

Table 10 The environmental and social action plan with indication of the relevant Performance Requirements (PRs) and approximate expected cost. All actions are to be completed by the end of 2012.

#	Action	Risks & Liabilities / Benefits	Legislative Requirements/ EBRD PR/BAT	Responsible / Resources	Estimated Cost €	Target / Evaluation Criteria For Successful Implementation	Comment
1	Develop and implement an Environmental Management System (EMS)	Optimisation and systematisation of environmental management	Environmental Protection Law, Article 7 / PR1 / ISO 14001	PID HSE manager	None	EMS / EBRD accepting the annual EHS Report	Add to the existing system as a minimum: <ul style="list-style-type: none"> • Corporate responsibility policy which includes HSE and social policy • Risk aspects assessment • HSE Management Plan including: <ul style="list-style-type: none"> • HSE electronic reports archiving system in the format required by ISO 14001
2	Develop and implement a waste management procedure	Possible future liability for hazardous waste disposal / Better housekeeping	PR3 / ISO 14001	Contractor HSE Officer	None	Waste management procedure is in place, hazardous and recyclable wastes are accumulated and disposed separately	See EMP point 7
3	Prepare a hazardous material spill response and clean-up plan for South Kazakhstan Region	Mortalities, groundwater and soil contamination / Smaller spill consequences	PR4	MOTC / Response team and equipment	100 000 – 200 000 per year	Contamination does not enter surface and ground waters / Response time <2 hours, clean-up time <5 hours, residual material concentration in ground < maximum permitted	Provide required resources and collect the emergency team feedback on effectiveness Make sure employees are adequately trained to inform emergency team. Document all accidents.
4	Include the Environmental and Social conditions defined under Appendix 2 of the Environmental and Social Analysis Report in the construction contracts at the tender stage Ensure implementation of these measures through a construction monitoring programme.	Fines and fees for environmental damage, costly cleanup / good relations with environmental authorities	PR3	Contractor HSE Officer	Minor	Absence of fines and fees for pollution No significant silt mobilisation, no project related suspended solids in water 100m downstream of construction	Environmental and Social Analysis Report Appendix 2 E&S Conditions defines the measures to be implemented during construction and covers <ul style="list-style-type: none"> • Staff and Labour • Public health and safety • Waste management • Pollution abatement • Wildlife and vegetation • Diversions and traffic control measures • Earthworks • Bituminous pavement works

#	Action	Risks & Liabilities / Benefits	Legislative Requirements/ EBRD PR/BAT	Responsible / Resources	Estimated Cost €	Target / Evaluation Criteria For Successful Implementation	Comment
5	Minimise disturbance to local infrastructure	Claims for cost of water, gas leaks / Good relations with the local community	PR4	Construction Supervising Contractor	€4 500 for a road entry None for organisational measures	Gas is available in the schools for cold period, water supply disconnected for <3 days	Install additional road entry at km793.2 for Uyimshyl village by this reducing their entry distance from 13km to the original 0.5km. Minimise disruption of pipeline water supply to Lower Zhinishke and Sharaphana when replacing km752.1 drainage pipe through which the pipeline passes (omitted on the topographic survey). Warn affected residents 24 hours before disconnection Ensure that gas pipes that cross the road for Zhanishke and Atameken schools are also considered. See also the E&S Conditions for the Agreement with the Construction Contractor point 6.4
6	Resettle and restore livelihood of the curb traders and other businesses in compliance with RAP requirements	Loss of sole income by vulnerable groups, risk of accidents from continued occupation of ROW	PR5	MOTC / Resettlement budget	Up to €200 000	Reduce impact on local population / 90% of resettled households and businesses admit in a year time that they were fairly treated.	Follow the Resettlement Action Plan
7	Ensure public and livestock safety	Deaths, injuries/ Safer road	PR4	MOTC/ Designer work	64 000 None	Reduce accidents / Reduction in accidents involving drivers, pedestrians and livestock	Conduct road safety assessment and incorporate finding in road design Provide a pedestrian underpass at km766 road entry with arrangements for wheelchairs Move the planned livestock underpass from km796.5 closer to the existing livestock crossing to km797.3
8	Implement the stakeholder engagement plan	Obstruction and delays in project implementation / Stakeholders project support	PR10	Community Liaison Officer	None	Working stakeholder engagement and grievance handling mechanism, no unresolved complaints	See Stakeholder Engagement Plan

