effective potable water supply to the Project that does not influence local supply and similarly, effective waste water management from the mine operations and mine workers' accommodation.</p> <p>Conduct information education and communication (IEC) campaigns in the workforce on proper water use, hygiene and sanitation. Records of attendance at these will be maintained in accordance with the Document Control Procedures (ref GEOTEAM-ENV-PRO0210).</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
EHA#4- High risk sexual practices, STIs including HIV/AIDS		
<p>HIV is relatively uncommon in the study area but there is evidence of an increased national trend.</p> <p>At the local level, there was the perception that most of the local cases were imported from Russia or other Central Asian countries.</p> <p>Knowledge and practices appeared good and as a result, stigma was relatively low.</p> <p>Health seeking behaviour for sexually transmitted infections (STIs) is reported as poor. STIs were rarely reported locally.</p>	<p>Transport corridors may increase the ability to transmit STIs; either from transport workers or through promotion of movement of people in and out of the study area. This may result in mixing of people with higher prevalence of STIs and HIV than what occurs in the local population. In-migration may also influence this.</p>	<p>Develop a HIV/AIDS policy and programme that incorporates both the workplace and community considerations.</p> <p>Develop a monitoring system on key HIV and STI indicators in the local health care facilities.</p> <p>Support local IEC campaigns on HIV and STI awareness, with attendance records maintained in accordance to the Document Control Procedure (Ref GEOTEAM-ENV-PRO0210).</p> <p>HIV and STI prevention programmes for long distance truck drivers and drivers of light duty vehicles. This will require contractor support and management.</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
Social ills such as commercial sex work was extremely rare in the study area	Disposable income will increase in the area, which may increase the potential for forms of transactional sex to occur.	Develop local gender empowerment and IEC programmes to reduce the potential risk of increased transactional sex in the area.
EHA #5- Food and Nutrition		
<p>Malnutrition and food security is not a major concern locally.</p> <p>Local nutritional surveillance is adequate.</p>	<p>A reduction of agricultural land, grazing land and ability to harvest natural products may reduce local food security or supply.</p> <p>Food inflation in the area may result due to supply and demand impacts from the Project.</p>	<p>Ensure adequate access to local agricultural and grazing land through minimising project footprint, identifying additional areas for grazing or compensation as required. Conduct monitoring of herders at regular intervals.</p> <p>Consider periodic food inflation surveys.</p> <p>Undertake specific nutritional surveillance through data in the local health centres as well as in adults. This data should be fed into the proposed CHIS.</p>
EHA #6- Non communicable diseases		
Non communicable diseases (NCDs) are the biggest cause of burden of disease in Armenia. This is related to the lifestyle and	The Project development is unlikely to play a significant direct role in increasing NCDs other than the potential to improve the local economic	Support health education programmes as part of community based outreach programmes.

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>poor management of modifiable risk factors.</p> <p>The health system is also poorly equipped at developing a promotive health programme which is compounded by the poor health seeking behaviours of the local community.</p>	<p>situation, which may result in poor lifestyle practices as a result of increase disposal incomes.</p> <p>The potential impact of NCDs in the workforce also needs to be considered as this may impact on employee health and safety as well as productivity</p>	<p>As part of the medical surveillance activities in the workforce screen for NCD's. Initiate wellness programmes in the workplace for the prevention of chronic diseases through management of modifiable risk factors.</p>
EHA #7- Injuries and accidents		
<p>Injuries and accidents are uncommon in the study area with road traffic accidents (RTAs) the most commonly reported.</p>	<p>There is a concern that the Project may increase transport corridor injuries through RTAs.</p> <p>An improved economy in the area may allow more people to be in a position to afford motorised transport with a potentially increased risk for accidents.</p>	<p>Traffic impact assessment indicates that traffic impacts will be low.</p> <p>Speed controls will be applied to all Project vehicles passing through local communities, in accordance to Transport Plan (Ref GEOTEAM-ENV-PLN0223). Strictly enforce the drug and alcohol policy for all project associated vehicles.</p>
EHA #8- Veterinary medicine and zoonotic diseases		

