# Environmental Monitoring Report

January–June 2022

# Kyrgyz Republic: Central Asia Regional Economic Cooperation Corridors 1 and 3 Connector Road Project (Phase 2) - Additional Financing

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Prepared for:

Ministry of Transport and Communications of the Kyrgyz Republic

Approved by: [Name and signature of Executive Agency staff]

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## Abbreviations

| | | |
|---|---|---|
| ACP | - | Asphalt Concrete Plant |
| ADB | - | Asian Development Bank |
| CAREC | - | Central Asian Regional Economic Cooperation |
| CBT | - | Concrete Batching Plant |
| CO | - | Carbon Monoxide |
| CSC | - | Construction Supervision Consultant |
| DDPSSES | - | Department of Disease Prevention and State Sanitary and Epidemiological Surveillance of the Ministry of Health |
| dia. | - | diameter |
| EA | - | Executing Agency |
| EMP | - | Environmental Management Plan |
| ES | - | Environment Specialist |
| EPS | - | Environmental Protection Specialist |
| IA | - | Implementing Agency |
| IBAT | - | Integrated Biodiversity Assessment Tool |
| IEE | - | Initial Environmental Examination |
| IES | - | International Environment Specialist |
| GC | - | General Contractor |
| GoKRG | - | Government of Kyrgyzstan |
| KGZ | - | Kyrgyzstan |
| km | - | kilometer |
| KR | - | Kyrgyz Republic |
| LARP | - | Land Acquisition and Resettlement Plan |
| LS | - | Left side |
| lm | - | Linear meter |
| m | - | Meter |
| $m^2$ | - | Square meter |
| $m^3$ | - | Cubic meter |
| masl | - | Meter above sea level |
| MPC | - | Maximum Permissible Concentration |
| MPL | - | Maximum Permissible Level |
| MTOC | - | Ministry of Transport and Communication of KR |
| MEoC KR | - | Ministry of Economy and Commerce of the Kyrgyz Republic |
| MNRETS | - | Ministry of Natural Resources, Environment and Technical Supervision |
| MoCIT KR | - | Ministry of Culture, Information and Tourism of Kyrgyz Republic |
| MoF KR | - | Ministry of Finance of the Kyrgyz Republic |
| NES | - | National Environmental Specialist |
| NRS | - | National Resettlement Specialist |
| $NO_2$ | - | Nitrite |
| pcs | - | pieces |
| PIU | - | Project Implementation Unit |
| RS | - | Right side |
| SCEC | - | State Committee on Ecology and Climate |
| SCP | - | Stone Crushing Plant |
| SF | - | Supplemental Financing |
| SAEMR | - | Semi-annual Environmental Monitoring Report |
| SDRS | | Social Development and Resettlement Specialist |
| SAEPF | - | State Agency on Environmental Protection and Forestry Agency |
| SSEMP | - | Site Specific Environment Management Plan |
| TA | - | Technical Assistance |
| TOR | - | Terms of Reference |

# 1 INTRODUCTION.

## 1.1 Preamble.

1. The Government of the Kyrgyz Republic (GoKRG) entered into supplemental loan and grant agreements with the Asian Development Bank (ADB) for the identification, design, implementation, and construction-supervision of the CAREC Corridors 1 and 3 Connectivity Improvement Project Phase 2 (The Project). The Project is part of the North-South Alternate Corridor which is a priority project in the Sustainable Development Strategy of GoKRG.

2. The Project involves rehabilitation of two road sections: the Balykchy section from km 0 to km 43 and the Kochkor – Epkin section from km 62+400 to km 89+500. For bidding and construction purposes, the Balykchy section is referred to as Lot 1 and the Kochkor-Epkin section is referred to as Lot 2. A location map of the Project is shown in Figure 1.

3. The Project is aimed at improving the socio-economic conditions of the Kyrgyz Republic regions through: (i) shortened travel time for movement of people and goods between the southern districts of Osh, Batken and Jalalabad and the northern districts of Naryn, Issyk-Kul, Chui and Talas; (ii) reduced transport costs due to reduced route and better road conditions; (iii) increased local and international traffic and trade particularly between Kyrgyzstan and Tajikistan; (iv) increased income-generating opportunities for local people; (v) creation of new jobs; (vi) good condition of vehicles; and (vii) reduced transportation costs.

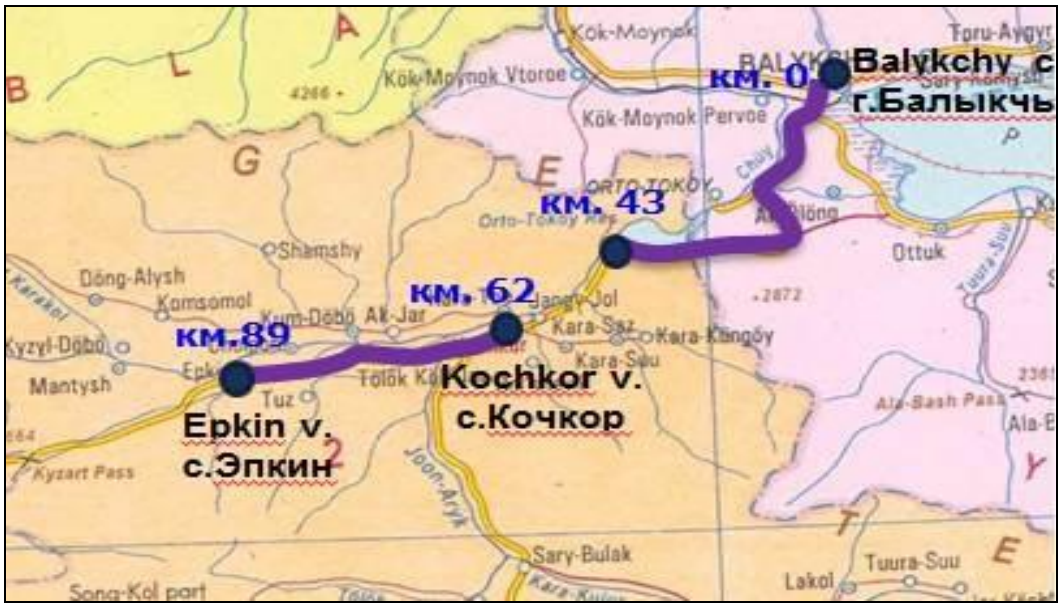



**Figure 1. Project Location.**

4. The Project is classified as environmental "Category B" based on the ADB Safeguard Policy Statement 2009 (SPS 2009). Accordingly, an Initial Environmental Examination (IEE) report[1] that include an Environmental Management Plan (EMP) was prepared separately for the two road sections by the Ministry of Transport and Communication (MOTC) through an international consulting team. Each IEE contains the recommended environmental management measures and monitoring programs. These aim to ensure that the identified

[1] https://www.adb.org/sites/default/files/linked-documents/41444-024-ieeab_1.pdf

negative environmental and social impacts associated with Project implementation will be avoided or at least minimized to acceptable levels. As recommended in the IEE-EMP, the civil works Contractor prepared a Site-Specific Environmental Management Plan (SSEMP) for each road lot. The SSEMP specified how the Contractor would ensure compliance with the SPS 2009, the IEE-EMP, and the applicable laws and regulations of GoKRG. The Construction Supervision Consultant (CSC) monitors the Contractor's implementation of the SSEMP and thus, its compliance with the IEE-EMP. Monthly, quarterly, and semi-annual reports are prepared by the CSC's environmental specialists and submitted to the PIU. The semi-annual report is submitted by the PIU to ADB for uploading into the ADB website for public disclosure, in line with the SPS 2009.

5. This report is the 5th Semi-annual Environmental Monitoring Report (SAEMR) for the Project. It builds upon the previous semi-annual reports. The report describes the status of implementation of the IEE-EMP from January 2022 to June 2022 based on the Contractor's records of its SSEMP implementation and on the CSC's environmental monitoring activities. Among others, the report highlights the observed best environmental management practices (BEMP) of the contractor and the recommendations for improvement for the environmental, health and safety aspects that did not fully meet the safeguards requirements.

## 1.2 Headline Information.

6. By the end of June 2022, the cumulative project accomplishment for Lot 1 is 31.75% against the planned accomplishment of 42.07%. The Contractor is behind schedule by 10.32%. The cumulative accomplishment for Lot 2 is 34.51% while the planned accomplishment of 44.23%. The Contractor is behind schedule by 9.72%.

7. The delays were due to the combined effects of the COVID-19 pandemic and few technical issues. The COVID-19 pandemic resulted in temporary work stoppages in line with the government's policies at the height of the pandemic between 2020 and 2021. Border controls and safeguards were implemented by many countries to prevent the spread of the virus, thus the foreign workers, mostly from China could not return to the site up to the end of this report period. Due to the delays attributable to the COVID-19 pandemic, the Contractor requested for time extension. The CSC recommended a time extension of 365 days for both Project lots. This recommendation was agreed to by the PIU and concurred by ADB on 30 May 2022. On the technical aspect, lack of suitable aggregates for asphalt concrete production and slow progress of culvert construction are the main contributing factors to the slow progress on Lot 1. On Lot 2, the Contractor is faced with the issue of poor quality of the completed asphalt-paved sections. The CSC required the Contractor to rectify the damaged sections before starting the asphalt wearing course. On 18 April 2022, the Contractor submitted a Revised Program of Works for both Lot 1 and Lot 2 covering the period January to December 2022 to catch up on the target accomplishments. Completed and ongoing civil works by end of June 2022 are summarized in Table 1.

**Table 1. Status of Civil Works by 30 June 2022**

| Project Package | Completed Works | Works in Progress (30 June 2022) |
|---|---|---|
| Lot 1 | • Bridge over channel at km12+080<br>• Pipe culvert at 37 locations<br>• Box culverts at 1 location<br>• Clearing and grubbing: 11 ha<br>• Soil excavation: 62,394m$^3$<br>• Embankment K98: 126,660 m$^3$<br>• Subbase construction: 77,679 m$^3$<br>• Base construction: 24,251 m$^3$<br>• AC binder course: 8,484 m$^3$ | • Pipe culvert at 2 locations<br>• Box culverts at 3 locations<br>• Formation of subgrade at km31+00-km34+00<br>• Base course<br>• AC binder course |
| Lot 2 | • Pipe culvert at 34 locations<br>• Box culverts at 5 locations<br>• Clearing and grubbing: 10.8 ha<br>• Excavation works: 22,464 m$^3$<br>• Embankment K95: 138,850 m3<br>• Subbase construction: 69,062 m$^3$<br>• Base construction: 17,444 m$^3$<br>• AC binder course: 2,841 m$^3$ | • Backfilling and waterproofing of bridges at km 86+261 and km88+795<br>• Pipe culvert at 1 location<br>• Box culvert at 1 location<br>• Formation of subgrade at km62+400-km69+00 and other sections<br>• Subbase course<br>• Base course |

*Source: Data provided by the Quantity Engineer of the CSC*

8. As explained in the previous SAEMRs, for both Lot 1 and Lot 2, all preparatory activities that are relevant to environmental management were completed by the Contractor between 2020 and 2021. These include:

- preparation of the SSEMP, Health and Safety Plan, and Covid-19 Prevention and Mitigation Plan
- acquisition of permits or approval from the local authorities and the State Environmental Protection and Forestry Agency (SEPFA) for the development and use of campsites, sites for construction facilities, quarry sites, and spoils disposal sites
- entering into agreement with relevant agencies for solid waste collection, wastewater collection, and hazardous waste collection
- acquisition of temporary permit for use of the quarry sites from the State Agency for Geology of Subsoil Use №03-5/682
- construction and/or development of the campsites, field offices, asphalt plants, crushing plants, fabrication areas, machinery areas, quarries, scarified asphalt and spoils disposal sites, and auxiliary installations,
- entering into agreement with the Laboratory of Chui-Bishkek Territorial Department of the State Agency for Environmental Protection and Forestry under GoKRG to carry out instrumental monitoring of water and atmospheric air quality and with LLC "ProfiLab" for instrumental monitoring of vibration and noise levels in areas of high environmental sensitivity and with socially sensitive receptors along the Project alignment, and in the quarry areas.

9. Archeological investigations and protection of cultural heritage sites close to the project road alignments were also done in 2020. The archeological investigations did not unearth any monument or relic of historical and cultural value in the quarry areas. The archeological investigation report was submitted to the PIU during the first quarter of 2021. A summary of the findings is incorporated in the SAEMR for January to June 2021.

10. There are settlements located near some sections of the road alignment. Along Lot 2, a new road will be constructed on an agricultural land. Demolition of fences within the areas covered by road widening and construction of new sidewalks is also necessary. Based on

the Project's Land Acquisition and Resettlement Plan (LARP 2018), 40 persons are affected and land for acquisition totals 24,959.4m$^2$. It consists of 21,453m$^2$ of agricultural land in Tendik village and 3,506.4m$^2$ residential land in Kok-Jar, Chekildek, and Epkin villages. The sidewalk design was reviewed in 2021 and it was found that it is possible to reduce: the number of affected people from 40 to 31, and the land acquisition from 3,506.4 m$^2$ to 864.38 m$^2$.

11. Both sides of Lot 1 and Lot 2 were lined with trees. In the IEE, the number of trees identified for forced removal was 68, 38 trees along Lot 1 and 30 trees along Lot 2. However, during the benchmark survey in 2020, a total of 1,909 trees were tagged for removal; 160 trees along Lot 1 and 1,749 trees along Lot 2. To minimize the impact on the existing greenery, the Consultant and the Contractor conducted a joint review of the benchmark points. This resulted in reduction in the number of trees cut, saving 45 trees. The Contractor completed the tree-cutting in 2020. The total number of trees felled is 1,704; 122 trees along Lot 1 and 1,582 trees along Lot 2 The Contractor needs to plant new seedlings at a ratio of 1:2 (two seedlings for every felled tree).

12. The Contractor and Consultant's National Environmental Specialists (NES) conducted a joint field trip to the nurseries in Kochkor to check the variaties and availability of tree seedlings for planting. The Contractor and Consultant will jointly undertake identification of potential sites for the planting activities within 2022.

13. During this reporting period, no complaints were received in relation to the use of any of the Contractor's facilities, disposal sites, and quarry sites. Likewise, no complaints had been received relating to disturbance to archeological sites. From the start of construction activities until the end of June 2022, there were no archeological chance finds along the road alignment nor in any area where excavations or earthworks were undertaken including the campsites, sites for the Contractor's facilities, quarry sites, and spoils disposal sites.

14. No major social or environmental issues arose during this reporting period Most of the non-compliances observed by the CSC's NES during the Project site visits were immediately rectified by the Contractor with few non-compliances currently being rectified. During this reporting period, the Contractor satisfactorily implemented its commitments for environmental protection as specified in the SSEMP and is fully compliant with the IEE-EMP.

15. On 22 June 2022, an ADB conducted Environment Safeguards Review Mission of the work areas and facilities of Lot 1 and Lot 2 to check the Project's compliance with the ADB's safeguard requirements. The mission was accompanied by representatives of the PIU, the CSC, and the Contractor during the site visit.