9 APPENDIX 2 ENVIRONMENTAL AND SOCIAL CONDITIONS FOR THE AGREEMENT WITH THE CONSTRUCTION CONTRACTOR

It is understood that the Committee for Roads of the Ministry of transport and Communication will use the Contract for Aktobe-Mortuk road SWCRP-0-I02-EBRD/CW "Civil Works Under South-West Corridor Road Project" dated July 2010 as a contract template for the Shymkent-Uzbek Border road under review. These conditions are therefore prepared in the form that can be easily inserted in the said contract. The items that are already in the contract are coloured grey.

PART B - PARTICULAR CONDITIONS

5 STAFF AND LABOUR

5.1.2 Engagement of Staff and Labour

The Contractor shall ensure non-discrimination and equality of opportunity and treatment in all aspects of the employment '(SNIIP' including recruitment and training, compensation (including wages and benefits), working conditions and employment, access to training, promotion, termination of employment or retirement and discipline. The Contractor shall ensure equal remuneration for men and women for work of equal value.

5.7 Health and Safety

5.7.1 The Contractor shall provide the Employer with a written Health and Safety Policy and a project-specific Health and Safety Plan before the commencement of work. The Plan shall include details of the Contractor's OHS management system, including the Contractor's plans to manage and monitor the health and safety risks associated with all construction work under its control. The Plan shall be made available to the lenders prior to the start of Construction. Every contractor shall plan, manage and monitor construction work carried out by him or under his control in a way which ensures that, so far as is reasonably practicable, it is carried out without risks to health and safety.

5.7.3 The Contractor shall ensure that a safe and healthy working environment is provided and that best occupational health and safety practice is promoted. The Contractor shall take steps to prevent accidents, injury and disease arising in the course of work by identifying and controlling risks to workers, as far as is reasonably practicable. The Contractor shall ensure that all staff, labourers and persons entitled to be on site receive the necessary supervision, information, instruction and training to do their jobs safely. Where appropriate, the Contractor shall provide appropriate equipment to minimise health and safety risks and enforce its use. The Contractor shall put in place arrangements for emergency prevention, preparedness and response.

5.7.4 HIV-AIDS Prevention.

The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labour (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to, of Sexually Transmitted Diseases (STD) - or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labour as appropriate; and (iii) provide for STI and HIV / AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS programme, (unless otherwise agreed) of all Site staff and labour. The Contractor shall include in the programme to be submitted for the execution of the Works under Sub-Clause 8.3 an alleviation program for Site staff and labour and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV / AIDS. The STI, STD and HIV / AIDS alleviation programme shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the programme shall detail the resources to be provided or uti-

lized and any related sub-contracting proposed. The programme shall also include provision of a detailed cost estimate with supporting documentation.

5.8 Contractor's Superintendence

The Contractor shall ensure that a grievance mechanism is available to all workers and their organisations to use without fear of intimidation or retaliation. The Contractor will ensure that employees are informed about the grievance mechanism and that this is part of the training for new employees and information is posted in relevant areas in the construction camp. The Contractor shall ensure that the grievance mechanism involves an appropriate level of management and addresses concerns promptly, using an understandable and transparent process that provides feedback to those concerned without any retribution.

5.12 Foreign Personnel

The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use his best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, and national or government permission required for bringing in the Contractor's personnel. The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

5.13 Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable, culturally appropriate food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

5.14 Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

5.15 Measures against Insect and Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.

5.16 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereof by Contractor's Personnel.

5.17 Arms and Ammunition

The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.

5.18 Festivals and Religious Customs

The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.