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>Zoonotic diseases are unpredictable, with potentially significant outbreaks due to seasonal movements of animals/livestock. The Project is unlikely to influence the risk of transmission of these diseases in any significant manner.</p>	<p>Project may reduce risks of transmission due to restriction of movement of livestock and wildlife, but this is not likely to provide a meaningful role in reducing disease risk from the prevailing baseline.</p>	<p>No mitigation measures required.</p>
<p>EHA #9- Environmental Health Determinants</p>		
<p>The potentially affected communities are located at some distance from the proposed project, which will limit the potential environmental health effects.</p>	<p>Noise and Vibration impacts are expected to be low - moderate due to the distance of any noise and vibration sensitive receptors from the Project (see noise and vibration assessments)</p>	<p>Ensure effective monitoring programmes that are well managed and based on appropriate noise modelling, in accordance to Air Quality, Noise and Vibration Management Plan (Ref GEOTEAM-ENV-PLN0241).</p> <p>Develop effective communication procedures to proactively and transparently communicate results on noise and vibration and other potential project related exposures in the community.</p> <p>Ensure effective occupational hygiene monitoring to reduce noise through engineering controls to as low as reasonably practical</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>The primary source of water for communities is groundwater. A number of heavy metals were detected in the ground water at baseline, which is likely to reflect the prevailing environmental conditions.</p>	<p>Acid rock drainage was noted to be a risk from the barren rock storage facility and open pits which can pose a significant risk to surface and groundwater quality in the study area if this is not effectively mitigated in a sustained manner. The presence of certain heavy metals is also important as these have the potential to increase in concentration with leaching from increased pH from the acid rock drainage. The most important heavy metals that were detected from a human health perspective included arsenic, chromium, manganese and lead.</p> <p>In addition, there is the potential for pollution of surface and groundwater sources from the Projects activities.</p>	<p>As noted in the Surface and Groundwater impact assessments chapters, there is not expected to be any significant impact to water users from ARD or heavy metal content from water. This has been re-enforced through the decision to operate a zero discharge site. Develop appropriate water management and monitoring systems as have been recommended by the integrated water specialist study – see the Surface water management plan (Ref GEOTEAM-ENV-PLN0214).</p> <p>A risk assessment has been undertaken to determine heavy metal concentrations in surface and ground water and evaluate the risk to human health through assessing toxicological exposure pathways. Monitoring will be undertaken as per the Environmental Monitoring Plan (Ref GEOTEAM-ENV-PLN0225)</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
	<p>A number of hazardous chemical substances (HCS) may be used (produced) in (by) the project process or in ancillary services. The most important is cyanide, which will be used in the extraction process of the ore on heap leach pads.</p>	<p>Cyanide will be managed in the framework of the International Cyanide Management Code (ref GEOTEAM-ENV-PLN0221).</p> <p>Other HCS management programmes must be in alignment with IFC PS3 guidance.</p> <p>Undertake a risk assessment on all HCS on site and develop requisite programmes to safeguard employee and community health.</p>
	<p>Based on detailed specialist studies it was determined that radiation and uranium exposures will have negligible workplace or community health impacts.</p>	<p>On-going surveillance of radon gas and as required radiation exposures, including radionuclides in water.</p>
	<p>Air quality and malodours will not cause significant health impacts on the community. Dust fallout and its associated impacts on the community are limited by the distance of the Project from the communities and the prevailing wind direction.</p>	<p>Dust management programmes as recommended in the Air Quality, Noise and Vibration Management Plan (Ref GEOTEAM-ENV-PLN0241).</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
		<p>Surveillance of chronic and acute respiratory disease in the proposed community health information management system (CHIS).</p> <p>Develop effective occupational hygiene monitoring programmes to evaluate air borne pollutants in the workplace. These can be used to model the potential risks in the communities while supporting the medical surveillance programmes in the workforce.</p>
EHA #10- Social Determinants of Health		
<p>Local economic and employment opportunities are limited in the study area. Perceptions on quality of life and general well-being are limited in the study area</p>	<p>The project development has the ability to significantly improve the local employment and economic development in the area if properly planned and executed.</p> <p>This has the potential to increase the perceptions of well-being and quality of life. Improved livelihoods may increase the affordability of services and promote improved health practices such as health seeking behaviours.</p>	<p>Evaluate opportunities to support local economic development with a local on improved quality of life and perceived well-being, as per the Community Development Plan (Ref GEOTEAM-SOC-PLN0153).</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>The proposed Project has generated significant stakeholder interest. The expectations of the local community and other stakeholders towards the Project are relatively high. This is in part due to the misperceptions of the project and its planned activities, which can cause a diminished sense of well-being due to an unknown future.</p>	<p>In addition to the misconceptions, the presence of the Project has the indirect potential to negatively affect community cohesion. This may be due to influx, altered economics, potential inequalities, and changes in lifestyle and traditional practices.</p>	<p>Mitigation measures as part of the ESIA (see the Project Commitment Register (Ref GEOTEAM-ENV-FM0031).</p> <p>Effective communication strategies to ensure the communities are aware and understand the Projects planned and current activities. This will reduce misinformation and misperceptions.</p> <p>Perform regular perception studies which include elements on perceived well-being and quality of life.</p>
<p>EHA #11- Cultural Health Practices</p>		
<p>Traditional medicine has a cultural basis but is also influenced by the limited accessibility and affordability of the local health services. This reduces effective health seeking behaviour.</p>	<p>The Project is unlikely to impact on cultural health practices in any marked manner. An ecosystem services study has been commissioned to determine if the Project will negatively impact on access to local herbs and plants.</p>	<p>Recommendations as per the ecosystems services assessments.</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
EHA #12- Health Services and Systems		
<p>The health services in the study area were generally of an acceptable standard to the local population but access and particularly affordability were noted as major constraints.</p> <p>The health services were lacking in basic services in areas with no heating or running water in some. There were also regular shortages of medication and consumables and essential equipment was often lacking.</p>	<p>The Project has the potential to negatively impact on health care services through increased demand. While the services in the small clinics are not overloaded an increased population from the workforce and potential job seeking migrants has the potential to overload these. Altered economics in the area may also improve health seeking behaviour which may in turn increase the burden on the local health services. It is anticipated that this will be manageable if recognised and planned for.</p>	<p>Develop and maintain a workplace occupational and primary health care centre to cater for the health care needs of the construction workforce. In operations it may be beneficial supporting local HSS to upgrade the facilities so that primary health care is managed off site and only the occupational health service is performed on site.</p> <p>Monitor the demographic changes in the immediate Project area and work with local health authorities to determine if the available health facilities are adequate for the needs of the community based on these changes which have been created by the Project.</p> <p>Consider HSS as a corporate social responsibility activity to improve health seeking behaviour.</p>

