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6.21 Worker Accomodation

6.21.1 *Scope and Purpose of this Document*

The present Section has been developed in April 2016 as an update to the ESIA, to take into account the findings of the Worker Accommodation Study (WAS) completed in April 2016.

The WAS evaluated the option of housing the Project's non-local construction workforce in existing hotel accommodations in the town of Jermuk and other communities within a reasonable driving distance from the Project site.

The IFC/EBRD guidance note, *Workers' Accommodation: Processes and Standards* calls for assessment of the likely impacts of worker accommodation options on local communities to be conducted. In this Section, the possible social impacts of the Project's accommodation arrangements have been assessed and mitigation measures proposed.

This Section contains an assessment of a "hybrid" of the two main workforce accommodation options presented in the WAS. It is assumed that up to a maximum 397 hotel beds will be utilized in high season and 561 hotel beds in low season to house the Project's construction workforce, and that a camp will be constructed to house at least 500 persons and up to 920 persons (the estimated size of the non-local workforce at peak of the construction phase)..

As the focus of this assessment is on the use of hotels and a camp to house the Project's workforce, its scope has not included an evaluation of the Project's possible impacts on the local housing market (assumed to not be affected by use of a self-contained camp and/or hotel rooms). Notwithstanding this, changes in the composition of the local population and/or their incomes resulting from the development of the Mine are likely to influence the local housing market – those impacts are considered elsewhere within the ESIA (e.g., chapter 6).

Amulsar Project Description

The Project is located in central south-east Armenia approximately 170km from Yerevan in an area commonly known as the Caucasus.

The Project footprint is bounded by the coordinates: 39.7824° North, 45.6108° East and 39.7210° North, 45.7416° East.

The wider area is characterised by mountains, undulating hills, river valleys and gently inclined plateaus at lower elevations. Surface water run-off from the slopes of the Project-affected area contributes to the catchments of the Arpa, Darb and Vorotan rivers. The Vorotan River flows

to the east of the Project and the Darb River flows to the south of the Project, and joins the Arpa River flowing west.

The gold ore deposits are located on the ridge peaks in the region of Amulsar Mountain, within the Northern Zangezur mountain chain at an altitude of 2,500 - 2,988 metres above sea level (m asl).

The land within the Project-affected area is characterised by sub-alpine and mountain meadow landscape which typically supports grasslands used for summer grazing. At lower elevations agricultural use is more diverse and supports a range of crops.

Regional climate variation is pronounced, with the foothills at lower altitudes having longer and hotter summers, averaging around 25^{o}C, and winter temperatures at an average of -5^{o}C compared to the average of -12^{o}C which can be recorded in the mountains. Annual rainfall is also influenced by the mountains and more rainfall is experienced at higher elevations; an average of approximately 800mm of rainfall per year would be typical for Amulsar (elevation of up to 3000 masl). Snow cover is present on the mountain in the period November to April and can exceed a depth of 3m, depending on weather conditions.

The Project-affected area straddles Vayots Dzor Marz (the capital of which is Yeghegnadzor) and Syunik Marz (the capital of which is Kapan). The closest town to the Project is Jermuk, which is situated approximately 10 km northwest from the gold-silver ore deposit and 7 km from the closest piece of Project infrastructure.

There are four rural communities in proximity to the Project, namely: Kechut (a rural community associated with the town of Jermuk), Saravan (including Saralanj and Ughedzor) and Gndevaz in Vayots Dzor Marz; and Gorayk, located in Syunik Marz. Gndevaz is the community closest to the footprint of infrastructure associated with the Project (the Heap Leach Facility (HLF) located > 1 km from the outer edge of the village).
The duration of the Project comprises two years of construction followed by a further 11 years of operation. In the event that further viable resources be found, the life of the Project could be extended. At the present stage of the Project development, however, the ESIA has only considered the exploitation of the ore deposit that has been proven through the programme of exploration to date.

Project Phases

The Project consists of the following main phases:

- **Exploration:** surface mapping, exploration drilling, and soil geochemistry, which has been used to define the geological resource to support a future mine development. Exploration at Amulsar has been ongoing since 2006. There will be continued and ongoing exploration at the site during the mine construction and operation activities to identify possible additional ore.
- **Construction:** the infrastructure required for the operation of the mine, processing of ore and refining of precious metals will be constructed, including ancillary infrastructure such as maintenance workshops and site offices.
- **Operations:** the production of gold and silver (as Doré) which comprises the phased mining of ore and barren rock from the open pits together with the processing of ore, and placement of barren rock in the storage facility.
- **Closure:** post operations, which includes the reclamation of the open pits, BRSF, and the HLF. Topsoil stockpiles established during construction will be used during site reclamation and closure. Infrastructure will be dismantled and disturbed areas will be restored to grasslands or other habitats similar to those currently present within the Project footprint.

Project Components

Accommodation facilities are a major Project component that will be developed during the construction phase of the Project.

6.21.2 *Profile of the Amulsar Project Workforce*

Lydian has developed a Project Execution Plan (PEP) in January 2016. It provides useful detail on the expected characteristics of the Project workforce based on estimated resources following recent Feasibility Studies.

The PEP is a series of excerpts from the Amulsar PEP Draft Rev. L. The excerpts contained here should be considered in draft form and are for general background to some of the environmental and socio-economic issues associated with the Amulsar gold project.

Household Profile

The average household size in Armenia consists of 4 people[1]. Rural households are moderately larger than urban households (4.4 vs. 3.7 persons)[8]. Armenian households often comprise related family units, common in both rural and urban areas.