# 2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES.

## 2.1 Project Description.

### 2.1.1 Project Rationale and Project Area.

16. Kyrgyzstan is a mountainous and landlocked country, where regional trade is heavily dependent on roads which dominates Kyrgyzstan's transport system. There is no rail or water transport network while air transport is expensive and not suitable for mass transport and freight.

17. The CAREC Corridors Interconnecting Road Projects 1 and 3 (Phase 2) will connect two major CAREC regional corridors by rehabilitating an existing but narrow connector road. It is part of the North-South Alternative Corridor, a priority project in the National Sustainable Development Strategy.

18. The entire road corridor lies within the Northern and Inner Tien Shan Mountain ranges. The route passes through the mountains and plains of Issyk-Kul region at altitudes between 700 meters and 3,500 meters above sea level (masl), crossing the Chu River valley. Based on Köppen Climate Classification System (BSK), the Issyk-kul region has mid-latitude steppe

climate which is described as continental with cold winters and hot summers. The difference between mid-summer and mid-winter temperatures can be extreme and areas of permafrost are notable.

19. Section 1 (Lot 1), the Balykchy section of the Project, is 43 km long and runs from east to south-west. It begins at a traffic circle located at the entrance to Balykchy City. Five roads converge at this point, one of which is a section of the CAREC road heading south. Lot 1 follows the existing highway up to km 43. The first 29 km of the road is within Tonsky Rayon (District) of Issyk-Kul Oblast (Province) while the remaining 14 km is within Kochkor Rayon of Naryn Oblast.

20. The road elevation at km 0 is 1,632masl while the elevation at km 43 is 1,756masl.

Throughout the road section, the elevation ranges from 1,610masl to 1,820masl. Figure 2 shows the general topography of the areas traversed by Lot 1.

Figure 2. Topographical Map of Areas Traversed by Lot 1.

21. The Kochkor-Epkin road section (Lot 2) is 25 km long and runs from east to west. It begins at the junction of three roads (km62+400) in Kochkor town where the Bishkek-Naryn-Torugart Highway serves as a detour for Kochkor town and this road section. The road follows the existing highway and ends at km89+500 in Epkin town. The entire road section is within Naryn Oblast and crosses only the Kochkor Rayon. The town of Kochkor is the center of Kochkor Rayon of Naryn Oblast.

22. The areas surrounding the roadway are vast agricultural lands used for crop and livestock production. Kochkor has rolling and mountainous terrain which is covered with highly palatable grasses suitable for grazing. The Kochkor Valley is bounded by the Kyzart mountain ridges on the north and Karagatty Kyzart on the south. The mountainous region has a very dissected relief with high slopes. The elevation in the valley ranges from 1,700masl to 2,400masl. The road elevation at km 62+400 (beginning of Lot 2) is 1,845masl while the elevation at km 89+500 (end of Lot 2) is 2,080masl. Elevation along the entire road section ranges from 2,400masl to 4,502masl. Figure 3 shows the general topography of the areas traversed by Lot 2.

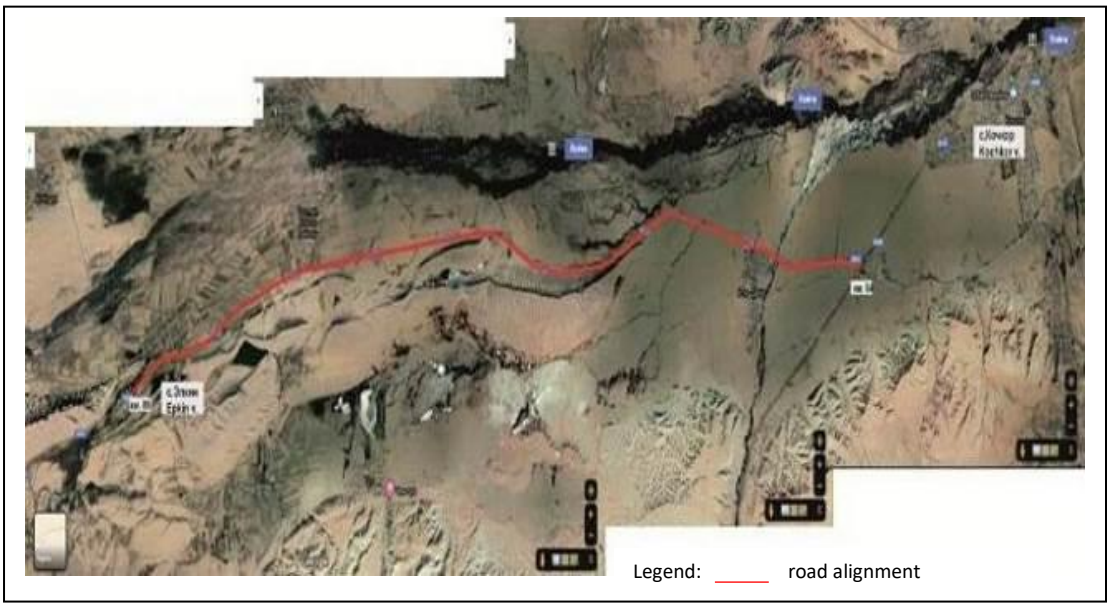



**Figure3. Topographical map of Areas Traversed by Lot 2.**

### 2.1.2 Basic Project Information.

23. Basic information concerning the Project loan, consulting services and construction contracts are summarized in Table 2.

**Table 2. Basic Project Information.**

| Item | Description |
|---|---|
| Project Name | Kyrgyz Republic: CAREC Corridors 1 and 3 Connecting Road Project, Phase 2 (Additional Financing) |
| Funding Agency | Asian Development Bank |
| Project References | Project number: TA-8887 KGZ<br>Loan number: ADB Loan 3432-KGZ (SF)<br>Grant number: 0496-KGZ (SF) |
| Executing Agency (EA) | Ministry of Transportation and Communication (MOTC) |
| Implementing Unit | Project Implementation Unit (PIU) under MOTC |
| Construction Supervision Consultant (CSC) | Roughton International Ltd., and RAM Engineering Associates LLC |
| Date of CSC contract | 14/02/2017 |
| Notification for CSC's work commencement | 20/05/2020 |
| Civil Works Contractor | Sinohydro-Powerchina Roadbridge JV |
| Approved subcontractors | • Arek StoryLLC<br>• Zhagalmay LLC<br>• Balkchi Trans LLC<br>• Shera Trans LLC.<br>• Jumgalsuukurulush Open Joint Stock Company<br>In 2021 Shera Trans was replaced by Kyrgyzgidrospecstroy LLC as a consortium partner with Zhagalmay |
| Road Sections covered by Contract | Total length of two road sections - 68 km |
| Lot 1 | Balykchy - 43 km |
| Lot 2 | Kochkor – Epkin - 25 km |
| Notice to commence works | 22/06/2020 |
| Completion date (original) | 22/06/2022 |
| Completion date (Revised) | 21 June 2023 |
| Time to finish – days | 730 days |
| Extension - days | First extension (delay due to COVID-19) 365 days |
| Warranty period - days | 36 months |
| Contract Amount | |
| Lot 1 | USD 22,671,896.26 |
| Lot 2 | US$ 17,537,958.57 |

### 2.1.3 Civil Works Scope and Technical Specifications.

24. The Project was designed in accordance with the Kyrgyz Highway Standard (SNIP 32-01:2004), with geometrical and structural requirements up to Technical Category II (main streets of city importance). The strip width 3.5m – 3.75m; width of carriageway 7.00m – 7.50 m; width of shoulder 3.25m – 3.75m (of which 0.50m - 0.75m will be paved). The average total road width is 15m. The road rehabilitation includes repair or replacement of existing small bridges and culverts, construction of side drains and other drainage facilities, construction of retaining walls for river protection where needed, provision of road signs and road markings, and construction of bus stops and one underground crosswalk. The scope of works is summarized in Table 3 while the technical specifications are summarized in Table 4.

**Table 3. Scope of Construction Works.**

| Work Item | Unit | Quantity (Original Plan) | |
|---|---|---|---|
| | | Lot 1 | Lot 2 |
| Tree cutting | pcs | 696 | 239* |
| Clearing and Grubbing | ha | 37 | 35 |
| Excavation | m3 | 116 485 | 42 823 |
| Existing Asphalt Break Up | km | 38 597 | 10 833 |
| Fill and Embankment | m3 | 205 306 | 93 725 |
| Culverts | set | 63 | 51 |
| Subgrade | m3 | 154 700 | 90 010 |
| Subbase | m3 | 220 850 | 125 000 |
| Base | m3 | 91 079 | 61 750 |
| Binder | m3 | 37 883 | 25 750 |
| Bridges | set | 4 | 1 |
| Gabions | pcs | 696 | - |
| Drainage | m | 1 569 | 139 |
| Parking near markets | Pcs | 4 | 2 |
| Automobile pavilion | pcs | 8 | 11 |
| Parapet fence | pcs | 1 339 | 946 |
| Reconstruction of communication lines<br>• Overhead line -10kV<br>• Overhead line - 0.4 kV<br>• Communication line<br>• Lighting poles<br>• PVC pipes | <br><br>poles<br>poles<br>poles<br>pcs<br>l.m. | <br><br>8<br>-<br>14<br>193<br>848 | <br><br>22<br>7<br>-<br>337<br>820 |
| Others | | Tree planting<br>Archaeological survey and monitoring<br>Removal of bus stops<br>Environmental monitoring<br>Auxiliary facilities | Tree planting<br>Archaeological survey and monitoring<br>Removal of bus stops<br>Environmental monitoring<br>Auxiliary facilities |

** Note: Increased to 1704 trees based on actual survey*

**Table 4. Technical Specifications.**

| Item | Specification | Remarks |
|---|---|---|
| Number of traffic lane | 2 | |
| Traffic lane width | 3.5m to 3.75m | |
| Width of carriageway | 2 x 7.5m | |
| Shoulder width | 3.25m to 3.75m | Of which, 0.5m to 0.75m should have covering |
| Total width of carriageway | 15m | |
| Design axle load | 11.5 tons | |
| Width of the road right-of-way | 30m to 60m | |
| Road Pavement<br>• Top pavement (SMA) layer<br>• Coarse-grained asphalt at junctions<br>• Leveling layer<br>• Base course<br>• Sub-base course<br>• Asphalt concrete mixture on sidewalks | <br>6 cm thickness; vol. 42,505 $m^3$<br>5 cm thickness vol. 682 $m^3$<br><br>9 cm thickness; vol. 63,633 $m^3$<br>20cm thickness; vol. 152,829 $m^3$<br>25cm thickness; vol. 345,850 $m^3$<br>4cm thickness; vol. 434 $m^3$ | |

### 2.1.4 Summary of Identified Negative Impacts of Project Implementation.

25. Based on the IEE reports for both Lot 1 and Lot 2, majority of the negative environmental impacts arising from project implementation will occur during the construction phase, but some impacts will occur during the operation phase.

26. The identified potential negative impacts during the Project construction phase include:

- noise and vibration
- generation of dust and air emissions from earthworks and from the operation of vehicles, construction equipment, concrete batching plants, asphalt batching plants and rock crushing plants
- impacts on water courses (siltation, deterioration of water quality)
- impacts of quarrying (removal of vegetation, changes in landscape, soil erosion/landslide, degradation of soil quality)
- impacts on soil due to removal of trees and vegetation
- Impacts resulting from rehabilitation of bridges and drainage structures,
- Impacts from operation of campsites, and
- Impacts on historical and archaeological sites

27. The identified negative impacts during the Project operation phase include:

- increase in gas emissions
- increase in noise levels
- increase in traffic accidents involving pedestrians and vehicles, and
- increased risk of accidents associated with possible spills of harmful substances attributable to increased traffic and high vehicle speeds due to good road surface.

28. Satisfactory management of noise, airborne pollutant emissions, and vibration are of particular importance to communities near the road and in places where sensitive receptors such as schools, hospitals, mosques, etc. are located.

## 2.2 Project Contracts and Management.

### 2.2.1 Project Management.

29. The Borrower and Project Executing Agency (EA) for the Kyrgyz Republic is the Ministry of Transport and Communication (MOTC). The Project Implementation Unit (PIU) under the MOTC is the implementing agency directly responsible for overseeing the execution of the contracts, financial management, and for ensuring compliance with the loan conditions. The PIU is supported by the Construction-Supervision Consultant (CSC), Roughton International Ltd., and Sub-consultants RAM Engineering LLC. The CSC supervises the civil works to ensure the quality and progress of works in accordance with the construction contracts. The CSC is also responsible for ensuring the Project's compliance with ADB's social and environmental safeguards. Construction of the project roads is being undertaken by the Joint Venture of Sinohydro Corporation Ltd – Power China Road Bridge Group Co. Ltd. (Sinohydro-Powerchina Roadbridge JV) which was awarded the contracts for both Lot 1 and Lot 2. Sinohydro-Powerchina Roadbridge JV, the General Contractor (GC) is supported by local subcontractors approved by the PIU.

30. Other agencies involved in the Project include the Ministry of Finance (MOF), State Committee on Ecology and Climate (SCEC), Ministry of Natural Resources, Environment and Technical Supervision (MNRETS), and Department of Disease Prevention and State Sanitary and Epidemiological Surveillance of the Ministry of Health (DDPSSES).

31. The functions, roles, and/or responsibilities of the entities involved in Project management are summarized in Table 5. Table 6 lists the names and contact numbers of

persons involved in the implementation of social and environmental safeguards.

**Table 5. Functions, Roles, and Responsibilities of Entities involved in Project Management.**

| Agency/Entity | Function/Roles/Responsibilities |
|---|---|
| ADB | Lending institution. Provides financing for the Project and ensures that Project implementation follows the ADB project cycle. Provides project management support to MOTC and PIU. Monitors Project implementation through regular missions. Provides workshops and seminars for staff of the EA, PIU, CSC and Contractor on project management, procurement, contracting of consulting services, disbursement, accounting, and financial management, and on social and environmental safeguards. |
| MOF | Authorized state body responsible for coordination with ADB and other donors regarding external assistance issues. |
| MOTC | Responsible for development of transport sector and is the EA for the project. MOTC has overall responsibility for planning, design, implementing and monitoring of the project. PIU operates under MOTC and performs tasks assigned from MOTC. |
| PIU | Implementing agency directly responsible for overseeing the execution of the contracts, financial management, and for ensuring compliance with the loan conditions, including the social and environmental safeguard requirements. |
| SCEC | Leading government agency for environmental protection, which is responsible for government policy in this area and coordinates environmental protection with other government agencies. Its functions include:<br>– development of environmental policy and its implementation;<br>– conducting state environmental impact assessment;<br>– issuance of environmental licenses;<br>– environmental monitoring;<br>supervising environmental information service, environmental legislation, established rules, limits and norms of environmental management, norms of emissions and discharges of pollutants and waste disposal |
| MNRETS | The state executive body that develops and implements state policy and coordinates in the areas of environmental protection, ecology and climate, geology and subsoil use, use and protection of natural resources, including bioresources, subsoil and water resources, with the exception of irrigation and reclamation infrastructure, exercising state control and supervision over compliance with environmental, industrial safety, mining safety, subsoil protection, coal and fuel quality. |
| DDPSSES | Supervises sanitary and epidemiological well-being of population, safety of goods, products, environmental facilities and conditions, prevention of harmful impact of environmental factors on human health |
| CSC | Supervises the civil works to ensure the quality and progress of works in accordance with the construction contracts. The CSC is also responsible for ensuring the Contractor's compliance with ADB's social and environmental safeguards. |
| General Contractor | Responsible for execution of the civil works and all works covered by the construction contract in accordance with the technical specifications. Also responsible for implementation of ADB social and environmental safeguards as specified in the contract agreement with the IA. |
| Subcontractors | Execution of the civil works covered by the sub-consultancy agreement with the GC in accordance with the technical specifications. Subcontractors are also responsible for implementation of ADB social and environmental safeguards in the same manner as the GC |

### 2.2.2 Management of Social and Environmental Aspects.

32. ADB has designated a Country Environmental Focal Person and a team of resident social and environmental specialists to monitor the Project's compliance with the ADB's social and environmental safeguards. The ADB team conducts site visit missions from regularly during Project implementation to check the social and environmental conditions.