Key Findings and Community Vulnerabilities	Potential Community Health, Safety and Security Impacts	Management and Mitigation
<p>The health information management system appeared to function effectively at the local level but was limited by the poor health seeking behaviour, limited diagnostic equipment and manual recording.</p>	<p>Reduced ability of the Project to effectively monitor health impacts through locally available longitudinal data sets.</p>	<p>Support the improvements and maintenance of the local health information system to monitor for both health impacts as well as the success of interventions. Specific indicators can be requested from the local health services so trends are monitored proactively.</p>
<p>Community Security</p>		
<p>The project will employ approximately 21 security guards to prevent un-authorized access. High risk facilities, such as the ADR plant, will have an enhanced security presence to prevent any loss of the doré product.</p>	<p>Where tension exists between a project and host communities, the presence of security guards can escalate that tension. If the security guards have not received appropriate training they may resort to inappropriate use of force to manage conflict</p>	<p>Lydian is becoming a signatory to Voluntary Principles. Security contracts will be awarded to local companies. A Memorandum of Understanding will be developed with the Armenian Police to establish the use of force which is appropriate for the protection of the site assets and personnel. If armed guards are required to protect the doré product, effective training will be provided and their performance monitored closely.</p>

7 MONITORING AND REPORTING

The ESMS Standard 11 describes how Lydian manages its documented information associated with its Health, Safety, Environment and Community (HSEC) Management System.

Monitoring programs will be developed for community health, safety and security impacts. They will be designed to:

- Assess the effectiveness of mitigation actions and other actions/controls;
- Assess actual impacts against predicted impacts; and
- Assess compliance with applicable and other requirements.

Results of monitoring programs relevant to communities will be made available in the Amulsar Information Centre located in Gndevaz.


Progress regarding the implementation and efficiency of this Plan will be reported to mine management at least quarterly, in order to enable issues and responses to be assessed in a timely manner. Responses to any grievances from local communities will be addressed in accordance to the Stakeholder Engagement Plan (SEP).

8 PERFORMANCE MONITORING

The ESMS Standards 14 – Monitoring, Measurement, Analysis and Analysis of Compliance, 15 – Internal Audit, and 16 - Management Review describe how Lydian manages its performance evaluation associated with its Health, Safety, Environment and Community (HSEC) Management System.

8.1 VERIFICATION AND MONITORING

Geoteam's assurance monitoring will be undertaken as described in the Compliance Assurance Plan. Whenever monitoring indicates a non-conformance related to Project standards, requirements and commitments, Geoteam reserves the right to issue a Non-conformance Report (NCR), Corrective Action Request (CAR), Work Improvement Notice (WIN) and Temporary Work Suspensions (TWS) to the relevant applicant, which will include a time frame for addressing the issue.

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In addition to internal verification and monitoring and audits conducted by Geoteam, external audits may also be carried out by recognised third parties including Armenian regulatory authorities.