[1] Armstat, (2014) Preliminary Data for 2011 Population Census www.armstat.am (in Armenian) accessed May 2 2014

In Gorayk, Gndevaz and Saravan, the average household sizes are between 5 - 7 members, usually as a result of two or more related families residing within a household. Reasons for coalesced families in households centre on housing affordability, availability of labour for subsistence agriculture, culture and tradition.

Approximately 75% of Jermuk town households have three or more members, with 35% having five to seven members[2]. This is linked to the lack of affordable housing choices for young people of marriageable age. Kechut showed greater tendency to larger households, with over 55% households having five to seven members.

Family life and inter-family allegiances are the cornerstones of local communities. Often family units consist of different generations, with sons bringing their wives into the family home. Mother and daughter-in-law relationships are prominent with mothers-in-law managing the household assisted by daughters and daughters in law.

Although women have an important role in the household, men are generally regarded as the head of households. High levels of migration by men searching for work have however led to a significant proportion of female-headed households (27% of Armenian households were headed by women in 2007)[3]. Community affairs are predominantly managed by men.

6.21.3 *Workforce Profile*

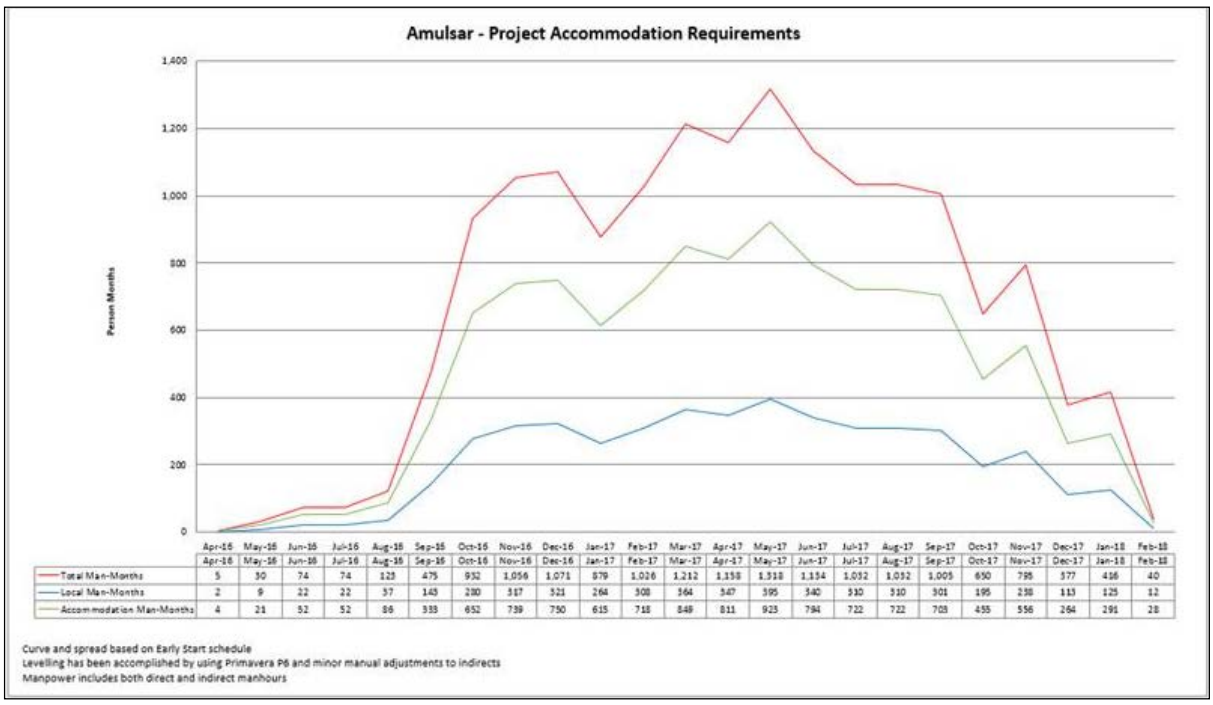
Nationality of the Workforce

The Amulsar workforce is expected to consist mainly of Armenian Nationals. A large proportion of the permanent workforce will be sourced from the local communities of Gorayk, Saravan, Gndevaz, Kechut, and Jermuk; and from other communities within a 45km radius of the Project. However, given the lack of extractive industries experience in these communities, it is expected that a significant percentage of the highly skilled workforce, i.e. engineers, geologists, metallurgists, and mechanical and electrical tradesmen with mining and processing experience, will need to be recruited from Yerevan and other regional centres of the country. Positions that cannot be filled by Armenians will be staffed with suitably qualified expatriates on fixed term contracts. It is anticipated that within 3 – 5 years the local workforce will have gained sufficient experience and competency to replace the majority of the expatriate job roles.

[2] MPG, (2010), Jermuk and Kechut Baseline Study
[3] International Fund for Agricultural Development (2007). Armenia Gender Profile, viewed 13 May 2012. http://www.ifad.org/english/gender/cen/profiles/arm.htm

Expected Project Workforce and Accommodation Requirements

The total workforce during operations is estimated at 657 employees. The peak workforce during construction could be as high as 1,300, of whom up to approximately 400 will be local. Figure 3 shows the expected workforce curve for the construction phase, with an estimate of the local and non-local composition of the construction workforce, whereby the estimated non-local workforce represents the number of accommodation beds required.