They also provide trainings to the staffs of the EA, IA, and CSC on environmental, health and safety aspects.

33. The MOTC has designated an officer to take charge of matters relating to social and environment aspects of the Project.

34. The CSC has in its team an International Social Development and Resettlement Specialist (SDRS), International Environment Specialist (IES), National Environmental Specialist (NES), National Resettlement Specialist (NRS), and National Archeologist. The SDRS is responsible for monitoring and reporting on the progress of resettlement activities and status of compliance with the social safeguards. The IES and NES are responsible for monitoring, document review, verification, and reporting on the Contractor's compliance with the IEE-EMP and SSEMP. They also provide guidance to the environmental staff of the Contractor on rectification of environmental non-compliance issues. The Contractor has designated a national Environmental Protection Specialist (EPS) who is mainly responsible for the implementation of the Contractor's commitments in the SSEMP. The Contractor's EPS is also responsible for overseeing the instrumental monitoring of noise, vibration, water quality, and air quality which the Contractor has sub-constructed to an accredited laboratory.

35. Table 6 lists the names and contact information of the persons currently in-charge of social and environmental management for the Project.

**Table 6. Contact Information of Persons In-charge of Social and Environmental Management.**

| No | Organization | Designation | Name | Contact information |
|---|---|---|---|---|
| 1 | ADB | Country Environment Focal | Ninette R. Pajarillaga | npajarillaga@adb.org |
| 2 | ADB Resident Mission in the Kyrgyz Republic | National Environmental Consultant | Sultan Bakirov | Sbakirov.consultant@adb.org |
| 3 | IPIG under MOTR | Implementing Agency Representative | Abdygulov Asylbek | asylbeka@piumotc.kg |
| 4 | Roughton International Ltd., and sub-consultant RAM Engineering Associates LLC. | International Environmental Specialist | Elsie B. Monsanto | lcbmonsanto@yahoo.com |
| | | Local Environmental Protection Specialist | Akmatova Nasiba | nasibamn@hotmail.com |
| 5 | Sinohydro-Powerchina Roadbridge JV. | Contractor's Local Environmental Protection Specialist | Beisheev Isake | isake.beysheev@bk.ru |

### 2.2.3 Construction-Supervision Consultant's Team.

36. Roughton International, Ltd. and Sub-consultants RAM Engineering LLC, as the construction supervision consultant are mainly responsible for ensuring that the General Contractor and its subconsultants are carrying out the works in accordance with the contract conditions and technical specifications. The CSC is also responsible for ensuring the Project's compliance with ADB's social and environmental safeguards. The CSC's organizational structure is shown in Figure 4. The list of staff as of 30 June 2022 is shown in Table 7.

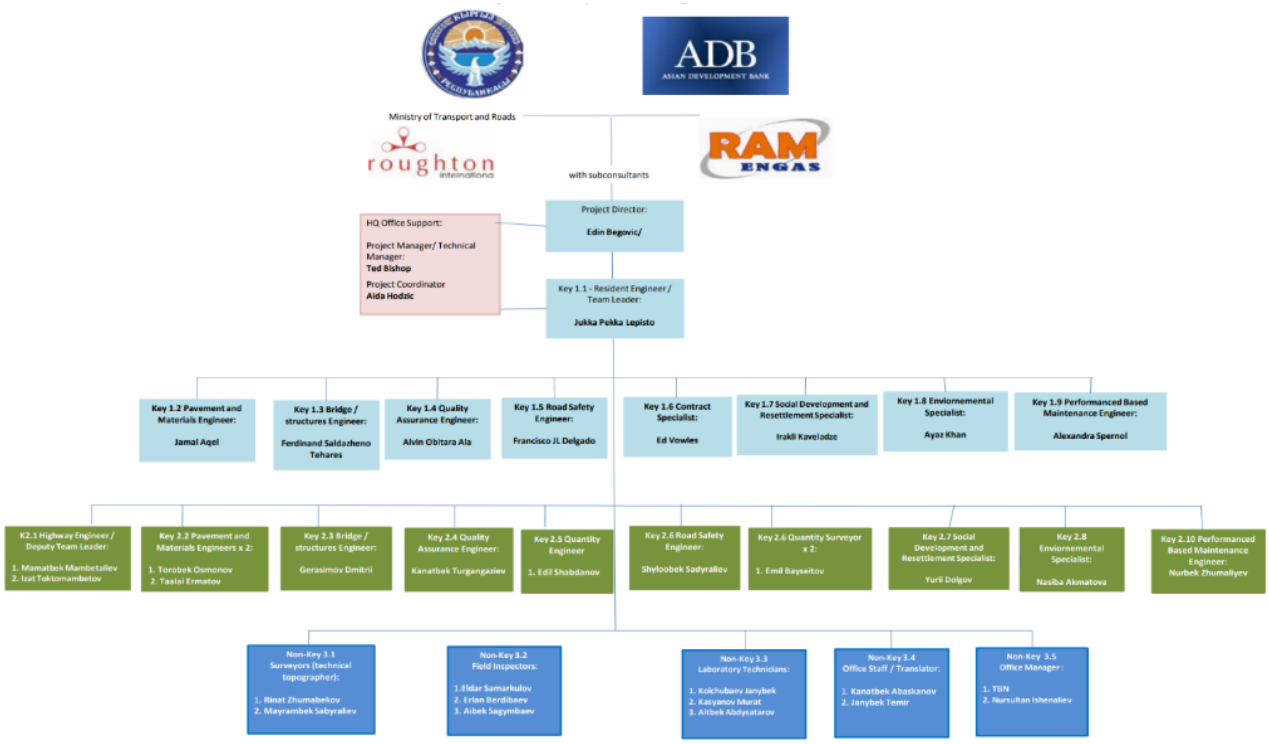



**Figure 4. Organizational Structure of the Construction Supervision Consultant.**

**Table 7. List of Consultant's Staff.**

| | |
|---|---|
| ***International staff*** | |
| Project Director | Edin Begovich |
| Resident Engineer-Team Leader | Jukka Pekka Lepisto |
| Contract Specialist | Ed Vowles |
| Social Development and Resettlement Specialist | Iraklii Kaveladze |
| Environment Specialist | Elsie Monsanto |
| PBM Engineer | Alexandra Spernol |
| Quality Assuarance Engineer | Donald Gater |
| Road Safety Engineer | Francisco Javier Lopez Delgado |
| Bridge/Structural Engineer | Ferdinand Tejares |
| ***Local staff*** | |
| Assistant Engineer -1 | Mamatbek Mambetaliev |
| Assistant Engineer -2 | Izat Toktomambetov |
| Pavement and Materials Engineer – 1 | Torobek Osmonov* |
| Pavement and Materials Engineer – 2 | Taalai Ermatov |
| Quality Engineer | Eldar Samarkulov* |
| Bridge Engineer | Dmitrii Gerasimov |
| Road Safety Engineer | Shyloobek Sadyraliev |
| Quantity Engineer | Edil Shabdanov |
| Quantity Engineer – 1 | Emil Bayseitov |
| Quantity Engineer – 2 | Dastan Tashtanov |
| Translator – 1 | Kanat Abaskanov |
| Translator – 2 | Bakytbek uulu Bakai |
| Office manager – 1 | Ruslan Boronov |
| Office manager – 2 | Nursultan Ishenaliev |

| | |
|---|---|
| PBM Engineer | Nurbek Zhumaliyev |
| Archaeologist | Kubatbek Tabaldiev |
| Topographer -1 | Rinat Zhumabekov |
| Topographer – 2 | Mayrambek Sabyraliev |
| Topographer – 3 | Dilshat Tajibayev |
| Site Inspector – 1 | Nurbek Omorov |
| Site Inspector – 2 | Emilbek Atambekov |
| Site Inspector – 3 | Ravshan Seyitov |
| Site Inspector – 4 | Erlan Berdibaev |
| Laboratory Technician – 1 | Kanybek Korkombayev |
| Laboratory Technician – 2 | Melis Ayazbekov |
| Laboratory Technician – 3 | Kenzhebek Andakeev |
| Environmental Protection Specialist | Nasiba Akhmatova |
| Resettlement Specialist | Yuri Dolgov |

## 2.3 Project Activities During Current Reporting Period.

### 2.3.1 Road construction works.

The following civil works activities were carried out during the current reporting period.

**Table 8. Civil Works Activities during the Current Reporting Period.**

| Work item/activity | Location | Quantity | Remarks |
|---|---|---|---|
| **Lot 1** | | | |
| Clearing and uprooting of cut trees | km13+140 - km43+000 | 39 860m | Completed |
| Scarifying of existing asphalt | km3+140 - km11+260 | 8.12km | Completed |
| | km12+000 - km34=000 | 22 km | Completed |
| Preparation of subgrade | km3+140 - km11+400 | 8 260 m | Completed |
| | km12+060 - km25+000 | 12 940m | Completed |
| | km25+000 - km31+000 | 6 000m | Completed |
| | km31+000 - km43+000 | | In progress |
| | km12+860 - km13+060 | 200m | Completed |
| Laying and compacting of subbase (25 cm) | km3+140 - km11+400 | 8 260m | Completed |
| | km13+200 - km31+000 | 17 800m | Completed |
| | km12+000 - km13+220 | 1 220 | Completed |
| Laying and compacting of base course (20 cm) | km3+140 - km11+260 | 8 120m | Completed RS |
| | km13+200 - km16+500 | 3 300m | Completed RS |
| | km16+500 - km21+000 | 4 500m | Completed RS |
| | km13+220 - km17+400 | 4 180m | Completed LS |
| | km17+400 - km 19+300 | 1 900m | Completed LS |
| | km19+300 - km 22+000 | 2700m | Completed LS |
| | km 29+400 - km 30+000 | 600m | Completed LS |
| | km28+200 - km29+400 | 1 200m | Completed LS |
| Laying of binder course (9cm) | Km3+140 - km10+000 | 686m | Completed |
| | km10+000 - km11+260 | 1 240m | Completed |
| | km12+230 - km 19+000 | 6 770m | Completed RS |
| | km 19+570 - km21+000 | 1 430m | Completed RS |
| | km13+239 - 14+200 | 961m | Completed LS |
| | km14+200 - 14+500 | 300m | Completed LS |
| Reinforced concrete pipe 1.0m dia | Various | 22 Completed, 1 in progress | |
| Reinforced concrete pipe 1.5m dia | Various | 15 completed, 1 in progress | |
| Box culvert = 6x3 | 12 set | 1 | In progress |

| Work item/activity | Location | Quantity | Remarks |
|---|---|---|---|
| Box culvert = 3x2.5 | 19 set | 1 | In progress |
| Box culvert =2x2 | 45 set | 1 | In progress |
| Bridge | km12+063 | 1 | Completed, open to traffic |
| **Lot 2** | | | |
| Clearing and uprooting of cut trees | km71+600 - km86+660 | 15 060m | Completed |
| | km88+660 - km89+040 | 220m | Completed |
| | km66+200 - km66+590 | 22km | Tree cutting completed |
| | km65+060 – km69+360 | 4 300m | Completed |
| | km62+700 - km63+400 | 700m | Completed |
| | km87+300 - km87+680 | 380m | Completed |
| | km66+260 - km66+340 | 80m | Completed LS |
| | km69+400 - km69+700 | 300m | Completed RS |
| | km62+540 - km62+610 | 70m | Removal of the top soil and tree-cutting completed RS |
| Scarifying of existing asphalt | km86+800 - km89+500 | 2 700m | Completed |
| | km64+400 - km65+060 | 660 m | Completed |
| | km66+740 - km69+000 | 2 260m | Completed |
| | km71+140 - km71+500 | 360m | Completed |
| | km67+770 - km67+920 | 150m | Completed |
| Preparation of subgrade | km 71+600 - km 86+000 | 1 440m | Completed |
| | km 87+700 - km88+740 | 1 040m | Completed |
| | km 89+080 - km 89+500 | 420m | Completed |
| | km 66+740 - km67+740 | 1 000m | Completed |
| | km 68+160 - km69+000 | 840m | Completed |
| | km62+760 - km63+100 | 340m | Completed |
| | km62+540 - km62+610 | 70m | In progress |
| | km66+260 - km66+340 | 80m | In progress LS |
| | km63+120 - km63+380 | 260m | In progress 7$^{th}$ layer |
| | km63+400 - km63+600 | 200m | In progress 2$^{nd}$ layer |
| | km63+600 - km65+160 | 1 560m | Completed |
| Laying and compacting of subbase (25 cm) | km71+600 - km 86+000 | 14 400m | Completed |
| | km66+740 - km 67+740 | 1 000m | Completed |
| | km68+200 - km 69+000 | 800m | Completed |
| | km88+880 - km 89+500 | 620m | Completed |
| | km87+700 - km 88+700 | 1 000m | Completed |
| | km63+600 - km65+160 | 1 560m | In progress LS |
| Laying and compacting of base course (20 cm) | km66+740 - km67+740 | 1 000m | In progress RS |
| | Km68+200 - km69+000 | 800 | In progress RS |
| | km71+880 - km79+480 | 7 600m | Completed RS |
| | km79+480 - km80+290 | 810m | Completed LS |
| | km81+460 - km85+960 | 4 500m | Completed RS |
| | km 81+460 - km83+400 | 1 940m | Completed LS |
| | km79+460 - km81+460 | 2000m | Completed LS |
| Laying of binder course (9cm) | km71+880 - km79+320 | 7440m | Completed both sides |
| | km79+320 - km80+290 | 970m | Completed RS |
| | km81+460 - km83+500 | 2040m | Completed RS |
| | km83+500 - km83+980 | 480m | Completed RS |
| Reinforced concrete pipe 1.0m dia | various | 95% completed | |
| Reinforced concrete pipe 1.5m dia | various | Completed | |
| Box culvert = 6x3 | 12 set | 2 completed | |

| Work item/activity | Location | Quantity | Remarks |
|---|---|---|---|
| Box culvert =2x2 | 45 set | 1 | In progress |
| Bridge at km 86+261.35 | Ak-Uchuk River | 11.1m | In progress |
| Bridge at km 88+795.01 | Zharkurumdu river | 11.1m | In progress |
| Bridge at km68+044.40 | Mukan River | | In progress |