8.2 REVIEW OF NON COMPLIANCES

Geoteam shall investigate fully any non-conformances with this plan. In the event that such a non-conformance invokes an external investigation, Geoteam will cooperate fully with the competent authorities in any investigation and review of non-compliances with this plan.

8.3 ANNUAL AUDIT

The Site Environmental, Health and Safety Manager shall ensure that all activities and contingency plans covered by this Plan are subject to an ESMS audit (the minimum frequency shall be annual). The results of audits are to be discussed during annual management meetings, where the Social Development manager and the Health and Safety Manager shall provide information on the performance of the site and the Executive Vice President, Sustainability make recommendations for further improvement.

9 AUTHORIZATION

Approved By: _____

Executive Vice President Sustainability

Date

APPENDIX 1

With regard to community health, safety and security, the Amulsar Project will comply with applicable Armenian laws and regulations; applicable International Finance Institution requirements; and applicable treaties and conventions. The applicable laws and other requirements are laid out in this section.

ARMENIAN LAW AND REGULATIONS

The Republic of Armenia (RA) legal framework is discussed in the ESIA (see Chapter 2). In summary, the following laws were included for their potential importance to community and public health:

- Health Laws
 - Law on Food Safety;
 - Law on Narcotic Drugs and Psychotropic Substances; and
 - The Law on the Sanitary-Epidemiological Safety of Population, which was adopted on November 16, 1992. This law puts forward requirements for sanitary-hygiene expertise.
- Public Laws
 - Law on Population Protection in Emergency Situations;
 - Law on State Statistics; and
 - According to the Law on Unification of the Measurements. One of the objectives of this law is to protect human life and health, the environment and ensure occupational safety.
- Energy Laws
 - Energy Law 2001.
- Mine Laws
 - Mining Code of Armenia, 2012, with subsequent amendments in 2014 and 2015.
- Labour laws
 - Labour Code of 9 November 2004.
- Environmental Laws
 - Law on Environmental Impact Expertise (EIE) 2014 – One of the main principles of the law is the human right to be healthy, to live and work in a healthy environment. Human health is thus an important element of this law. The Ministry of Health is one of the decision makers in the Environmental Impact Expertise process. The Ministry of Nature Protection refers specific health related queries to the MOH as required.

- Water Code of the Republic of Armenia;
- Forest Code of the Republic of Armenia; and
- The Law on Atmospheric Air Protection (adopted on November 1, 1994).
- Agricultural Laws
 - Law Of The Republic Of Armenia On Agricultural Census; and
 - Law Of The Republic Of Armenia On Organic Agriculture.


Although there is no explicit requirement within Armenian legislation to undertake a health impact assessment, the Law on Population Protection in Emergency Situations is particularly relevant to community safety and security. This outlines a series of responsibilities of RA citizens and the government to victims of major accidents. These are mainly perceived to be accidents caused by natural disasters, pandemics and weapons research activities, but some aspects and procedures will have relevance to emergency planning at Amulsar mine. These include the nature of the rights of victims to have access to information in emergency situations and for all to be made aware of protection mechanisms to both prevent and address emergency situations. The Project will use the Awareness and Preparedness for Emergencies at the Local Level (APELL) process to achieve this, in accordance to the Emergency Preparedness Response Plan (EPRP).

The law states that in the emergency situations enterprises, institutions and organisations must:

- Provide the protection of their employees; and
- Support the implementation of rescue and urgent activities and establish necessary forces to fulfil relevant activities.

A high priority is to provide immediate warning and protection of the population living in the zone of possible dangerous impact.

The government of RA is responsible for directing action in emergency situations and monitoring its implementation. State regional bodies and local authorities are those who organise emergency response activities on the ground, including population protection work and restoration projects that seek to reduce the effects of emergency situations. It is the responsibility of the republic-level body authorised to deal with population protection to gather funds and organise procedures under this law.

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IFC PERFORMANCE STANDARDS AND GUIDANCE NOTES

Various international standards and guidelines apply to community health, safety and security. Those that are relevant to the Project are listed in Appendix 1.

Performance Standard 4: Community Health, Safety and Security (International Finance Corporation, 2012), and its objectives are:

- To anticipate and avoid adverse impacts on the health and safety of the affected communities during the project life from both routine and non-routine circumstances; and
- To ensure the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimises risks to affected communities.

Performance Standard 1: Social and Environmental Assessment and Management Systems (International Finance Corporation, 2012), and some of its objectives are:

- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimise, and where residual impacts remain, compensate/offset for risks and impacts to workers, affected communities, and the environment;
- To ensure that grievances from affected communities and external communications from other stakeholders are responded to and managed appropriately; and
- To promote and provide means for adequate engagement with affected communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.