	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18
Total Man-Months	5	30	74	74	123	475	932	1,056	1,071	879	1,026	1,212	1,158	1,318	1,134	1,032	1,032	1,005	650	795	577	416	40
Local Man-Months	2	9	22	22	37	143	280	317	321	264	308	364	347	395	340	310	310	301	195	238	173	125	12
Accommodation Man-Months	4	21	52	52	86	333	652	739	750	615	718	848	811	923	794	722	722	703	455	556	404	291	28

Figure 6.21.1: Estimated accommodation requirements for non-local construction workforce (in green)

The heavy industrial nature of the facilities will require significant expatriate supervision during construction. An international firm (or firms) will be awarded Engineering, Procurement, and Construction Management contracts to complete the design and manage Project construction. The appointed firm(s) will employ the bulk of the expatriates required for the construction of the Project. A part of their mandate will be to maximize the employment of local personnel and to utilise local sub-contractors where suitable skills exist. It is anticipated that approximately 30% of the construction workforce will be from the local area. The non-local Armenians and expatriate construction workforce will reside in hotels a temporary construction camp.

During operations, some of the accommodation arrangements for non-local Armenians and expatriate employees will remain the same. The bulk of the workforce during operations, approximately 85%, will be employed in the mining and processing departments.

Upon closure, about 20 workers will be employed in monitoring and maintenance activities of the decommissioned plant. Salaries have been benchmarked against comparable operations in Armenia.

Depending on the nature of work and the origin of the employee, the duty roster for the Amulsar Project during operations could be as indicated in Table 2 below. Armenian employees have a shorter roster in order to adhere to local labour legislation (maximum 48 hours in a working week).

Table 6.21.1: Duty Roster for Amulsar Project Employees

Employee Type	On duty	Off duty
Armenian shift worker, 12 hour shifts	4 days	4 days
Armenian day workers, 8/9 hour shifts	5 days	2 days
Expatriates	5 weeks	2 weeks

6.21.4 *Migration of Potential Workforce*

International labour migration

By the 1980s the practice of seasonal migration for work had spread to urban centres of Armenia, with between 30,000 to 40,000 seasonal labourers migrating, predominantly to Russia, between spring and fall each year[4]. The practice of seasonal labour migration remains common, with over 14% of households engaged in the activity in 2006, approximately 100,000 labour migrants per annum. By 2007, labour migrants constituted 94% of all migrants, with only 3% leaving Armenia with an intention to permanently reside abroad and 2% with an intention to study internationally[5].

The overwhelming majority of Armenian labour migrants are married men between the ages of 21 and 50, with only 6.5% of the migration pool made up by women. The ILO estimated that this level of migration comprised 13% of the economically active men and just over 1% of economically active women in 2006[17].

The decision to migrate seasonally for labour is driven primarily by the job scarcity. Opportunity to improve salaries and a greater range of job types exist further afield, often abroad. Young men from villages often leave to work abroad after completing their military service, without necessarily first seeking opportunities within Armenia. The tradition of *khopan*, refers to the practice where in some villages men have been continuously leaving to work abroad over a long period of time.

[4] UNDP, (2009), Migration and Human Development: Opportunities and Challenges, Armenia, 2009, www.undp.org (accessed 4th September 2012)
[5] ILO, (2009), Migration and Development – Armenia Country Study

The global financial crisis of 2009 has impacted migration patterns in Armenia, with a small reduction (approximately 2%) of seasonal labourers from both rural and urban areas[6].

Local migration

Within the neighbouring villages out-migration is prevalent but of less significance than it is at a national level. Anecdotal evidence suggests that local seasonal migration is dynamic and that it has been variable between villages during the period 2009 to 2015.

While Saravan, Jermuk and Kechut show a decrease in migration, Gorayk shows a marginal increase. Gndevaz shows high variability with a significant increase in 2014. According to a core strategy for Jermuk developed by USAID in 2008, many former Jermuk residents have moved abroad permanently, mainly to Russia, as migrant labourers. On the other hand, a large number of Jermuk residents with relatively high educational attainment are believed to have moved to Yerevan to pursue better work opportunities.

Table 6.21.2: Number of Seasonal Migrants in 2009, 2014 and 2015

Village	Number of seasonal migrants		
	2009	2014	2015
Gorayk	7	12	15
Gndevaz	20	71	22
Saravan	20	15	7
Jermuk and Kechut	no data	560 (2013 data)	230

Inward migration during summer months is associated with seasonal herding activities. Seasonal herders, who are predominantly residents of Vayk, Sisian, Xndzoresk and Yeghegnadzor, migrate to the Project area to graze their livestock (cattle and sheep) on the pastures and to grow hay. In 2012, 58 seasonal herders migrated to the Project area to graze cattle and grow hay. The Project has mapped the approximate locations of the camps in the ESIA.

6.21.5 *Methodology*

To evaluate the potential social impact associated with housing workers in hotel accommodations and in a self-contained camp, data collected for the worker accommodation study (WAS) are considered. The WAS team visited and inspected hotels in Jermuk with the purpose of assessing their suitability for housing workers for the Project. Interviews with hotel owners or managers were conducted to gather information about the hotels' capacity to house Project workers as well as perceptions about the possible effects that housing Project workers in hotels might have on the hotels and on other local businesses.

[6] National Institute of Labour and Social Research, (2010), Impact of the Global Financial Crisis on Households

In addition, interviews with key persons from the community of Jermuk (e.g., Community Liaison Committee, the Mayor, health care officials, and representatives from civil society organizations) were conducted in which the accommodation options as well as the influx of Project workers were discussed. Perceptions about potential impacts of the Project and its workforce on the community were explored during these interviews.

A set of questions intended for hotel owners/managers and community representatives was prepared in advance of the visits. Based on the level of knowledge of interview respondents and the type of information being provided, ad hoc follow on questions were also asked. Questions related to various types of community capital – including community infrastructure, social capital, and economic capital. The questions included in the interview guides were designed to gather information about existing socio-economic conditions and to elicit views about possible impacts of the Project's accommodation arrangements on the local community.