5.19 Funeral Arrangements

The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

5.20 Prohibition of Forced or Compulsory Labour

The Contractor shall ensure that there shall be no use of forced or compulsory labour, including bonded or involuntary prison labour, in any form. Forced or compulsory labour consists of any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty. Workers shall not be required to lodge deposits or their identity papers with their employers.

5.21 Prohibition of Child Labour

The Contractor shall ensure that young people are not employed below the appropriate national age for employment. The Contractor shall put in place a procedure to verify the ages of young workers. Young workers aged between the national minimum age of access to employment and 18 years shall not be employed on hazardous work and a risk assessment shall be carried out in respect of any work carried out by such employees.

5.22 Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer, and these records shall be available for inspection by Auditors during normal working hours.

6. PUBLIC HEALTH AND SAFETY

The Contractor shall develop and implement a Public Health and Safety Management Plan which as a minimum include the following requirements:

- 6.1. Minimise equipment noise and vibration in the residential areas
 - 6.1.1. Limit excessively noisy work and movement of heavy machinery to daytime
 - 6.1.2. Make public announcement of excessively noisy or vibrating work at least 24 hours before commencement.
 - 6.1.3. Reduce vibrating machinery power if more than 2 houses complained about structural damages. The reduction would require longer compaction time;
 - 6.1.4. Eliminate pulse noise sources during night work close to residential area (dump truck flap banging when lowering emptied buckets)
- 6.2. Assess, document and rectify any damages caused from his activities to the project stakeholders including the population along the road.
 - 6.2.1. Before the start of the road compaction the Contractor shall survey the walls and foundations integrity of the capital structures within 50m to the road edge.
 - 6.2.2. Carry out the second survey after compaction work is completed to document cracks and subsidence resulted from compaction.
 - 6.2.3. Repair recorded damages within 30 days from the assessment results agreed by both parties.
 - 6.2.4. Complete work by obtaining the structure owner 'satisfaction' signature.
 - 6.2.5. If complete rehabilitation of the structure is not possible, compensate loss of the structure value by conducting additional repair work elsewhere.
- 6.3. Ensure safe road crossing during construction
 - 6.3.1. Do not obstruct view of pedestrian crossings to the drivers by with parked equipment
 - 6.3.2. Arrange alternative crossing for livestock when a livestock passage is obstructed
 - 6.3.3. Adhere to the 150m minimum distance of the quarries, equipment parking and worker camps to residential houses and 50m to water courses
- 6.4. Minimise impact on local population and infrastructure from access restriction, construction camps, asphalt and concrete plants and temporary storage and parking areas
 - 6.4.1. Ensure that the entries to the residents and businesses along the road are maintained and diversions are clearly marked during the construction
 - 6.4.2. Check before use of water, electricity, catering and medical services that the needs of the local population and business will not be compromised
 - 6.4.3. Obtain water only from authorized water obstruction points

6.4.4. Place the construction sites at least 700m away from houses

7. WASTE MANAGEMENT

The Contractor shall and implement a Waste Management Procedure (WMP) to minimise waste volumes and dispose waste safely using the waste hierarchy (reduce reuse, recover, recycle) and safe disposal of waste. The WMP shall as a minimum include the following requirements:

- 7.1. Arrange separate accumulation and disposal of hazardous (used oil, oiled cloth and ground) and recyclable waste
- 7.2. Inspect hazardous and non-hazardous waste disposal sites for licenses, disposal methods and availability of space for the project waste
- 7.3. Use toilets with enclosed sewage collection (no pot holes toilets)
- 7.4. Use licensed treatment facilities for sewage disposal.
- 7.5. Prepare site specific management and decommissioning plans including spills cleanup and revegetation.