*Note: Based on data provided by the CSC Quantity Engineer*

37. The accomplishments on the major work items for Lot 1 are summarized below:

- **Tree cutting**. Total number of trees to be cut is 696 of which, 122 have been cut by end of December 2021. No tree-cutting activity was carried out this reporting period. Total accomplishment on this work item from the Project commencement up to end of June 2022 is 17.53%.
- **Clearing and grubbing works**. During this report period, 1,480m$^2$ or 0.4% of the total work quantity was accomplished. The total accomplishment from the Project commencement up to end of June 2022 is 24.8%.
- **Excavation**. Total quantity for excavation is 61,805m$^3$ consisting of 3,395m$^3$ spoil materials from cutting and 58,410m$^3$ of rock. During this report period 11.60% of the total quantity was excavated (Photos 1-2). The total accomplishment from Project commencement up to end of June 2022 is 78. 6%.
- **Removal of Existing Asphalt**: The entire 27km length of road will be scarified. Original quantity to be scarified is 38,597m$^3$. Actual accomplishment during this report period is 21.9%. The total accomplishment from the Project commencement up to end of June 2022 is 70%.
- **Fill and embankment**: Total quantity of embankment with common fill and subgrade material from cuts and from borrow pits is 360,006 m$^3$. During this report period, 27% was completed (Photos 4-6). The total accomplishment from the Project commencement up to end of June 2022 is 77.1%.
- **Subgrade**: Subgrade works is for the total road length of 42.915km and involves laying and compaction of 399,940 m$^3$ of subgrade material. During this report period 7.9% was completed. Total accomplishment from the Project commencement up to the end of June 2022 is 86.9%. (Photos 9-10)
- **Subbase**: Subbase works is for the total road length of 42.915km and involves laying and compaction of 260,095 m$^3$ of subbase material; 39,245m$^3$ on the shoulders and 220,850m$^3$ on the main road. Accomplishment on the main road during this reporting period is 21.9%. Total accomplishment from the Project commencement up to the end of June 2022 is 63.4% (Photos 11-12). Subbase works on shoulders have not started.
- **Base Course**: Base course works for the total road length of 42.915km involves laying and compaction of 92,737m$^3$ of base course material. Accomplishment during this reporting period is 13.6% and total accomplishment from the Project commencement is 63.4% (Photos 13-14).
- **Asphalt Binder**. Laying and compaction of asphalt binder course on the 42.915km road for a total quantity of 38,390m$^3$. Accomplishment during this reporting period is 12.2% and total accomplishment from Project commencement is 30.0% (Photos 13-14).
- **Asphalt Pavement**: Laying and compaction of asphalt wearing course on the 42.915km road for a total quantity of 25,339m$^3$. This activity has not started.

- **Reinforced Concrete Pipes.** The works involve provision and installation of 597m RCP of 1.0m diameter and 521m RCP of 1.5m diameter. Actual accomplishment this reporting period is 30.0% on the 1.0m diameter pipe and 26% on the 1.5m-dia. pipe. The total accomplishment from the Project commencement up to end of June 2022 is 71.0% and 68.0%, respectively.
- **Culverts**: This work item involves construction of four sets of box culverts consisting of 45 sets of 2x2m, 19 sets of 3x2.5m, 16 sets of 4x2.5m, and 12 sets of 6x3m. Works have just started and has no reported accomplishment yet (Photos 7-8).
- **Bridge**. Construction of the bridge at Km12+063.7 has recently been completed. Total accomplishment from Project commencement up to end of June 2022 is 90%.
- **Gabions**: Installation of 301pcs of gabions. No work was undertaken during this report period. Total accomplishment from Project commencement until end of June 2022 is 17.53%.
- **Miscellaneous Items**. Completed removal and installation of electric poles and power lines at km12+205-km12+475%, km 67+973 to km 69+360, and km 86+618 to km 86+705; completed the removal of bus stops at km0+000-km43+000; continually carried out road maintenance at km 0+000 to km 43+000.

Photo 1. Excavation works at km41+500.

Photo 2. Rock excavation at Km42+420-km42+480 LS.


Photo 3. Existing asphalt being scarified at km31+000.


Photo 4. Backfilling at km33+200-km33+700 LS.


| | |
|---|---|
| Photo 5. Filling of embankment at km41+940. | Photo 6. Embankment compaction at Km12+860 to Km13+000. |
|  |  |
| Photo 7. Installation of RCP at Km35+469. | Photo 8. Installation of RCP at km 11+543. |
|  |  |
| Photo 9. Contractor's crushing plant in operation. | Photo 10. Crushed stone paving at km km14+600-15+000 (LS). |
|  |  |
| Photo 11. Base course construction at km16+300 – km 19+000. | Photo 12. Filling of subbase at km66+740-km67+740 RS. |
|  |  |
| Photo 13. Laying of binder course at Km17+230 – Km17+500. | Photo 14. Compaction of binder course at Km15+600-km16+440 RS. |

38. The following works were carried out on Lot 2

- **Tree cutting**. Based on the original design, total number of trees to be cut was 239. Based on the benchmark survey, it increased to 1,749. A total of 1,357 trees have been cut during the past years. During this report period, 117 trees were cut or 48.9% of the original quantity. Total accomplishment from the Project commencement until the end of June 2022 based on the original scope has reached 350.9% of the original quantity.
- **Clearing and grubbing.** The works cover 35ha based on original design. During this report period, 1.7% of the total work quantity was accomplished. The total accomplishment from Project commencement up to end of June 2022 is 24.5% (Photo 15 -16).
- **Excavation**: This item involves excavation and disposal of unusable materials from cutting and rock excavation. Total quantity for excavation is 10,833$m^3$. The accomplishment during the current reporting period is 119.2%, exceeding the original quantity. Total accomplishment from Project commencement up to end of June 2022 has reached 269.8% (Photos 17-18).
- **Removal of Existing Asphalt**. Based on the original plan, 10,833$m^3$ of old asphalt pavement will be scarified. The total accomplishment from the Project commencement up to end of June 2022 is 94.11% (Photos 19).
- **Fill and embankment**: Total quantity for formation of embankment with common fill and subgrade material from cuts and from borrow pits is 183,735$m^3$. During this report period 29.2% was accomplished (Photos 20-23). The total accomplishment from the Project commencement up to end of June 2022 is 79. 5%.
- **Subgrade**: Subgrade works is for the total road length of 27.1km involving 90,010$m^3$. Accomplishment during this report period is 7.4%. Total accomplishment from the Project commencement up to the end of June 2022 is 31%.
- **Subbase**: Subbase works is for the total road length of 27km and involves laying and compaction of 152,626$m^3$ subbase material; 26,220$m^3$ for shoulders and 126,516$m^3$ for the main road. Accomplishment on the main road during this reporting period is 24.2%. Total accomplishment from the Project commencement up to the end of June 2022 is 45.5% (Photos 11-12). Subbase works on shoulders have not started.
- **Base**. Base course requirement based on original design is 62,300$m^3$. Accomplishment during this reporting period is 11.9%. Total accomplishment from the Project commencement up to the end of June 2022 is 28.25%.
- **Binder**: Spreading and compaction of asphalt binder course and asphalt wearing course for the total road length of 27.1km involving 62,300$m^3$. Accomplishment during this reporting period is 11.4%. Total accomplishment from Project commencement up to the end of June 2022 is 27.2% (Photos 24-25).
- **Reinforced Concrete Pipes.** The works involve provision and installation of 675m RCP of 1.0m diameter and 160m RCP of 1.5m diameter. Actual accomplishment this reporting period is 37.7% on the 1.0m diameter pipe, and 37.5% on the 1.5m-dia. pipe. The total accomplishment from the Project commencement up to end of June 2022 is 91.0% and 50.0%, respectively.
- **Culverts**. Construction of box culverts consisting of 22 sets of 3x2.5m and 12 sets of 6x3m. Works on this item have just started and has no reported accomplishment yet
- **Bridges**: Construction of bridges at km 65+410, km68+044, km86+261, and km88+795. Total accomplishment during this report period is 60%. Works on the first

two bridges have not started. By end of June 2022, the bridge at km86+261 is 50% complete while the bridge at Km88+795 is 60% complete (Photos 26 -28).

Photo 15. Road side trimming at Km71 – km 79.

Photo 16. Grubbing works at Km 65 – km 300.

Photo 17. Removal of unsuitable materials at Km 87 – km 300.

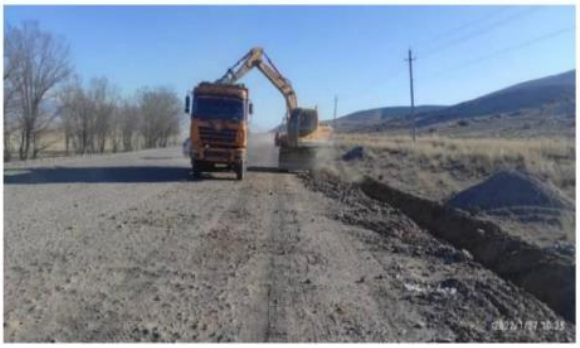


Photo 18. Excavation of ditches at km 85+420.

Photo 19. Existing a/c pavement being scarified at km 88+660 to km 88+750.

Photo 20. Subgrade backfilling at km 88+660 - km 88+740.

Photo 21. Construction of embankment at Km 89+340.

Photo 22. Backfilling of bridge at km 88+795.

Photo 23. Crushed stone paving at km 83+000 to km 83+400 LS.

Photo 24 Binder course paving at km 74+120 - 75+00.

Photo 25. Binder course paving at km 17+564 - 18+677.

Photo 26. Backfilling of foundation and piers of Zharkurumdu River Bridge at km 88+795.

Photo 27. Construction of box culvert at km 62+700.

Photo 28. Installation of bridge retaining wall formwork for Ak-Uchuk River Bridge km 86+261.

### 2.3.2 Ancillary Works.

39. Aside from the activities involving the major road work items, during the current reporting period, the Contractor carried out the following activities to support his project operations and to fully comply with other contractual obligations as stipulated in the contract and technical specifications.

- Maintenance of the Contractor's staff houses, offices, fabrication areas, equipment maintenance areas, fuel storage areas, crushing plants, materials storage areas, asphalt plants, concrete batching plants, etc. This includes provision of necessary equipment, office supplies, first aid facilities, and daily accommodation needs of staff and workers (Photos 29 -50). The necessary permits for these facilities were obtained prior to construction. More detailed information may be found in the SAEMR June – December 2021. Refer to Figure 5 for the location maps of the

contractor's camps and auxiliary installations for Lot 1, and to Figure 6 for Lot 2.

- Maintenance of project information sign boards, safety sign boards, and other safety warning devices for traffic, worker safety, and public safety (Photos 51-52)
- Continued compliance with measures related to the COVID-19 pandemic.
- Compliance with the ADB safeguard policies; the relevant laws and regulations of the Kyrgyz Republic on health, safety, and environmental protection; the IEE-EMP; and the Contractor's SSEMP (see Section 3 and Section 4).
- Monitoring of air quality (noise, vibration, air pollutants), water quality and soil quality (See Section 4.3)
- Operation and maintenance of soil and aggregate quarries (See Section 4.4)
- Operation and maintenance of spoils disposal sites (See Section 4.5)
- Keep record of complaints and grievance

**Contractor's Campsite and Facility Area for Lot 1.**

40. The Contractor's campsite and facility area are located along Balykchy Road at km16+100 at about 50m distance from the right side of the road. It has a total area of 45ha. (See Figure 6). Within the 45ha area are the Contractor's offices, living quarters for the officers and workers, materials fabrication area, equipment parking area, fuel storage area, equipment maintenance area, rock crushing plant, asphalt batching plant, and cement batching plant. The rock crushing plan, asphalt batching plant, and cement batching plant are located about 500m away from the offices and accommodation. All necessary documents /approval from local authorities and the State Committee for Ecology and Climate were obtained before construction of the facilities.

41. The office buildings and the workers' accommodation buildings are built next to each other in one compound about 50m from the main road. The living quarters are designed for 45 people. These are for the international and national staff and workers who are not residents in the area. Workers living near the project site live in their own houses.

42. There are separate buildings and rooms for the management, technical staff, and workers. The compound has its own water supply for domestic use, power supply, communication lines, first-aid room with doctor and first aid supplies, a prayer room (namazkana), dining area, kitchen, separate toilet and bath for men and women, and an open space for recreation and gathering at the center of the buildings. There are provisions for firefighting and emergencies. Fire extinguishers are distributed strategically inside and outside the buildings. Additionally, a concrete sand tank and shovels are placed at one section of the open space for fire emergency. Various information materials on COVID-19 and fire awareness are posted around the buildings.

43. By end of June 2022, the camps and facility areas are orderly and in good condition, with sufficient supplies of consumables.

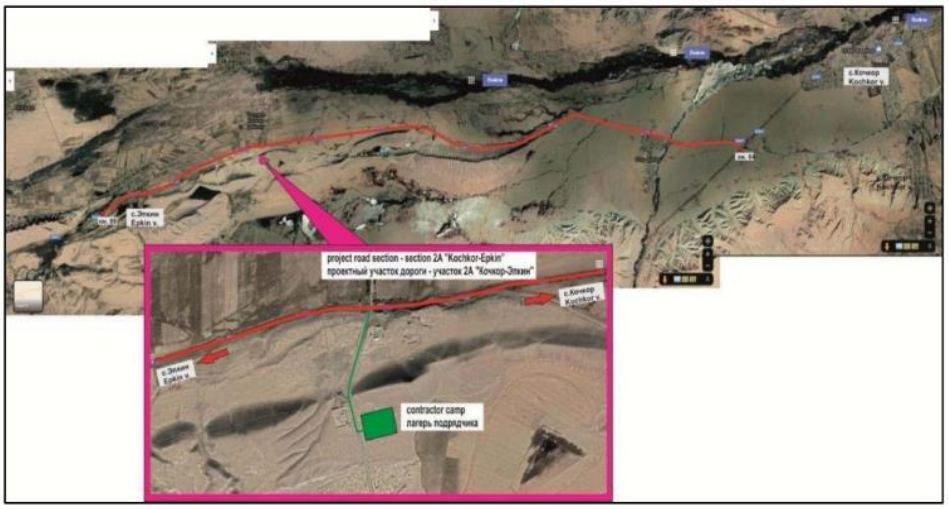



Figure 5. Location of Lot 1 Contractor's Campsite and Facility Areas.

Photo 29. General view of Lot 1 campsite at km 16 + 100 (RS).

Photo 30. Lot 1 campsite and parking area at km 16 + 100 (RS).

Photo 31. Lot 1 offices and bulletin boards.

Photo 32. Lot 1 first aid room, doctor, and first aid supplies.

Photo 33. Arrangement of offices.