The impact assessment methodology utilized in this chapter is discussed in section 4.3, and is presented in more detail in Appendix 6.21.1.

6.21.6 *Baseline Conditions*

Areas of Influence

The national area of influence is the entire country of Armenia. The regional area of influence includes the two *Marzer* (provinces) straddled by the mine layout and footprint, Vayots Dzor and Syunik. The local area of influence is defined as the settlements most likely to experience changes from environmental and social impacts. The local area of influence covers "project affected communities", which refers to residents in the three closest rural settlements – Gorayk, Gndevaz and Saravan (including Saralanj and Ughedzor), the town of Jermuk (including Kechut) and seasonal herders resident on Project land during summer months.

Vayots Dzor *Marz* comprises the following districts: Jermuk, Yeghegnadzor and Vayk, with populations of 4,346, 7,421 and 5,067 respectively (according to the 2011 Census). Syunik *Marz* comprises four districts: Kapan (34,713), Goris (17,881), Meghri (4,282) and Sisian (12,074). The Project site is located in Jermuk, Vayk and Sisian districts.

The Project's local area of influence is predominantly rural, with Jermuk being the only urban centre in the area. According to the 2011 Census, the population of Jermuk was 4,346 and the neighbouring community of Kechut had a population of 884. In both communities, full-time employment is the main source of income of the local population. The largest employers are Jermuk Mineral Water Bottling Factory, Mayr Gortsaran Bottling Factory, and hotels and other

businesses linked to the tourism sector in Jermuk.

The tourism sector is the mainstay of the economy of the town of Jermuk. In the 1940s the town was established, due to its mineral waters, as a tourist destination within the Soviet Union. At its height in the late 1980s, the town had a population of 10,000. This number greatly diminished after the breakup of the Soviet Union, and the 2001 Census recorded a population of around 6,300 residents.

6.21.7 *Existing Hotel Facilities*

The WAS identified 15 hotels in Jermuk, of which all were visited and inspected by the study team. Various criteria (i.e., technical, safety, and socio-economic) were applied by the WAS team in the assessment of their viability for use by the Project to house its workforce. A key factor in the socio-economic criteria applied was the hotels' typical occupancy rates during the high tourist season and their existing arrangements with various clients. Thus, potential use of hotels by the Project was "capped" in such a way as to minimize impacts on the traditional tourist trade in Jermuk.

Of the hotels identified and inspected, some were excluded from further consideration by the Project due to their state of repair and/or the need for extensive renovations (in some instances, renovations are not expected to be completed within the timeframe of the anticipated ramp-up period in the Project's construction phase). Although the WAS identified a total hotel capacity in Jermuk and area of 1,306 beds (based on double occupancy), the maximum number of hotel beds potentially utilized by the Project was estimated to be 397 in high season to 561 in low season.

6.21.8 *Potential Social Impacts – Workforce Accommodation Options*

This section presents the assessment of the potential social impacts of each of the worker accommodation options under consideration.

Fieldwork Undertaken

Following completion of review and fine-tuning of procedures, criteria, expectations and logistics, the Worker Accommodation Study (WAS) team travelled to the study area in March 2016.

Field investigations were conducted over the course of six days by methodically visiting each potential hotel accommodation. During this time the WAS team was based in Jermuk. For field activities the team would typically split into two groups; one to conduct visual inspections

of hotel facilities, and other to complete interviews with hotel managers and community representatives. As noted in 6.21.5, interviews with hotel managers and community representatives were conducted to collect data about existing socio-economic conditions including levels of employment in the local community as well as trends in the hospitality and tourism sector – and to understand perceptions of the possible impacts of the Project on the local community.

6.21.9 *Workforce Accommodation Arrangements*

The two main workforce accommodation options identified in the worker accommodation study (WAS) conducted in April 2016 were as follows:

- Option 1: upper end of estimated socially acceptable use of hotels, 370 hotel beds, 550 camp beds.
- Option 2: a range of hotel utilization from zero up to 370 beds in Jermuk and Arpa Valley resulting in camp size between 550 and 920 people.

The maximum camp size of 920 people is equal to the size of the non-local workforce which will be required and is necessary if no hotels are utilized. If the maximum high season hotel availability of 370 beds is utilized, a 550-person camp will be required during Project construction ramp-up.

It should be noted that this scenario also covers the use of selected hotels which will be required to facilitate initial camp construction. In this scenario Management may determine if and how many hotel beds are used for the duration of Project construction. With both options presented above it is important to note that the hotel usage quoted is the usage at peak accommodation demand (May 2017) at approximately 1,300 people and is reflective of availability at that time. To meet requirements during the initial fall 2016 manpower ramp up, however, it should be assumed that the Project will utilize between 370 and 561 estimated maximum socially acceptable hotel beds as camp construction occurs (pushing demand above 1,000 people where it remains until construction nears completion in March 2018. This need for this is driven by the Project's steep manpower ramp up applicable with either presented option.

6.21.10 *Impact Assessment*

The potential social impacts arising out of the accommodation options under consideration have been identified drawing on knowledge of the socioeconomic environment and the proposed Project activities, as well as the results of fieldwork – namely, the input provided regarding perceptions of Project impacts explored during interviews conducted with hotel

owners and community representatives (i.e., CLC members, Mayor of Jermuk, and representatives of civil society organizations). Each of the impacts has been evaluated according to the predefined assessment criteria in order to determine their likely significance.

Assuming effective implementation of the measures designed to avoid, minimize, reduce or compensate for any adverse impacts as well as to enhance any positive impacts, each impact was re-evaluated using the same assessment criteria to determine the significance of the residual impacts following mitigation. Details regarding the Social Impact Assessment Methodology are presented in Appendix 6.21.1.