8. POLLUTION ABATEMENT

The Contractor shall minimise air, water and ground pollution by doing as a minimum the following:

- 8.1. Check equipment engines regularly. Equipment producing excessive smoke must not be used
- 8.2. Conduct repair of pipes with no or least water first, use of pre-cast components or cofferdams if casting in situ.
- 8.3. Install silt fences where construction generates significant silt uplifting.
- 8.4. Place the construction sites at least 150m away from the water courses where shallow groundwater is protected from surface contamination by a silty clay layer.
- 8.5. Use oil/fuel catch trays for refueling, the onsite machinery repair and maintenance, under the diesel power generators and oil and fuel tanks.
- 8.6. Provide proper fuel nozzles and means for preventing accidental spills at refueling places

9. NATURAL RESOURCE USE

The Contractor shall minimise damage to natural resources by doing as a minimum the following:

- 9.1. Use borrow pits authorized for extraction by all necessary authorities
 - 9.1.1. Prepare pits management and decommissioning plans
 - 9.1.2. Prevent unauthorised extraction by a third party by guarding or fencing the pits

10. WILDLIFE AND VEGETATION

10.1. The Contractor shall minimise impact on wildlife and natural vegetation by doing as a minimum the following:

- 10.1.1. Prohibit workers to use illegal forms of fishing, feeding animals (including birds) and leaving food waste around
- 10.1.2. Provide canteens food waste containers with tight lids and anchors to prevent animals from tipping them over.
- 10.1.3. Direct and screen flash lights to minimise lighten areas outside the spaces need to be illuminated for safety and security.
- 10.1.4. Avoid working on drainage pipes overnight, do not block the passage in the pipes under construction when no work is conducted on the pipe (e.g. overnight)

10.2. The Contractor shall minimise loss of the existing roadside plantations by doing as a minimum the following:

- 10.2.1. Prepare tree lines planting plan by commissioning a specialist and obtain the Supervisor approval;
- 10.2.2. Replant the centerline trees to the side of the completed part of the road;
- 10.2.3. For the trees that cannot be replanted, obtain approval from the Committee for Forestry and Hunting, under the Ministry of Agriculture;
- 10.2.4. Compensate for cut trees by planting and caring after 8 seedlings for each cut mature tree. Plant along the road edges that pass close to residential areas. Use appropriate for the road section plants and caring methods.
- 10.2.5. Replant appropriate number of seedlings the next year if less than 20% of replanted mature trees and 30% of seedlings survived.

SECTION 100 - GENERAL REQUIREMENTS

5 Item: Diversions and Traffic Control Measures

Unit: Lump Sum

The rate shall include for:

- a consulting with the road police and local authorities,
- b submitting traffic management plans for the Engineer's approval, include keeping head lights on all the time and limiting trucks speed at the residential areas to 40km/h
- c construction and operation,; routine, emergency and winter maintenance and further removal signs, barriers, traffic lights, lighting, «stop - walk» signboards and removal on completion of all traffic control schemes, traffic control devices construction, maintenance and removal of temporary road diversions, temporary bridges and associated drainage works
- d passing of the transport through the sections currently under development by way of temporary road diversions or traffic control schemes organization, including organization of one-way traffic, regular dust abatement measures on the diversions without hard surface
- e diversions announcements on the local radio and in the TV running line.
- e photographic records,
- f the provision and running of recovery vehicles,

SECTION 500 – EARTHWORKS

1 Item: Removal of topsoil

Unit: m3.

Removal of topsoil shall be calculated from cross sections taken before and after removal of topsoil.

The rate shall include for:

- a excavation and loading into transport,
- b all haulage,
- c depositing in the final position on the permanent works, or depositing in temporary stockpiles or other approved areas, including the provision of stockpile areas
- d multiple handling of excavated material,
- e keeping the Works free of water,
- f dust abatement on the haulage routes (dirt roads watering, trucks wheels cleaning and bucket covers).
- g fertile soil stacking for the following decommissioning or repositioning to the permitted for application surface

Topsoil stripped beyond the agreed limits shall not be measured for payment and the Contractor will be required to reinstate such areas in accordance with the Specification at his own expense.

SECTION 800 - BITUMINOUS PAVEMENT WORKS

The rate shall include the following:

k processing of asphalt wastes to meet the specifications for road pavement and subsequent incorporation of asphalt waste in the construction