Photo 34. Ladies and men's toilets.


Photo 35: Information materials on COVID-19 and fire awareness.

Photo 36. Left photo: provision for firefighting
Right photo: smoking area.

Photo 37. Lot 1 camp's kitchen and cook.

Photo 38. Lot 1 camp dining area.

Photo 39. Domestic water supply tank (inset).

Photo 40. Vehicle and equipment parking area.

Photo 41. Lot 1 concrete and asphalt batching plants.

Photo 42. Lot 1 rock crushing plant.

**Contractor's Campsite and Facility Area for Lot 2.**

44. The Contractor's campsite and facility area for Lot 2 are located near the road of Cholpon Village leading to Chon-tuz Village. The village road intersects Lot 2 road at km81+400 on the left. The site has a total area of 4.5ha. (See Figure 7). Within the fenced compound are the Contractor's offices, living quarters for the officers and workers, materials fabrication area, and car parking area. The fuel storage area, equipment maintenance area, water tank, rock crushing plant, asphalt batching plant, and cement batching plant are location within the vicinity of compound at minimum distance of 100m from the campsite. All necessary documents /approval from local authorities and the State Committee for Ecology and Climate were obtained before construction of the facilities.

*Lot 2 facility area with the rock crushing plant at the foreground and the Contractor's camp at background*.

45. The campsite has similar arrangement and provisions as those of Lot 1. The living quarters are designed to house both the international and national staff and workers who are not residents in the area. Workers living near the project site live in their own houses.

46. The Contractor has identified the place for the construction workers camp, which is located on Section 2A "Kochkor – Epkin" at 81+000, about 250 meters from the road, over an area of 4.5 ha. All necessary documents/approval from local authorities, State Agency for Environmental Protection and Forestry (SAEPF), have been received. The construction and erection of the workers camp has already been started. In accordance with the requirements of the Kyrgyz Republic Legislation, the contractor will also develop an environmental passport.

47. There are separate buildings and rooms for the management, technical staff, and workers. The compound has its own water supply for domestic use, power supply, communication lines, first-aid room with doctor and first aid supplies, a prayer room (namazkana), dining area, kitchen, separate toilet and bath for men and women, and an open space for recreation and gathering at the center of the buildings. There are provisions for firefighting and emergencies. Fire extinguishers are distributed strategically inside and outside the buildings. Additionally, a concrete sand tank and shovels are placed at one section of the open space for fire emergency. Various information materials on COVID-19 and fire awareness are posted around the buildings.

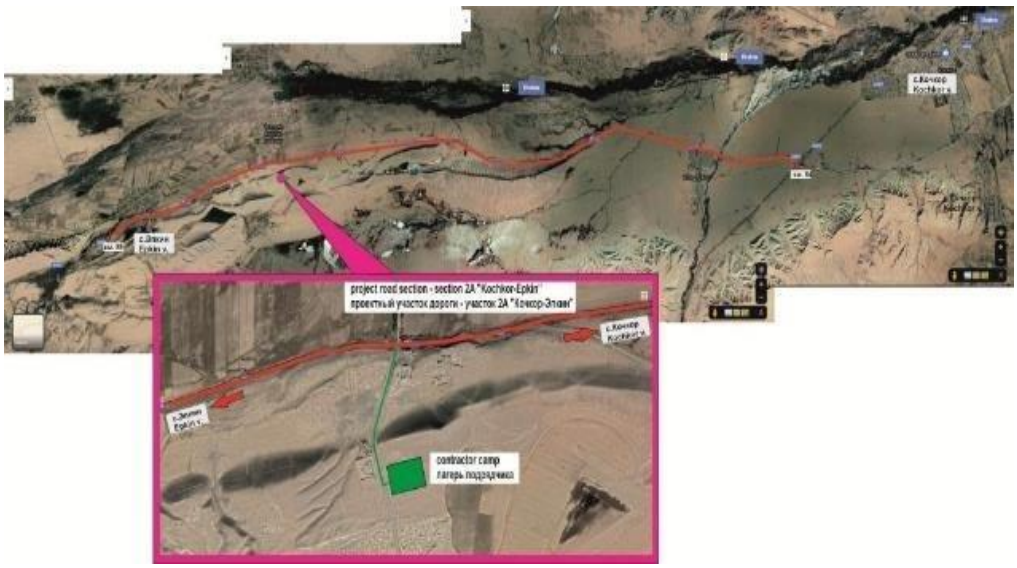



Figure 6. Map of Contractor's Camp and Facility Site for Lot 2.

Photo 43. Lot 2 basketball court.

Photo 44. The offices and camps.

Photo 45. Lot 2 mess hall.

Photo 46. First aid room and doctor.

Photo 47. Kitchen.

Photo 48. Kitchen facilities and supplies.

Photo 49. Entertainment area.

Photo 50. Electrical connections and domestic water supply tanks (inset).

**Contractor's Manpower.**

48. As of 30 June 2022, the General Contractor and subcontractors have a combined manpower of 387 mainly local personnel. Foreign staff still could not be remobilized due to the COVID-19 restrictions. Below is a summary of the Contractor's manpower

**Table 8. List of Contractor's Manpower.**

| Personnel | Contractor SINOHYDRO | | Subcontractor (Arek Stroy) | Subcontractor (Jumgal Suu Kurulush LLC) | Subcontractor (Jagylmai LLC) |
|---|---|---|---|---|---|
| | Local (Lot 2) | Foreign | Lot 1 | Lot 2 | Lot 2 |
| Administrative/ Engineer/ Technician | 27 | 9 | 43 | 2 | 12 |
| Operators and drivers | 44 | 3 | 65 | 1 | 23 |
| Skilled workers | 42 | | 42 | | 10 |
| Unskilled labor | 49 | | 52 | 8 | 7 |
| Others | - | | - | - | 3 |
| *Subtotal* | *174* | | *202* | *11* | 55 |
| TOTAL | **174** | | **268** | | |

## 2.4 Description of Changes to Project Design.

49. To minimize impact on private plots in Kok-Jar, Chekildek and Epkin Lot-2 villages, the

design of sidewalks was modified. The sidewalk width was combined by 1.0 m on road sections in these villages (see Figure 7). As a result of revised sidewalk design, the affected area was reduced to 864.38 $m^2$ from the original total area of 3,506.4 $m^2$.

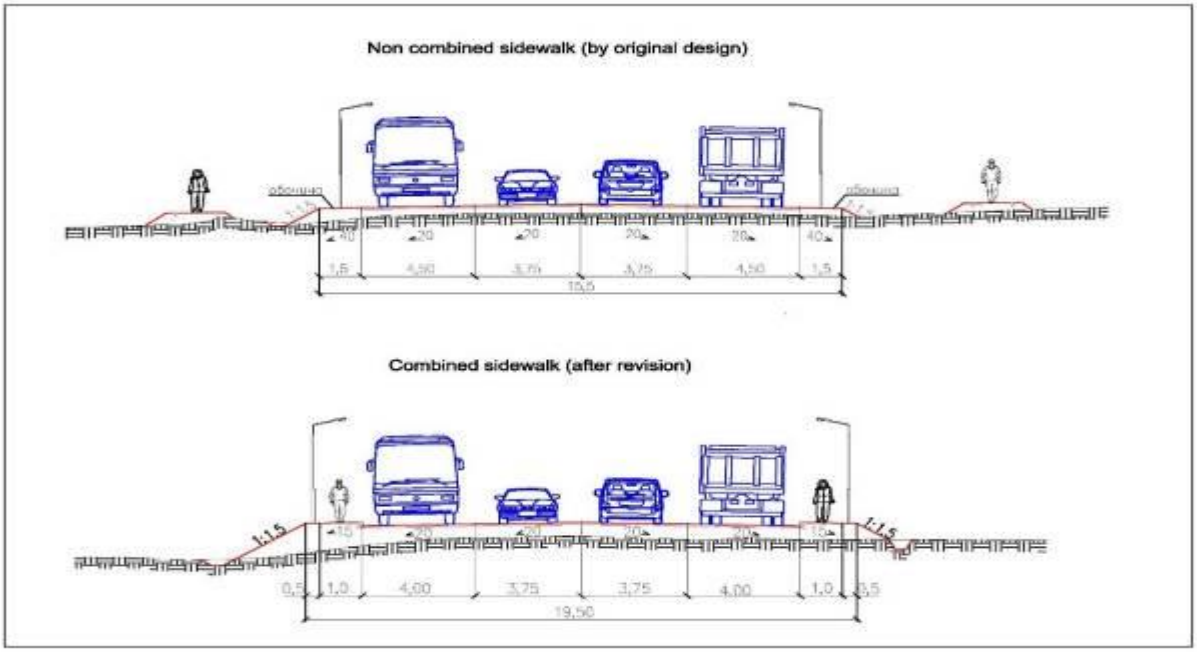



Figure 7. The scheme of combined sidewalk.

## 2.5 Description of Changes to Agreed Construction methods.

50. No changes were made in construction methods

## 3. ENVIRONMENTAL SAFEGUARD ACTIVITIES.

## 3.1 General Description of Environmental Safeguard Activities.

51. All environmental safeguard activities of the Contractor are based on the approved SSEMP The Contractor's Environmental Protection Specialist (EPS) is primarily responsible for the implementation of the Contractor's environmental protection commitments as specified in the SSEMP. The Contractor's Project Manager provides the necessary resources and management support to put all relevant plans into action. Among others, the safeguard activities of the Contractor include: (i) securing all needed environmental permits for the temporary use of some land, and for the installation and operation of the Contractor's facilities; (ii) consultations and dialogues with local communities to explain about the project activities and to resolve public grievances; (iii) self-monitoring of the construction sites and facilities to ensure that the conditions are in accordance with the ADB SPS 2009, IEE-EMP, SSEMP, government regulations, and best management practices; (iv) implementation of corrective actions that may be recommended by the CSC ES; (v) supervision of sampling and testing of ambient pollution indicators; (vi) implementation of social, health and safety requirements; (vii) keeping daily logs and maintaining records of all environmental activities; and (viii) preparation of environmental reports.

52. The CSC ES monitors the Contractor's compliance with the IEE-EMP and SSEMP during the construction stage through ocular site visits and audits of the Contractor's logbooks and records. Site visits are usually done together with the Contractor's EPS so that instructions for correction of non-compliances can be clearly and immediately explained for prompt action. The CSC-ES also participates in air and water sampling and noise and vibration monitoring.

53. Site inspections by the NES were conducted jointly with the Contractor's ES. When environmental problems are observed, the Consultant notifies the Contractor verbally or in writing to correct the violations within a specified period. Meetings and/or orientations for staff who commits violations and those responsible for EMP and SSEMP are conducted to explain the violations and suggestions for improvement.

## 3.2. Site Audits.

54. From January to June 2022, the NES visited the project sites 18 times. The new IES visited the sites two times: on 21 June 2022, a day after her mobilization, for site familiarization and on 22 June with the ADB mission. The ES of the CSC and the Contractor jointly conducted the visual monitoring and the ambient environmental quality monitoring. The scope of activities and the findings of the site inspections are summarized in Table 9. Selected photographs of activities and findings are shown in Photos 51 to 62.

**Table 9. Findings of Site Inspections during the Report Period.**

| № | Data | Name of auditors | Purpose of inspectiona | Scope of Activity/ Findings |
|---|---|---|---|---|
| **January** | | | | |
| 1 | 13.01.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of construction sites on Lot 1 with the Contractor's ecologist | Visual monitoring of all construction sites, and inspection of sites for the removal of old asphalt.<br>There were no violations and inconsistencies with the SSEMP. |
| 2 | 14.01.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of construction sites on Lot 2 with the Contractor's ecologist | Visual monitoring of all construction sites, dumps of unusable soil, quarries.<br>There were no violations and non-compliance with the SSEMP. |
| **February** | | | | |
| 3 | 22.02.2022 | Akhmatova N.<br>Beisheev I. | Inspection of sites for quarries and dumps of old asphalt | Visual monitoring of all construction sites, dumps of unusable soil, quarries.<br>There were no violations and non-compliance with the SSEMP. |
| 4 | 24.02.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of construction sites on Lot 2 with the Contractor's ecologist | Visual monitoring of all construction sites, production facilities.<br>There were no violations and inconsistencies with the SSEMP. |
| 5 | 25.02.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of construction sites on Lot 1 with the Contractor's ecologist | Visual monitoring of all construction sites, production facilities.<br>There were no violations and inconsistencies with the SSEMP |

| |
|---|
| **March – no inspection in March** |

| | | | | |
|---|---|---|---|---|
| **April** | | | | |
| 6 | 13-14.04.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of construction sites on Lot 1 and Lot 2 with the Contractor's ecologist. | There were violations of SSEMP in terms of soil protection and non-compliance of stockpiling and storage of equipment and spare parts with environmental requirements. The violations were eliminated. |
| 7 | 15.04.2022 | Akhmatova N.<br>Beisheev I. | Visit to Kochkor plant nurseries | Examination of seedlings |
| **May** | | | | |
| 8 | 11.05.2022 | Public hearings in Kok-Jar and Cholpon | Familiarization with ADB's Policy on Protective Environmental Measures, the impact of construction activities on the environment, and the mitigating and protective measures taken. Disclosure of grievance mechanism. | |
| 9 | 12.05.2022 | Public hearings in Tash Sarai | Familiarization with ADB's Policy on Protective Environmental Measures, the impact of construction activities on the environment, and the mitigating and protective measures taken. Disclosure of grievance mechanism | |
| 10 | 13.05.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of the Contractor's performance of the SSEMP | Visual monitoring of construction sites, production bases, quarries, dumps |
| 11 | 16.05.2022 | Akhmatova N.<br>Beisheev I. | Monitoring of the Contractor's performance of the SSEMP | There were violations of SSEMP in terms of collection and storage of garbage, contamination of the fabrication yard with petroleum products, insufficient dust suppression of the unpaved sections of the road. |
| 12 | 31.05.2022 | ADB Mission | | |
| **June** | | | | |
| 13 | 15.06.2022 г. | Participation in the instrumental noise and vibration measurements on Lot 1 and Lot 2 | | |
| 14 | 16.06.2022 г. | Akhmatova N.<br>Beisheev I. | Site audit | Checking the Contractor's implementation of previously issued notice to correct non-compliances with the SSEMP on Lot 1 |
| 15 | 17.06.2022 г. | Akhmatova N. | Site audit | Checking the Contractor's |

| | | | | |
|---|---|---|---|---|
| | | Beisheev I. | | implementation of previously issued notice to correct non-compliances with the SSEMP on Lot 2 |
| 16 | 21.06.2022 | Akhmatova N.<br>Monsanto E. | International specialist Monsanto E. familiarization with the project sites of Lot 1 and Lot 2. | |
| 17 | 22.06.2022 | ADB Mission on Environmental Protective Measures | | |

**Photos of Monitoring in January, February, March 2022.**

Photo 51. Rock crusher of Lot 1 in operation.

Photo 52. Rock crusher of Lot 2 in operation.

Photo 53. Well-maintained office and camp at Lot 2.