As noted above, it is likely that a hybrid form of workforce accommodations will be utilised. Thus, it is anticipated that the impacts identified under each of the two accommodation components (i.e., hotels and camps) will materialize under the hybrid. The anticipated social impacts of the workforce accommodation arrangements, as well as their likely significance before and after mitigation and management measures are put in place, are presented in Tables 3 and 4 below.

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [7][8]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Temporary Influx of Project Workers (occupying a considerable number of hotel beds), with potentially negative impact on traditional tourism	Construction	Construction phase Project workers take up part of the hotel capacity in the town of Jermuk, potentially affecting the availability of accommodations for more "traditional" visitors during the high tourist season. While this may represent a negative impact from the point of view of a segment of the tourism and hospitality sector, it is largely limited to the high tourist season (June to September and early January in Jermuk; May to October elsewhere) when hotels operate at close to full occupancy and the Project would be "competing" for beds with tourists.	Moderate Negative	It is proposed that hotels will be used selectively, and with reasonable limits on occupancy by the Project – in particular during the high tourist season. Specifically, two large hotels (the Moscow and Jermuk Ashkharh) would be used for 250 people and a number of smaller hotels for another 120 people. This means that no hotel would become completely unavailable to other visitors.	Minor Negative
	Operation		Negligible		Negligible
	Closure		N/A		N/A
Change in Visitors' perceptions of Jermuk as a "spa town", with negative impact on traditional tourism	Construction	A considerable presence of the Project's construction workforce in Jermuk (in addition to the presence of the mine itself nearby) may affect the "spa" character of the town and tourists' perception of the destination – normally associated with fresh air, tranquil surroundings, and spa/medical treatments. Although this change in perceptions is an impact of a qualitative nature, it may in the medium to long-term lead to other, more tangible, effects such as reductions in the numbers of visitors.	Major Negative	Minimize the number of workers housed in Jermuk hotels. Support tourism development efforts. Enforce Code of Conduct.	Moderate Negative
	Operation		Moderate Negative		Minor Negative
	Closure		Negligible		Negligible

[7] It is assumed that during the operations phase of the Project use of hotels would be reduced.
[8] This table is focused on the impacts of using hotels to house the Project's workforce.

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Change in Local Residents' Perceptions of Own Community (Sense of Place)	Construction	The presence of a construction workforce (and the mine nearby) may affect how local residents perceive their own community. This may include sense of place and perceptions of safety in the community. This is a qualitative effect, and may have some positive aspects if residents associate the presence of a mining project with increased employment and other opportunities for local people.	Moderate Negative	Frequent and proactive communication with local community stakeholders. Enforce Code of Conduct.	Minor Negative
	Operation		Minor Negative		Negligible
	Closure		N/A		N/A
Increased Pressure on Community Infrastructure and Facilities	Construction	The presence of the Project's workforce in hotels would not have a discernible impact on municipal infrastructure and services during the high tourist season, as typically during that time most hotels operate at or near capacity (and the municipality is prepared accordingly). However, for the low tourist season the municipality would need to	Moderate Negative	Increase capacity of local hospital. Make upgrades to municipal landfill. Coordinate with (and, where necessary, provide support for) the	Minor Positive
	Operation		Minor Negative		Minor Positive

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
	Closure	increase staffing to adjust to a higher than normal demand for services (due to the presence of Project workers in hotels) and may need to increase the rates for garbage collection charged to hotel operators. Resources would also need to be made available for snow removal and street lighting. This impact implies higher costs for the municipality of Jermuk, which may be offset by fees levied on the hotels (already benefiting from higher occupancy in the low season) or on the Project itself. The hiring of additional personnel by the municipality during the low (winter) season – if resources are made available to the Municipality – would represents a benefit or positive impact from the point of view of local employment. The provision of health services in the community may also be moderately affected if at specific times the Jermuk hospital finds itself overwhelmed by a large increase in cases. However, the Project may contribute to enhancing the capacity of the hospital – thus offsetting some of the negative impacts of increased demand for the services.	N/A	Municipality.	N/A
Increase in Local Employment	Construction	During the high tourist season, it is not expected that Project workers being housed in hotels would	Moderate Positive	N/A	Moderate Positive

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
(Direct and Indirect)	Operation	generate new or additional employment, as hotels generally operate at or near capacity during those months (June to September and early January). However, by housing construction phase workers in hotels, the Project has the potential to contribute to increased year-round employment for some workers in the town (both those directly employed by hotels and others involved in the service sector). This is a positive effect, although it is temporary due to the duration of the construction phase and seasonal (discernible mostly during the low tourist season).	Negligible		Negligible
	Closure		N/A		N/A
Increase in Local Procurement (Goods and Services)	Construction	There could be an increase in the procurement of local goods and services during the low tourist season (with the high tourist season likely unchanged) if the hotels' supply chain normally includes a considerable number of local businesses. However, the positive impact on local procurement of housing workers in hotels may be increased if the Project requires – as part of its contractual arrangements with hotels – the maximization of procurement from local businesses.	Minor Positive	Include local procurement provisions in the contracts of Project contractors. Implement supplier development programs.	Moderate Positive
	Operation		Negligible		Negligible
	Closure		N/A		N/A
Increased Skills Development	Construction	Increased year-round employment for some hotel workers and others may result in greater	Moderate Positive	N/A	Moderate Positive

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
(and Experience) of Local Workforce	Operation	opportunities for skills enhancement through on the job training. Enhanced skills and greater experience may lead to improved future employability of some workers. As the Project will likely house some expatriate workers in hotels during the construction period, this will likely provide more opportunities for hotel workers to enhance their foreign language capabilities – a critical skill needed for employment in the hotel and hospitality industry. This impact is positive, although it is expected to be of short duration (primarily during construction phase).	Minor Positive		Minor Positive
	Closure		N/A		N/A
Adverse Effects on Community Health, Safety,	Construction	Housing part of the construction workforce in hotels within the community of Jermuk has potential negative effects on community health,	Major Negative	Implement awareness programs (e.g., re: STDs).	Moderate Negative
	Operation		Minor Negative		Negligible

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
and Security	Closure	safety, and security. The influx of a construction workforce has the potential to result in increased transmissions of communicable diseases (e.g., STDs, flu, etc.). The need to transport a large number of workers from site to their accommodations would likely result in increased traffic and the presence of large vehicles in the community, possibly resulting in an increase in traffic incidents and/or changes in air quality.	N/A	Offer confidential testing for STDs and other communicable diseases. Increase the capacity of local health services. Minimize interactions of workers with community (enforce code of Conduct). Implement a traffic safety/control measures.	N/A
Potential Conflicts between Community and Project Workers	Construction	The potential for conflict between members of the local community and construction phase Project workers is enhanced if the workers are housed in hotels within the community and interactions are not minimized. Although the communities such as Jermuk are accustomed to visitors, it has been indicated that if local people perceive that unskilled and semi-skilled jobs are being offered to outside workers without considering local workers first, there may be conflicts as result of resentment generated among potential local workers.	Major Negative	Maximize local employment through the use of local job registry and training programs. Minimize interactions of workers with community (enforce Code of Conduct).	Minor Negative
	Operation		Minor Negative		Negligible
	Closure		N/A		N/A
Potential Tensions in	Construction	Tensions between the community and the Project may increase if there is at least a perception that	Major Negative	Frequent and proactive communication with local	Minor Negative

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Community-Project Relationship	Operation	the housing of construction phase workers in hotels within the community is not being managed properly and/or is resulting in detrimental effects for the community. A potential negative impact is a deterioration in the perceptions of the Project, ongoing interactions, and levels of collaboration. In extreme cases, a poor relationship between the Project and host communities could result in a loss of a social license to operate and/or a disruption of project activities and even stoppages.	N/A	community stakeholders, with updates on Project activities.	N/A
	Closure		N/A		N/A
Increased Revenue for Local Hotels	Construction	The housing of construction phase Project workers in local hotels would, at least for the duration of the construction phase (short-term), result in steady and possibly increased revenues for hotels. Arrangements between the Project and hotels could result in a guaranteed full occupancy during the high tourist season, and higher than usual occupancy during the low season. Revenues would therefore be more evenly distributed throughout the year. The overall impact is highly positive, although of short duration (likely limited to the construction phase).	Moderate Positive	N/A	Moderate Positive
	Operation		Minor Positive		Minor Positive
	Closure		N/A		N/A
Loss of Clientele for Some Hotels After	Construction	High or full occupancy of hotels represents a short-term gain for hotel owners. However, the inability of hotels to cater to some of their	Moderate Negative	Communicate Project plans and expected dates of construction phase completion with Project	Minor Negative
	Operation		Minor Negative		Negligible

Table 6.21.3 Summary of Impacts Pre-Mitigation and Post Mitigation - Hotels [78]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Construction Peak	Closure	"traditional" clientele (e.g., tour companies with which there are longstanding agreements) may result in loss of business if a perception develops that hotels are always full due to the presence of Project workers.	N/A	owners. Selective (and limited) use of hotels. Support the development of long-term tourism development strategies and plans.	N/A
Reduction in Trade for Some Goods and Service Providers	Construction	Tourist-oriented oriented activities such as outdoor guided tours, the sale of regional products, souvenirs, art, and restaurants would likely experience a loss in business activity in the usual high tourist season if a considerable number of hotel beds are occupied by workers (instead of tourists) – as workers' expenditures on such goods and services would likely be modest. This is a negative impact for some local businesses.	Moderate Negative	Provide business training to local enterprises. Implement supplier development programs. Provide support to local businesses' advertising and promotional efforts (e.g., local festivals and events).	Minor Negative
	Operation		Minor Negative		Negligible
	Closure		Minor Negative		Negligible

Table 6.21.4: Summary of Impacts Pre-Mitigation and Post Mitigation –Worker Camp [9]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Change in Visitors' perceptions of Jermuk as a "spa town", with negative impact on traditional tourism	Construction	The presence of the Project's construction workforce in Jermuk (in addition to the presence of the mine itself nearby) may affect the "spa" character of the town and tourists' perception of the destination – normally associated with fresh air, tranquil surroundings, and spa/medical treatments. It is thought that the construction of a camp for the Project's workforce may limit the extent to which the character of the town of Jermuk will be changed.	Moderate Negative	Minimize the presence of Project vehicles and workforce in Jermuk. Support tourism. development efforts. Enforce Code of Conduct.	Minor Negative
	Operation		Minor Negative		Negligible
	Closure		Negligible		Negligible
Change in Local Residents' Perceptions of Own Community (Sense of Place and Community Safety)	Construction	The presence of a construction workforce nearby may affect how local residents perceive their own community. This may include sense of place and perceptions of safety in the community. This is a qualitative effect, and may have some positive aspects if residents associate the presence of a mining project with increased employment and other opportunities for local people.	Minor Negative	Frequent and proactive communication with local community stakeholders. Enforce Code of Conduct.	Negligible
	Operation		Negligible		Negligible
	Closure		Negligible		Negligible
Increased Pressure on Community	Construction	The housing of the Project's workforce in a self-contained camp should not have a discernible impact on municipal infrastructure and services.	Minor Negative	Increase capacity of local hospital. Coordinate with (and, where	Minor Positive

[9] This table is focused on the impacts of constructing and operating a camp to house the Project's workforce.