Photo 54. Top: Dust control at Lot 1 and Lot 2
Bottom: Well-maintained parking areas Lot 1 and Lot 2.

Photo 55: Dust at km 15+900, Km 41+750,km 16-36.

Photo 56: Dust at km 71+500, km 72+680, km 81 to km 86,

| | |
|---|---|
| | km 88+600 – km 89+200. |

**Photos of Monitoring in April, May and June 2022.**

Photo 57. Watering along Lot 1 to control dust.

Photo 58. Watering along Lot 2 to control dust.

Photo 59. Concrete batching plant's 3-chamber wastewater primary treatment tank at Lot 1.

Photo 60. Asphalt plant in operation at Lot 1. Good facility and site maintenance.

Photo 61 Scrap materials around the fabrication area.

Photo 62 Laying and compaction of clay layer for scarified asphalt disposal site before use.

## 3.3 Issues Tracking (Based on Non-Compliance Notices).

55. If a non-compliance is identified during a site visit, a verbal instruction is initially given by the CSC to the Contractor, clearly giving suggestions for immediate correction. The CSC

sends a follow up letter for issues that were not immediately corrected to formalize the instruction with a deadline date for correction. If the Contractor is unable to correct the non-compliance by the deadline date, the issue will be carried over to the next non-compliance notice. The CSC gives a new deadline date if the Contractor has a valid reason for the delay in executing the corrective action. Issues are tracked and status is included in the monthly, quarterly, and semi-annual environmental reports of the CSC. Similarly, the Contractor tracks the status of non-compliance notices issued by the CSC and includes the status in the monthly reports submitted to the CSC.

### 3.3.1 Contractor's activites to eliminate SSEMP non-compliances.

56. Table 11 shows the status of non-compliance issues identified during the site visits from January to June 2022, including the issues specified in the CSC's letter Ref. KGZ4267/02/01/JPL/271 dated 18.04.2022, and KGZ4267/02/01/JPL/333 dated 18.06.2022. Non-compliance issues before and after correction are shown in Photos 63 to 71.

**Table 11. Status of Corrective Measures for Non-Compliance Issues.**

| No п/п | Observed Non-compliance or Violations | Proposed Corrective Measures (PCM) | Deadline for Compliance | Status (as of 30 June 2022) |
|---|---|---|---|---|
| **Lot 1** | | | | |
| 1 | Pollution of the area around the gas station (photo 63) | Ensure that the area is cleaned up from oil contamination. | 17 June 2022 | Done (photo 64) |
| 2 | Storage conditions for waste equipment, spare parts do not meet the sanitary and environmental requirements (photo 65). | Ensure separate storage in accordance with environmental requirements | 17 June 2022 | Done (photo 66) |
| 3 | Complete the construction of a concrete septic tank to collect wastewater from the Concrete Mixing Plant. | | April 2022 | Done (photo 67). |
| **Lot 2** | | | | |
| 5 | An additional diesel fuel storage tank has been installed in the fuel depot without providing measures to collect diesel fuel in case of emergency leakage/spillage | The area under the tank, in the area of possible fuel leaks (the place where the hose is connected to the tank)- must have a hard waterproof surface, fenced along the perimeter with a 200 mm high rim. A container for collecting emergency fuel spills should be installed. The capacity of this container should not be less than the capacity of the fuel storage tank (Construction standards of the Kyrgyz Republic "Fillin stations" dated 12.11.2018) | Due by 25 Nov. 2021<br><br>Extended until March 2022. | Due to the impossibility of performing concrete work related to the cold weather, the Contractor committed to correct the issue by the end of March 2022.<br><br>**Current status: not done.** The fuel tank is owned by the subcontractor which was recently replaced. Tank has not been operated. If the tank will be operated in future, |

| No п/п | Observed Non-compliance or Violations | Proposed Corrective Measures (PCM) | Deadline for Compliance | Status (as of 30 June 2022) |
|---|---|---|---|---|
| | | | | the CSC will give a new deadline for compliance. |
| 6 | At Lot 2, during the development of the open pit at km.71+500 and 81+200, the requirements of industrial safety in terms of ensuring stability of the sides of the open pit are not met: there is a risk of collapse, i.e. the angle of slope of the wall of the pit is 90 °, according to "Methodological instructions to determine the slope angle of the boards, slopes, benches and dumps, construction and operated open pits are equal to 70 ° - which ensures the stability of the boards (photo 68) | The Contractor was issued Instructions on the need to ensure stability of the pit walls during quarrying (letter KGZ4267/02/01/JPL/109 dated 23.11.2021). | Continuously throughout the development period | Done by the last quarter of 2021 for the quarry at km 81+200.<br>Done by June 2022 for the quarry at km71+500 (photo 69) |
| 7 | There are emissions coming from some parts of the asphalt plant which are not fully sealed, and due to damages in the connecting hoses | Inspect connection hoses, gate valves, joints on the process equipment and the concrete mixing plant and ensure that these are properly sealed before operation. | immediately | Done |
| 8 | Provide a watertight holding tank for collecting wastewater from the concrete mixing plant in Lot 2. | | Before 15 Aug 2022 | |
| 9 | Bitumen adhesive additive is stored under direct sunlight, which is unacceptable and can lead to its unserviceability and, consequently, the formation of waste | Ensure storage conditions of the adhesive additive, preventing direct sunlight | By June 17, 2022 | Done |
| 10 | The conditions of collection and storage of garbage and equipment do not meet the sanitary and environmental requirements (photo 70). | Ensure separate storage in accordance with environmental requirements | By 17 June 2022 | Done (photo 71) |

| Before Correction | After Correction |
|---|---|
|  |  |
| Photo 63. Spills of fuel ion the ground. | Photo 64. Contaminated soil was removed and area cleaned. |
|  |  |
| Photo 65. Scrap materials around the site. | Photo 66. Scrap materials removed and the site cleaned. |
|  |  |
| Photo 67. A 3-chamber holding tank has been provided for the concrete batching plant. | Photo 68. Methodology of soil quarrying at km71+500 is not meeting the required angle for stability and safety. |

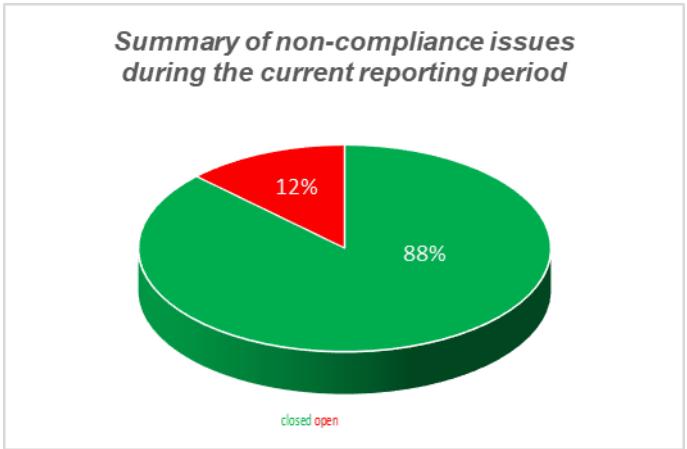

Photo 69. Methodology for soil quarry has been changed to prevent erosion and ensure safety.

Photo 70. Storage of scrap materials not meeting the environmental requirement.

Photo 71. Scattered scrap materials have been removed and the site has been cleaned.

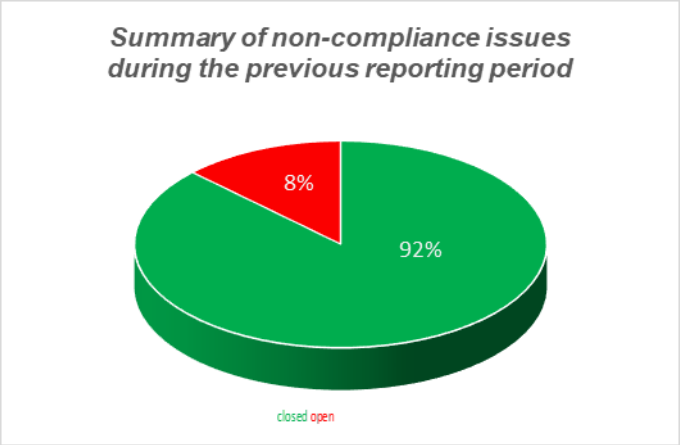
**Summary of non-compliances based on current period notifications.**

| | |
|---|---|
| Total number of non-conformities | 10 |
| Number of closed non-conformities | 8 |
| Percentage of closed items | 80 % |
| Non-conformities discovered during reporting period | 8 |
| Non-conformities closed during the reporting period | 7 |
| Percentage of closed items | 88% |



**Summary of non-compliances for the previous reporting period.**

| | |
|---|---|
| Number of open non-conformities | 1 |
| Number of closed non-conformities | 11 |
| Percentage of non-conformities closed | 92% |




## 3.4 Trends.

57. During the previous reporting period, 12 non-compliances was issued by the CSC. Of these, 10 were resolved before the deadline date, 1 was resolved during this period, and 1 is still unresolved. The unresolved non-compliance is related to the fuel storage warehouse (Lot 2) which was not provided with a concrete bund wall to catch potential leaks or spills. Construction of concrete bund was prescribed to the Contractor before putting the tank into operation. Due to winter temperatures, the concreting work was postponed until March 2022. However, the subcontractor that owns the fuel tank was later removed from the Contractor's team. This issue will be deleted from succeeding reports if the tank will not be used eventually. If it would be used, the CSC will set a new deadline date for compliance.

58. The second non-compliance is related to sealing of the equipment and damage to connection hoses of the ACP emissions stack. The Contractor has partially completed the prescribed work.

## 3.5 Unanticipated Environmental Impacts or Risks.

59. There are no unexpected environmental impacts or risks during the reporting period.

# 4. RESULTS OF ENVIRONMENTAL MONITORING.

## 4.1. Overview of Monitoring Conducted during Current Period.

60. Instrumental monitoring was carried out in accordance with the Monitoring Plan for Quality of Environmental Components (water, air, noise, vibration), reflected in the SSEMP. The socially sensitive receptors and objects of increased environmental sensitivity are listed in Table 12.

**Table 12. Sensitive receptors at the Project Sites.**

| Lot 1 | Lot 2 |
|---|---|
| • Balykchy town. High road, beginning of the section km 0 + 000 - 0 + 300 | • Kok-Jar village at km 65+985<br>• Chekildek village 70+003L |

| | |
|---|---|
| • Tash-Sarai village, km. 11+000<br>• Chu river, Tash –Sarai village (bridge), km 11+500<br>• Irrigation ditch, km 12+055<br>• Chu river, gauging station, bridge, km 42+600<br>• Production base km 16+600 | • Epkin village, next to mosque km 86+540<br>• Production base at km 81+500<br>• Joon-Aryk river km 65+410<br>• Sazdyn Suusu river km 86+261<br>• Mukandyn suusu river km 68+044<br>• Kok-Jar river cemetery km 68+000<br>• Cemetery Chekildek village km 69+800<br>• Cemetery Cholpon village km 82+800 |

61. Instrumental monitoring of noise and vibration levels is being carried out by a specialized laboratory "ProfiLab".

62. Sampling and laboratory analyses of air and water quality are being conducted by the Department of Environmental Monitoring (DEM) under the State Committee on Environment and Climate (SCEC). In the first quarter of 2022, the transfer of the SCEC to the Ministry of Natural Resources, Environment and Technical Supervision of the Kyrgyz Republic was completed.

63. Instrumental monitoring of water quality, air quality, noise and vibration levels was planned for March and June 2022. Sampling for water analyses was also undertaken as planned (Photo 73) but not tested in the laboratory because DEM suspended its work to prepare the laboratory for accreditation according to international standard ISO IEC 17025-2019 based on the letter of the State Committee on Environment and Climate to the Ministry of Natural Resources, Environment and Technical Supervision of KR #206 dated 06.04.2022 (See Attachment 1).

64. Instrumental monitoring of air quality, noise and vibration levels was carried out in April and June 2022. The Contractor carried out instrumental monitoring of air, vibration, and noise quality in areas of high environmental sensitivity and socially sensitive receptors along the Project Road, as well as at the borrow pits (Photos 72-74).

Photo 72. Air quality sampling at the Contractor's rock crushing plant for Lot 2, km 81+200.

Photo 73. Air quality sampling at Kok-Zhar village, km 66+100.

Photo 73. Water sampling at Orto-Tokoi Reservoir

65. The noise and vibration levels during the operation of the Contractor's vehicles and equipment in quarries and production bases and during construction works were within the maximum permissible levels (MPL). The vibration levels of operating construction equipment were also within the MPL.

66. During the air quality monitoring in April and June 2022, the concentrations of CO, $NO_2$, $SO_2$, and dust in the monitored sites were within the MPL, except at km0+000 (Balykchy roundabout), where the concentration of $NO_2$ during the June 2022 monitoring exceeded the MPL. At this location, the $NO_2$ regulatory limit was also exceeded in October 2021 and December 2021. Being a roundabout, the volume of vehicles passing through this area is higher than in other sections of the road. The sheer volume of vehicles is seen as the primary reason for the high concentrations of this pollutant. As construction works has not started at this location up to now, the high $NO_2$ load could not be attributed to the Project.