Table 6.21.4: Summary of Impacts Pre-Mitigation and Post Mitigation –Worker Camp [9]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Infrastructure and Facilities	Operation	However, the Project's workforce may need to avail of medical services in Jermuk hospital – thus adding demand for services (increase in cases) at local medical facilities. The provision of health services in the community may also be moderately affected if at specific times the Jermuk hospital finds itself overwhelmed by a large increase in cases (particularly during high tourist season, when demand may be at peak). However, the Project may contribute to enhancing the capacity of the hospital – thus offsetting some of the negative impacts of increased demand for the services.	Minor Negative	necessary, provide support for) the local hospital.	Minor Positive
	Closure		Negligible		Negligible
Increase in Local Employment (Camp Construction and Services)	Construction	Construction of a camp to house the Project's workforce will generate employment opportunities for local people, both in relation to the construction of the camp and for the provision of camp services. If camp accommodations are used during the operation phase of the Project, the employment generated would be a long-term benefit (lasting for the operational life of the Project).	Major Positive	N/A	Major Positive
	Operation		Moderate Positive		Moderate Positive
	Closure		Negligible		Negligible
Increase in Local Procurement (Goods and	Construction	There could be an increase in the procurement of local goods and services if the Project, through the management of the camp, makes efforts to	Minor Positive	Include local procurement provisions in the contracts of Project contractors operating in	Major Positive
	Operation		Minor Positive		Moderate Positive

Table 6.21.4: Summary of Impacts Pre-Mitigation and Post Mitigation –Worker Camp [9]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Services)	Closure	maximize procurement from local businesses and service providers.	Negligible	camp (e.g., catering services companies). Maximize use of local contractors for the construction of the camp. Implement supplier development programs.	Negligible
Adverse Effects on Community Health, Safety, and Security	Construction	The presence of the Project's external workforce near to the community of Jermuk has potential negative effects on community health, safety, and security. The influx of workforce has the potential to result in increased transmissions of communicable diseases (e.g., STDs, flu, etc.). Housing the Project's workforce in a camp limits the level of interaction with the local community and potentially reduces the likelihood of the above.	Moderate Negative	Implement awareness programs (e.g., re: STDs). Offer confidential testing of STDs and other communicable diseases. Increase the capacity of local health services. Minimize interactions of workers with community (enforce code of Conduct).	Minor Negative
	Operation		Minor Negative		Negligible
	Closure		Negligible		Negligible
Potential Loss of Staff from Hotels or Other Local	Construction	As construction and operation of a camp housing the Project's workforce will require hiring experienced personnel, both for building	Moderate Negative	Develop a local employment plan which addresses the needs of both the local workforce and local	Minor Negative
	Operation		Minor Negative		Negligible

Table 6.21.4: Summary of Impacts Pre-Mitigation and Post Mitigation –Worker Camp [9]					
Socio-Economic Impact	**Project Phase**	**Description of Impact**	**Pre-Mitigation Significance Rating**	**Mitigation Measures (Proposed)**	**Post-Mitigation Significance Rating**
Businesses to the Camp	Closure	construction/maintenance and accommodation/hospitality services, it is possible that the Project will recruit workers currently employed by the hotels or other local businesses. This may have adverse effects for some local businesses, as these may be required to offer higher wages (to "compete" with the Project) and/or engage in new recruitment and training efforts.	Negligible	businesses. A possible measure may be to focus on the hiring of people not currently employed.	Negligible

6.21.11 *Mine Construction Phase Impacts*

Potential Impacts

The Project's use of existing hotel capacity in Jermuk, specifically during the high tourist season, may affect the availability of accommodations for other visitors and has the potential to temporarily have adverse effects on the tourism sector which has been a mainstay for the local economy for decades. High or full hotel occupancy during the Project's construction phase may create a perception of hotels always being full, potentially resulting in the partial loss of the hotels' traditional clientele.

Some local businesses which rely considerably on seasonal trade with tourists (e.g., vendors of local/regional products, tour guides, restaurants, etc.) may experience temporary negative effects as result of the Project's workforce "replacing" tourists in some hotels, as Project workers may be less likely to purchase their goods or services.

Use of local hotels by the Project may contribute to a change in visitors' perception of Jermuk as "spa town". This change in perception may lead to more tangible effects, such as an eventual reduction in the number of visitors in Jermuk – representing a negative effect for the local tourism and hospitality sector and more broadly for the local economy.

Local people's perception of their own community may be affected by development of the Mine, particularly with the workforce having a constant presence in the community. This may affect social capital (sense of place) and people's perception of safety in the community. Use of a camp is likely to mitigate this some of this possible effect.

Irrespective of the accommodation arrangements selected, the presence of a non-local Project workforce may affect the incidence of communicable diseases, e.g., STDs, in the community.

According to local community representatives interviewed, the housing of workers in hotels may present some challenges from the point of view of municipal resources and provision of services, particularly rubbish collection and snow removal. The municipality may need more resources and/or resort to higher fees/taxes to (to be levied on hotels) fund additional workloads and salaries for additional personnel.

Construction and operation of a camp would generate net employment increases and business contracting opportunities in the local community. Furthermore, the use of a camp would minimize or avoid any adverse effects on the hospitality and tourism sector as it would minimize the need to use existing hotel capacity in Jermuk.

The use of a camp minimizes some of the adverse effects identified above, as the housing of the Project's workforce within a self-contained camp would result in reduced interactions between the non-local workforce and members of the community. Use of the camp can also result in more opportunities to maximize local procurement, as the management of the camp and its contractors would be fully under the Project's control.