**Table 13. Results of instrumental monitoring.**

| Location of the monitoring site | Monitoring period | CO mg/m³ | $NO_2$ mg/m³ | $SO_2$ mg/m³ | Dust concentration, mg/m³ | Noise level, dB | Vibration level |
|---|---|---|---|---|---|---|---|
| **Regulatory maximum permissible concentration of pollutants** | | **5** | **0.085** | **0.5** | **0.5** | **80** | **112** |
| **LOT 1** | | | | | | | |
| **70. Balykchy town 0+000 km**<br>Latitude 42˚27′09 Longitude 76˚09′37′′ | Dec 2015 (baseline) | | 0,022±0,004 | 0,05±0,006 | 0,29±0,07 | 43,1 | 92,4 |
| | June 2021 (baseline) | 0,4±0,08 | 0,082±0,021 | 0,008±0,002 | 0,073±0,015 | 68 | 96 |
| | Aug 2021 (baseline) | | | | | 65 | 97 |
| | Oct 2021 (baseline) | | 0,135±0,24 | 0,085±0,01 | <0,2 | 79 | 91 |
| | Dec 2021 (baseline) | | 0,164±0,03 | 0,05 | 0,228±0,057 | 70 | 95 |
| | April 2020 (baseline) | | | | | 66 | 98 |
| | June 2020 (baseline) | <0,05 | 0,15±0,03 | 0,325±0,057 | | 66 | 96 |
| **71. Tash-Sarai village 11+000 km**<br>Latitude 42˚22′14 Longitude 76˚04′53′′ | Dec 2015 (baseline) | | 0,027±0,005 | <0,05 | <0,26 | 40,2 | 91,7 |
| | June 2021 (baseline) | 0,2±0,08 | 0,025±0,0063 | 0,004±0,001 | 0,4±0,08 | 57 | 87 |
| | Aug 2021 (baseline) | | | | | 65 | 88 |
| | Oct 2021 (baseline) | | 0,09±0,016 | <0,05 | <0,2 | 70 | 92 |
| | Dec 2021 (baseline) | | 0,053 | <0,05 | 0,228±0,05 | 68 | 92 |
| | Apr 2022 | | | | | | 62 |
| | Jun 2022 | | 0,04±0,01 | <0,05 | 0,2±0,05 | | 66 |
| **72. Production base** | June 2021 (baseline) | 0,7±0,14 | 0,033±0,0083 | 0,006±0,0015 | 0,012±0,0024 | 62 | 93 |

| Location of the monitoring site | Monitoring period | CO mg/m³ | $NO_2$ mg/m³ | $SO_2$ mg/m³ | Dust concentration , mg/m³ | Noise level, dB | Vibration level |
|---|---|---|---|---|---|---|---|
| **Regulatory maximum permissible concentration of pollutants** | | **5** | **0.085** | **0.5** | **0.5** | **80** | **112** |
| **(Asphalt plant, crushing plant) Quarry km 16+600** Latitude 42˚22′14 Longitude76˚0 4′53′′ | Aug 2021 | | | | | | 90 |
| | Oct 2021 | | 0,05 | <0,05 | 0,25 | 65 | 94 |
| | Dec 2021 | | 0,087 | <0,05 | 0,19 | 58 | 87 |
| | Apr 2022 | | 0,07±0,01 | <0,05 | 0,25 | 61 | 93 |
| | Jun 2022 | | 0,04 | <0,05 | 0,35 | 58 | 84 |
| **Asphalt Plant** | June 2022 | 0,07±0,01 | <0,05 | 0.25 | 58 | 84 | |
| **Rock Crusher** | June 2022 | 0,04 | <0.05 | 0.35 | | | |
| **Quarry km 7+100** Latitude 42˚40′60 Longitude 76˚09′32′′ | June 2021 (baseline) | | | | | 58 | 90 |
| | Aug 2021 | | | | | 50 | 91 |
| | Oct 2021 | | | | | 47 | 77 |
| | Dec 2021 | | | | | 70 | 90 |
| | Apr 2021 | | Quarry not active | | | | |
| | June 2021 | | Quarry not active | | | | |
| **Quarry 9+000** Latitude 42˚38′89 Longitude 76˚09′86′′ | June 2021 (baseline) | | | | | 46 | 90 |
| | Aug | | | | | 49 | 90 |
| | Oct 2021 | | | | | 47 | 77 |
| | Dec 2021 | | | | | 62 | 94 |
| | Jun 2022 | | | | | 53 | 66 |
| **Quarry km 26+800** Latitude 42˚29′36 Longitude 76˚09′94′′ | June 2021 (baseline) | | | | | 51 | 85 |
| | Oct | | | | | 54 | 87 |
| | Dec 2021 | | 0,02 | 0,05 | 0,2 | 52 | 91 |
| **Quarry km34+240** | April 2022 | | | | | 58 | 86 |
| | June 2022 | | | | | 64 | 87 |
| **LOT 2** | | | | | | | |
| **73. Kok-Jar village km 65+985** Latitude 42˚19′17 Longitude 75˚65′33′′ | December 2015 (baseline) | | *<0,02* | <0,05 | <0,26 | 57 | 90 |
| | June 2021 (baseline) | 0,3±0,06 | 0,018±0,0045 | 0,003±0,0008 | 0,012±0,0024 | 51 | 88 |
| | Aug (baseline) | | | | | 49 | 83 |
| | Oct (baseline) | | 0,042 | <0,05 | <0,2 | 63 | 90 |
| | Dec (baseline) | | 0,167 | 005 | 0,347 | 53 | 94 |
| | Apr 2022 | | | | | | 64 |
| | Jun 2022 | | 0,069±0,013 | <0,05 | 0,2 | | 64 |
| **74. Chekildek village km 70+003** Latitude 42˚19′44 | December 2015 (baseline) | | 0,023±0,004 | <0,05 | 0,028±0,07 | 68,1 | 91,1 |
| | June 2021 (baseline indicators) | 0,3±0,06 | 0,018±0,0045 | 0,003±0,0008 | 0,103±0,021 | 56 | 85 |
| | Aug (baseline) | | | | | 59 | 94 |

| Location of the monitoring site | Monitoring period | CO mg/m³ | $NO_2$ mg/m³ | $SO_2$ mg/m³ | Dust concentration , mg/m³ | Noise level, dB | Vibration level |
|---|---|---|---|---|---|---|---|
| **Regulatory maximum permissible concentration of pollutants** | | **5** | **0.085** | **0.5** | **0.5** | **80** | **112** |
| Longitude 75˚60′80′′ | Oct (baseline) | | <0,02 | <0,05 | <0,2 | 62 | 91 |
| | Dec (baseline) | | 0,072 | <0,05 | 0.27 | 60 | 96 |
| | April 2022 | | | | | | 70 |
| | Jun 2022 | | 0,025 | 0,03 | 0,18 | | 68 |
| **76. Production base Quarry 81+200** Latitude 42˚18′50 Longitude 75˚47′84′′ | December 2015 (baseline) | | | | | | |
| | June 2021 (baseline) | 0,5±0,1 | 0,016±0,004 | 0,004±0,001 | 0,109±0,022 | 83 | 98 |
| | Aug 2021 | 0,4 | | | | 72 | 84 |
| | Oct 2021 | 0,6 | 0,078 | 0,155 | 3,24±0,81 | 74 | 84 |
| | Dec 2021 | 0,85 | 0,02 | 0,05 | <0,2 | 65 | 93 |
| | April 2022 | | | | | | 80 |
| | Jun 2022 | | 0,03±0,004 | <0,05 | 0,4 | | 45 |
| **Epkin village km 86+000 east side of the road** Latitude 42˚10′24 Longitude 75˚25′21′′ | June 2021 (baseline) | | | | | 46 | 88 |
| | Aug 2021 | | | | | 53 | 88 |
| | Oct 2021 | 0,88 | 0,028 | <0,5 | 0,02 | 61 | 83 |
| | Dec 2021 | 0,92 | 0,056 | <0,05 | 0,308 | 65 | 89 |
| | April 2022 | | | | | | 62 |
| | June 2022 | | 0,04±0,01 | <0,05 | 0,25 | | 56 |
| **Quarry km. 71+500 north side of the road** Latitude 42˚18′83 Longitude 75˚58′95′′ | Aug 2021 | | | | | | 52 |
| | Oct 2021 | | | | | | 67 |
| | Dec 2021 | | 0,012 | 0,05 | 0,347 | | 69 |
| | April 2022 | | | | | | 66 |
| | June 2022 | | | | | | 70 |
| **Quarry 75 + 400 near the house st. Orkoshov M, 30** Latitude 42˚19′27 Longitude 75˚54′45′′ | Aug 2021 | | | | | 52 | 98 |
| | Oct 2021 | | | | | 67 | 83 |
| | Dec 2021 | | 0,012 | 0,05 | 0,347 | 69 | 90 |
| | April 2022 | | | | | 67 | 83 |
| | June 2022 | | | | | 53 | 88 |

## 4.2. Trends.

67. The results of the analyses of the ambient air quality pollution parameters, noise, and vibration during this reporting period are consistent with those of the past monitoring periods. The measured concentrations of pollutants were within the MPL except for $NO_2$ at km 0+000, at the roundabout in Balykchy. At this station, the $NO_2$ concentrations have exceeded the MPL in October and December 2021, and in June 2022. The high $NO_2$ cannot be attributed to the Project as civil works have not started at this section up to now. As there are no agricultural, commercial, or industrial activities in these areas, the only possible reason for $NO_2$ load is vehicle emissions. This area has much higher volume of vehicles compared to the other road sections, being a roundabout.

68. The results of the air quality, noise, and vibration monitoring at the quarry areas during this reporting period were also within the MPL. It would be noted that the measured dust level at the production area at km 81+200 exceeded the MPL in October 2021 but was less than the detection limit for dust (2.0mg/L) in June 2022. The abrupt decrease may be attributed to the Contractor's change in quarrying methodology and to more frequent watering of the sites, in response to the CSC's instructions and notice to correct.

## 4.3. Summary of Monitoring Outcomes.

69. During this reporting period, the Contractor's performance is assessed to be satisfactory. The Consultant was able to correct most of the non-conformities earlier than the deadline dates given by the CSC, except for a few issues that could not be completed by the deadline dates owing to circumstances surrounding these issues. The CSC will continue to work closely with the Contractor and subcontractors to maintain the Project's compliance with the environmental safeguards.

## 4.4 Material Resources Utilization.

### 4.4.1 Current period.

**Water Resources**

70. The Contractor's requirements for drinking water in the camps, offices, and worksites are brought from local suppliers by containers of five (5) gallons. For the water requirements for domestic water supply, batching plants, equipment maintenance areas, and fabrication areas, the Contractor developed spring sources near the campsites. Water is pumped from the spring to water tanks and distributed by a pipeline to the faucets.

71. For the water requirement for dust control, the Contractor obtained permission from the local authorities to set up water intake points at the water sources listed in Table 14.

- Letter of consent of the Kok-Jar village administration No. 319 dated July 21, 2020

- Letter of consent of the Cholpon village administration No. 405 dated June 20, 2020.

Table 14. Water Source Intake Points.

| № | Water source | GPS coordinates |
|---|---|---|
| *For Lot 1* | | |
| 1 | Orto-Tokoi reservoir | N 42* 12.765 E 075* 30.966 |
| 2 | Orto-Tokoi reservoir | N 42* 18.315 E 075* 54.123 |
| 3 | Orto-Tokoi reservoir | N 42* 17.739 E 075* 55.975 |
| 4 | River Chu | N 42* 21.882 E 076* 03.894 |
| 5 | River Chu | N 42* 22.324 E 076* 04.886 |
| 6 | River Chu | N 42* 23.207 E 076* 05.868 |

| | | |
|---|---|---|
| 7 | River Chu | N 42* 23.831 E 076* 05.939 |
| *For Lot 2* | | |
| 1 | Joon-Aryk | N 42* 10.394 E 075* 25.194 |
| 2 | Mukandyn Suusu | N 42* 10.394 E 075* 39.708 |
| 3 | Chekildektin Suusu | N 42* 11.852 E 075* 37.128 |
| 4 | Sazdyn Suusu | N42*09.753 E075*23.393 |
| 5 | Sazdyn Suusu | N42*09.798 E075*23.576 |
| 6 | Tarmal Saz | N42*11.266 E075*34.744 |

## Filling Materials and Aggregates.

72. The soil and aggregates needed for filling, embankment, subgrade, and subbase works are obtained from the quarries near the road alignment. Before developing and mining the land, the Contractor obtained the necessary permits from the respective owners and from the local and national government authorities that have jurisdiction over the identified quarry sites.

73. By the end of June 2022, the Contractor has development permits for 22 quarries; 17 for Lot 1 and five (5) for Lot 2. The Contractor obtained the permits for 17 of the quarries between 2020 and the first half of 2021. Five were added during the second half of 2021. Table 15 shows the features and status of the quarries.

**Table 15. Characteristics and Status of Quarry Areas.**

| № | Quarry Type | Location | | Volume ($m^3$) | Land Area (ha) | Distance from road (m) | Volume quarried ($m^3$) | Status (30 June 2022) |
|---|---|---|---|---|---|---|---|---|
| | | Station | Village | | | LS/RS | | |
| **Lot 1** | | | | | | | | |
| 1 | Soil/ Stone | km 5+500 | - | 600 000 | 5.09 | 430 (LS) | 53 471 | Active |
| 2 | Soil/ Stone | km 7+100 | - | 164 000 | 4.1 | 122 (RS) | - | Not used /not active |
| 3 | Soil/ Stone | km 7+200 | - | 195 200 | 4.88 | 122 (RS) | 4 347 | Active |
| 4 | Soil/ Stone | km 9+000 | Boz-Barmak | 380 000 | 7.6 | 25 (RS) | 82 234 | Active |
| 6 | Soil/ Stone | km16+600 | - | 1 744 000 | 43.6 | 42 (RS) | 102 200 | Active |
| 7 | Soil/ Stone | km 16+600 | - | 51 000 | 12,84 | 42 (RS) | 30 520 | Active |
| 8 | Soil/ Stone | km 16+600 | - | 113 000 | 2,83 | 42 (RS) | 39 080 | Active |
| 9 | Soil/ Stone | km 20+600 | - | 65 600 | 1,64 | 120 (LS) | - | Not used/ not active |
| 10 | Soil/ Stone | km 22+700 | - | 380 000 | 9,5 | 37 (LS) | 56 562 | Active |
| 11 | Soil/ Stone | km 26+800 | - | 488 000 | 12,2 | 80 (LS) | 85 835 | Active |
| 14 | Soil/ Stone | km 34+240 | - | 245 600 | 6,14 | 325 (LS) | 5 258 | Active |
| 16 | Soil/ Stone | km 39+450 | - | 164 000 | 4,1 | 520 (LS) | - | Not used/ not active |
| 17 | Soil/ Stone | km 43+400 | - | 124 000 | 3,1 | 40 (LS) | - | Not used /not active |
| **Lot 2** | | | | | | | | |
| 18 | Soil/ | km | - | 250 000 | 5,2 | 5 (LS) | 62 362 | Active |

| № | Quarry Type | Location | | Volume ($m^3$) | Land Area (ha) | Distance from road (m) | Volume quarried ($m^3$) | Status (30 June 2022) |
|---|---|---|---|---|---|---|---|---|
| | | Station | Village | | | LS/RS | | |
| | Stone | 71+500 | | | | | | |
| 19 | Soil/ Stone | km 75+400 | | 108 000 | 2.7 | 30 (LS) | 50 405 | Active |
| 20 | Soil/ Stone | Km 81+200 | - | 385 700 | 5,6 | 50 (LS) | 130 699 | Active |
| 21 | Soil/ Stone | km 86+000 | Epkin | 85 000 | 2,0 | 20 (LS) | 15 336 | Active |
| 22 | Soil/ Stone | km 89+093 | - | 105 145 | 0,77 | (LS) | 28 642 | Active |

**Cement, Asphalt, and Reinforcing Steel Bars.**

74. The cement, asphalt and reinforcing steel bars needed for fabrication or construction of culverts, concrete pipes, bridges retaining walls and other concrete structures are obtained from approved commercial sources.

**Fuel, Lubricants, Acetylene.**

75. The fuel requirement for the heavy equipment, machineries and vehicles are supplied by gasoline stations near the project sites, either pumped into the Contractor's cylindrical tank installed near the fabrication areas or by the drums. These are stored in the Contractor's fuel storage area. Lubricants and acetylene are supplied also from commercial sources within the locality.

### 4.4.2 Cumulative Resource Utilization.

76. From the start of the project until end of June 2022, the Contractor has taken 459,507m3 of filling/rock/aggregates materials from the quarries for Lot 1 and 487,444$m^3$ of these materials for Lot 2. As of this report period, the Contractor do not have a record or breakdown of the actual utilization of water (drinking, domestic supply, batching plants, watering of sites and production areas, equipment washing areas, etc.). For worksite watering, the Contractor currently has 16 water trucks being used throughout Lot 1 and Lot 2. The water trucks carry out watering 24/7 during dry days. Other equipment that utilizes water are the three concrete batching plants and three concrete mixers. Records of utilization of fuel, lubricants, and acetylene are not available. This will be requested from the Contractor for inclusion in the next reporting period. Table 16 is a summary of the Contractor's construction materials utilization until 31 May 2022.

**Table 16. Contractor's Construction Materials Utilization.**

| Material | Total Demand | Total Utilized | % Completion | Remaining Quantity | Unit |
|---|---|---|---|---|---|
| Bitumen | 14 492 | 5 511 | 38.0 | 8 981 | ton |
| Aggregates | 110 471 | 76 528 | 69.3 | 33 943 | $m^3$ |
| Crushed stone mix | 158 913 | 130 063 | 81.9 | 28 850 | $m^3$ |
| Subbase | 416 807 | 322 700 | 77.4 | 94 107 | $m^3$ |
| Bridge slab | 41 | 41 | 100 | 0 | pcs |
| Precast pipe 1.0m diameter | 1 165 | 983 | 96.4 | 185 | pcs |
| Precast pipe 1.5m diameter | 626 | 487 | 78.7 | 132 | pcs |

Source: CSC Monthly Progress Report, May 2022

## 4.5 Waste management.

77. The following wastes were generated in the course of main and secondary activities during road reconstruction:

- unusable soil
- scarified asphalt concrete pavement and demolished concrete slabs
- domestic solid waste (biodegradable and non-biodegradable) from the kitchen, dining areas, offices and camps
- hazardous solid waste (e.g. used rags contaminated with oil and lubricants, contaminated soil, spent bitumen, concrete bags, oil and lubricant containers, electrical bulbs, etc.) from equipment maintenanace and asphalt and wastewater and solid domestic waste generated during activities of personnel at construction camps
- wastewater from kitchen, concrete batching plants, mixer, equipment washing
- scrap materials (iron bars from structures, roofing materials, etc.)

78. The spoils and scarified asphalt are disposed in the Project's disposal sites. The Contractor has all necessary permits from relevant state agencies (aiyl okmotu, territorial environmental authorities) for disposal of unusable soil. and old asphalt concrete in old pits in accordance with the Landfill Plan, agreed with the Territorial Department of Environmental Protection of SCER KR. Table 17 shows the features and status of utilization of the soil disposal sites while Table 18 shows the features and status of the scarified asphalt disposal sites.

*Lot 1. Km. 12 + 000 (letter of consent of Kok-Moynok village administration No. 465 of 10.16.2020. Permit of the Issyk-Kul territorial administration of the State Agency for Environmental Protection and Forestry for disposal of waste in the environment No. 005952 dated 19.10.2020, No. 005967 dated 20.05.2021).*

Lot 2. Km. 80 + 900 and km 89 + 090 (Permit of the Naryn Territorial Department of Environmental Protection No. 02-4 / 682 dated 03.11.2020, Letter of consent of Cholpon village administration No. 662 dated 29.10.2020, Permit of Kochkor Forestry Development Department Forest ecosystems No. 02-2 / 71 dated 27.04.2021).

**Table 17. Features and Status of Soil Disposal Sites.**

| № | Location | | Distance from the road (m) | Spoil capacity | | | Spoil quantities $m^3$ | Status as of June 30, 2022 | Assessment of conditions and compliance to environmental protection measures |
|---|---|---|---|---|---|---|---|---|---|
| | Station | Village | (LS/RS) | Area, $m^2$ | Height m | Volume ($m^3$) | | | |
| **Lot 1** | | | | | | | | | |
| 1 | km 12+100 | Tash-Sarai | 100 (LS) | 12500 | 4 | 50 000 | 10 145 | Activity is completed | Satisfactory. Soil is spread and levelled. No negative comments. |
| 2 | km 40+360 | - | 30 (LS) | 10645 | 2,1 | 22 015 | - | Not yet used | |
| Lot 2 | | | | | | | | | |
| 3 | km 71+640 | - | 12 (LS) | 3850 | 4 | 5 401 | 13 400 | Activity is completed | The soil is spread and leveled. Recultivation is required. |
| 4 | km 71+860 | - | 12 (LS) | 2069 | 4 | 8 278 | 7 508 | Activity is completed | The soil is spread and leveled. Recultivation is required.. |
| 5 | km 80+900 | - | 70 (LS) | 4200 | 3 | 12 600 | 12000 | Activity is completed | Requires leveling and installation of a signposting board |
| 6 | km 89+090 | - | 60m (RS) | 12000 | 1,8 | 21 800 | 18000 | Still active | Requires leveling and installation of a signposting board |

**Table 18. Features and Status of Scarified Asphalt Disposal Site**

| № | Location | | Distance from the road (m) | Spoil capacity | | | Disposed Quantity $m^3$ | Status as of June 30, 2022 | Assessment of conditions and compliance to environmental protection measures |
|---|---|---|---|---|---|---|---|---|---|
| | Station | Village | (LS/RS) | Area, $m^2$ | Height m | Capacity ($m^3$) | | | |
| Lot 1 | km 7+000 | - | 50 (RS) | 10 400 | | 62 862 | 27 989 | Active | Satisfactory. Old asphalt is spread and levelled. No negative comments. |
| | km 20+100 | - | 130 (RS) | 183 000 | | 33 902 | 15 838 | Activity completed | Satisfactory. Old asphalt is spread and levelled. No negative comments. Recultivation is required |
| | km 21+260 | - | 50 (RS) | 48 700 | | 80 374 | 15 504 | Active | |
| | km 32+720 | - | 150 (LS) | 4 100 | 3,0 | 16 000 | 15 770 | Activity completed | Satisfactory. Old asphalt is spread and levelled.. Recultivation is required |
| | km 38+660 | - | 545 (LS) | 26 100 | 3,0 | 78 535 | - | Was not used | |
| | km 40+200 | - | 141 (LS) | 9 000 | 1,4 | 12 461 | - | Was not used | |
| Lot 2 | km 70+180 | - | 400 (RS) | 18 800 | 4,4 | 82 784 | 2 962 | Still active | Levelling and sign posting is required |
| | km 89+090 | - | 80 (RS) | 12 000 | 1,8 | 21 800 | 2 777 | Still active | Levelling and sign posting is required |

79. The solid domestic waste is removed (photo 70) and disposed at municipal landfill in Balykchy and Cholpon villages. Wastewater is transported (photo 71) to treatment facilities of Balykchy in accordance with contract with municipal enterprise of Balykchy - "Gorvodokanal".

Photo 71. Solid waste disposal.

Photo 72 wastewater disposal from the production base of Lot 1.

### 4.5.1 Current period.

80. By end of December 2021, the total unusable soil produced from earthworks amounted to 17,908$m^3$; 1,325$m^3$ was from Lot 1 and 16,583$m^3$ was from Lot 2. By June 2022, the total quantity of unusable use amounted to 61,053$m^3$; 10,145$m^3$ from Lot 1 and 50, 908$m^3$ from Lot 2. Thus, the total volume of unsuitable materials produced during this reporting period was 43,145$m^3$. All the

materials were brought to the spoils disposal sites as indicated in Table 17.

81. By June 2022, the total volume of scarified asphalt from Lot 1 amounted to 388,718m$^3$. The materials are disposed in the approved disposal sites as indicated in Table 18. The total volume of scarified materials from Lot 2 amounted to 12,581m$^3$. Of this, 5,739m$^3$ was disposed in the two disposal sites. The remaining volume was recycled and used in the construction of the access road in Epkin, Cholpon and Kok Zhar village (total volume 5,685m$^3$) and in the construction of access road to the Contractor's asphalt batching plant, concrete batching plant, and crushing and screening plant for Lot 2 (total volume 1,157 m$^3$) as explained in the December 2021 semi-annual report,

82. The solid waste was generated from activities of workers living in camps are collected by the Balykchy municipal government and disposed in the Balykchy municipal landfill. Solid domestic waste in Lot 2 is transported from construction camp to Cholpon aiyl okmotu municipal landfill. The volume of solid domestic waste during this reporting period at Lot 1 was 7,200 kg, at Lot 2 – 5,296 kg.

### 4.5.2 Cumulative Waste Generation.

83. The bulk of solid wastes generated came from the spoils and scarified asphalt as discussed above. The combined volume of these solid waste from the Project commencement until end of June 2022 amounts to 401,299m$^3$. The cumulative domestic solid waste generated by the Project is 12,496 kg. Currently, there are no records of the types and quantities of recyclable and recycled solid wastes. As well, there are no records on the quantity and disposal of hazardous solid wastes. These will be monitored and included in succeeding reports. The waste from the asphalt batching plant is collected in an impermeable (concrete-lined) pit which is connected to the batching plant chute.

84. There are no records of the quantity of the various types of liquid wastes generated as these are difficult to quantity. However, wastewater from the kitchen, laundry areas and toilets are collected in three-chamber septic tanks which are being emptied by the municipal sanitation departments. The wastewater from the concrete batching plants is collected into a 3-chamber tank through a lined canal. The tank is made of impermeable concrete. Management of wastewater from equipment washing will be monitored and included in the next monitoring report.

## 4.6 Health and safety.

### 4.6.1 Public health and safety.

85. During this reporting period, there were no incidents or accidents related to construction activities that affected public health and safety. Warning signs and information boards were installed at the work sites.

### 4.6.2 Health and safety of workers.

86. In January 2022 a Chinese employee of the Contractor in Lot 2 tested positive to Covid-19 and was asked to go on quarantine. He recovered and worked from January 28 up to February 11, 2022 No other Covid-19 case was reported thereafter. There were no new Covid19 cases reported in Kyrgyzstan since May2022. The total reported cases in the country by end May reached 200 993 (source: www.worldometers.info/coronavirus/country/kyrgyzstan/).

87. During this reporting period, there were no accidents or other diseases among Contractor's working personnel. The Contractor's workers' accommodation camps on Lots 1 and 2 are maintained in good condition and comply with hygienic and sanitary standards (Photos 35-50). Good living conditions have been created for workers. Contractor provided workers with disinfectants, antiseptics and personal protective equipment (masks, respirators, gloves), also disinfectants and antiseptics were installed in all public places (Photo 73).

88. In the camp on Lot 1 and Lot 2 there are conditions for personal hygiene: there is a bathroom with a shower bathroom with a shower, personal hygiene products in each room. Provided "entry" and daily temperature control with registration in the Logbook. Hospitals in Balykchy and Kochkor villages. Kochkor concluded agreements for the provision of medical services. Contractor complies with the "Plan of response, prevention and prevention of spread of COVID-19". In September 2021, vaccination of 99% of employees on Lot 2 was carried out.

89. That following information posters were posted and maintained at the Contractor's camp for Lot 1 and Lot 2:

- Structure of the safety management organization. Responsible persons and their contact information.
- information posters on protective measures against COVID-19, safety precautions, first aid.
- fire shields and fire extinguishers installed.

### 4.7. Training.

90. Some trainings were carried out for the project during the previous years as discussed in the previous reports. During this reporting period, no training was conducted, however the Contractor carries out weekly toolbox talks for its workers

## 5. FUNCTIONING OF THE SEMP.

### 5.1 SEMP Review.

91. Review and approval of the SSEMPs were completed in 2020. The MoTC KR approved the SSEMP for Lot 1 in October 2020 and for Lot 2 in November 2020. In line with the IEE recommendations, each SSEMP includes 14 separate annexes:

1. Emergency Management Plan
2. Grievance consideration mechanism
3. Occupational safety, health and hygiene plan
4. Construction camp management plan
5. Construction waste management plan
6. Noise management plan
7. Water quality management plan
8. Air quality management plan
9. Tree management plan
10. Dust control plan
11. Land Protection Management Plan
12. Plan of environmental protection during the construction and reconstruction of bridges
13. Quarry Management Plan
14. Plan for the prevention and control of COVID-19.

92. A plan to prevent the spread of COVID-19 was developed additionally considering the current epidemiological situation.

93. During construction work, Contractor ensured implementation of mitigating measures for impact of construction work on environment in accordance with SSEMP.

## 6. GOOD PRACTICES AND OPPORTUNITY FOR IMPROVEMENT.

### 6.1 Good Practices.

94. The following good practices related to health, safety and environmental protection were noted during this report period:

- The Contractor maintains cleanliness and orderliness in and around the camps, offices, and most worksites both at Lot 1 and Lot 2 with sufficient supply of drinking water and food for the staff and workers.
- The Contractor maintains the health clinic manned by a doctor both in Lot 1 and Lot 2 camps with sufficient first aid supplies and first aid kits for the worksites. The doctor maintains a logbook of health records of personnel.
- The Contractor maintains the Project sign boards and road signs along the alignment
- The Contractor has provided sufficient fire extinguishers around the camps, offices, fabrication areas and equipment maintenance areas. The fire extinguishers are full.
- The Contractor maintains sufficient health and safety information bulletins relative to COVID-19 prevention and control, as well as fire safety.
- The Contractor maintains the good condition of equipment. Equipment that emits smoke was not observed in the Project sites. Idle broken equipment was also not observed along the roads.
- The Contractor has increased the number of watering trucks and the frequency of watering throughout the road length. Watering is done 24/7 during dry days.
- The Contractor has provided and continually maintains impermeable wastewater holding tanks at the locations of asphalt and cement batching plants.
- The Contractor observes proper stockpiling of materials and does not stock soils, sand, and aggregates to unsafe heights.
- Provide a temporary storage area for hazardous wastes, with impermeable base, wall, and full cover and proper sign board

## 6.2 Opportunities for Improvement.

95. The CSC recommends inclusion of the following activities to improve the current practices:

- Documentation and recording, including photo-documentation, of waste collection (solid waste and wastewater) by the collection agencies. The records and photos to be included in the Contractor's monthly reports
- Provide wash basin, soap, water and toilet paper in the men and women's toilet in Lot 1
- Provide drip pans to catch oil leaks from equipment being repaired. Provide covered leak-proof bin for the collected spills of oil
- Provide an equipment washing area with wastewater collection system. Contractor to strictly prohibit washing of any equipment anywhere else
- Provide proper cover for the septic tank in Lot 2
- Provision of necessary PPE to workers and staff of both the CSC and Contractor including hard hat, safety shoes or boots. Special PPE to be provided for hazardous jobs including safety harness for works at height (if applicable), full face shield for welders, safety gloves for mechanical workers, etc.
- Recording and photo-documentation of consultation meetings with local people or communities

# 7. SUMMARY AND RECOMMENDATIONS.

## 7.1 Summary.

96. In general, based on monthly inspections results and monitoring of construction sites, Contractor has satisfactory performance in mitigating and preventing negative impact of works on the environment. Most of identified violations and non-compliances were eliminated by the Contractor within the specified time for correction. Seven (7) out of identified 8 non-compliances were eliminated immediately. It is noteworthy that the noted non-compliance issues were less this period compared to the previous reporting periods.

## 7.2 Recommendations.

97. The CSC recommends that the suggestions for improvement listed in Section 6.2 be started.