Both accommodation arrangements would result in increases in employment in the local community, with year-round employment for more individuals in the community being a highly valued positive effect.

Mitigation and Enhancement Measures

Selective (i.e., limited) use of hotels is a proposed mitigation measure which would ensure that the Project does not unduly affect the supply of tourist accommodations in the town of Jermuk.

Negative effects to the local tourism-based economy in Jermuk can be minimized by limiting the number of workers housed in local hotels. Enforcement of a code of conduct for Project workers will be aimed to preventing worker behaviours from affecting other visitors.

Supporting tourism development efforts (including promotional activities and capacity-building in business practices) may be an opportunity for the Project to mitigate some of the negative impacts and contribute to the long-term viability of the sector.

Some of the positive impacts or benefits of both accommodation arrangements – i.e., increases in local employment and procurement – can be enhanced or maximised through the implementation of local employment and supplier development programs.

Residual Impacts

Use of part of the hotel capacity in Jermuk may be necessary during the Project's construction phase, potentially affecting the availability of tourist accommodations in Jermuk during the high tourist season (particularly in 2017). Nevertheless, as it is proposed that only a relatively small portion of the local hotels' capacity will be used by the Project the residual impact is expected to be minor.

A negative change in people's perception of Jermuk as a "spa town" can have long-term effects in terms of number of visitors arriving in the town and on overall economic activity and opportunities for tourist sector growth. This is potentially one of the most serious possible impacts which the Project will have to manage with a suite of measures and monitor appropriately.

The increases in local employment that would accrue under either of the two accommodation arrangements could be enhanced or maximized through the deliberate implementation of measures as those described above. The employment impacts are expected to be discernible and significant.

6.21.12 *Mine Operations Phase Impacts*

Potential Impacts

The possible change in people's perceptions about the "spa town" of Jermuk identified for the construction phase can persist into the operations phase of the Project and beyond, if not managed appropriately from the start.

Local employment increases and development of local businesses may be noticeable Project impacts in the operations phase, particularly if targeted measures are implemented appropriately during the construction phase. Another related benefit is an increase in skills development likely to be experienced by many members of the local labour force.

Mitigation and Enhancement Measures

Generally, the same suite of mitigation measures identified for the construction phase shall apply during operations.

Selective use of hotels is a proposed mitigation measure for the operations phase which would ensure that the Project does not unduly affect the supply of tourist accommodations in the town of Jermuk.

Supporting tourism development efforts (including promotional activities and capacity-building in business practices) shall continue to be used as a measure to mitigate some of the negative impacts and contribute to the long-term viability of the sector.

Some of the positive impacts or benefits of both accommodation arrangements – i.e., increases in local employment and procurement – can be enhanced or maximised through the continued implementation of local employment and supplier development programs during the operations phase.

Residual Impacts

Many of the impacts identified for the construction phase of the Project would likely persist throughout the life of the Project. Of some concern is the possible change in perceptions about the character of the "spa town" of Jermuk. This will have to be managed very effectively during the construction phase in order to avoid long-term effects which could affect the local tourism

sector in the long-term. Measures proposed in the preceding section shall contribute to minimising the negative effects on the tourism sector of Jermuk.

Although the employment impacts of the Project (and in particular of the accommodation arrangements) are expected to be more pronounced during the construction phase of the Project, it may be reasonable to expect greater participation of the local workforce (as a proportion of the Project's total workforce) during the operations phase of the Project. Furthermore, local supplier development programs may result in long-lasting business development impacts locally.

Mine Closure Impacts

It is expected that by the time the Project reaches closure there will not be any significant use of hotel accommodations by the Project workforce, and only a small number of workers – if any – will be housed in camp or hotels during this phase. The Project workforce is expected to be drastically reduced at closure and may consist of approximately 20-30 workers. Therefore, it is expected that the overall impact of the workforce accommodation arrangements at this stage will be negligible.

Conclusions

The IFC/EBRD guidance note, *Workers' Accommodation: Processes and Standards* calls for assessment of the likely impacts of worker accommodation options on local communities to be conducted. In this Section, the possible social impacts of the Project's accommodation arrangements have been assessed and mitigation measures proposed.

The selected workforce accommodation arrangements for the Project will have impacts on the local economy; community health and safety; community infrastructure; and likely on aspects of social capital in the town of Jermuk.

Negative social impacts include potential changes in people's perceptions about the town of Jermuk, which may have implications for both the local economy and social capital. The presence of the Project's non-local workforce in Jermuk could also affect local people's perception about their own community – including their perceptions of safety; this may occur irrespective of where the workforce is housed, although the camp arrangements would help to mitigate this by limiting interactions of the non-local workforce with the community. An increase in cases of communicable diseases, including STDs, as result of the presence of a non-local workforce is also possible, and would require culturally-appropriate communication and awareness-raising measures (as well as adequate training of local public health professionals) for its prevention.

Some potentially negative impacts can, through the use of appropriate mitigation measures, be transformed into positive impacts. Thus, for example, actual or perceived low levels of uptake of local workers or suppliers by the Project could be considerably increased if efforts are made to develop and implement local employment and supplier development plans.
The construction and operation of a camp presents tangible economic benefits in the form of direct and indirect employment and local procurement. Use of local hotels would only present clear (net) local business and employment benefits during the low tourist season, a time during which most hotels normally experience low occupancy.

In general, the use of a self-contained camp creates fewer potential negative social impacts than the extensive use of existing hotel accommodations in the town of Jermuk. This assessment was based on the premise that the option chosen will involve both use of hotels and the construction of a camp.