

Semi-annual environmental monitoring report

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

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4.7. TRAINING **ОШИБКА! ЗАКЛАДКА НЕ ОПРЕДЕЛЕНА.**

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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 |
| DDPSSSES | - | 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.

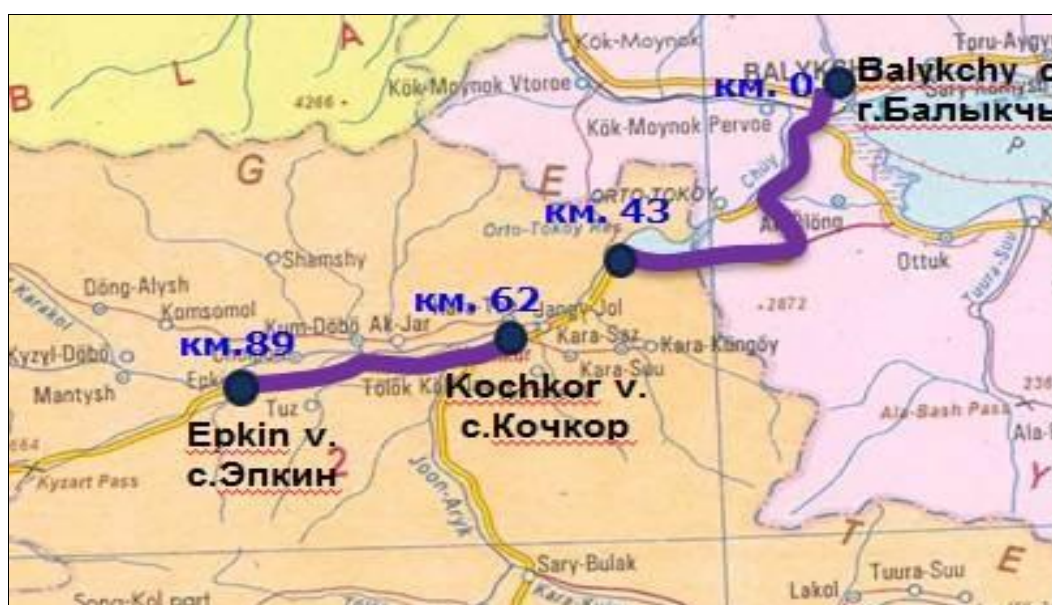


Figure 1. Project Location.

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) report¹ 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 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

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

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 is sixth "semi-annual" Environmental Monitoring Report from July to December 2022, for CAREC Corridor 1 and 3 Connector Road project. Additional financing Lot 1 "Balykchy km. 0 - km. 43", Lot 2 "Kochkor-Epkin (km 64 - km 89)". This report describes environmental aspects, mitigation and monitoring activities carried out by Sinohydro-Powerchina Roadbridge JV Contractor and reviewed by construction supervision consultant Roughton International Ltd, and sub-consultant RAM Engineering Associates LLC.»

6. Report contains materials of conducted works from Contractor and Consultant. Based on monitoring, inspections from July to December 2022 by National Environmental Specialist and information received from Contractor.

1.2 Key Information.

7. Planting. There are trees on both sides of project road. According to IEE the estimated number of trees for forced cutting is 68 (Lot 1 - 38 trees and Lot 2 - 30 trees), but their exact number was determined after surveying and setting out the design coordinates onto project section.

8. In 2020, when pegging and setting out design coordinates onsite, identified 1,909 pieces for "forced" cutting, of which: 160 pcs. in Lot 1 and 1749 pcs. in Lot 2.

9. Significant output of this Report is planting of trees started on Lot 2. The Lot 2 provides seedlings in quantity of 3,164 pieces. In November first 450 seedlings were planted in Cholpon park: silver poplar - 100 pcs, pyramidal poplar - 100 pcs, weeping willow - 50 pcs, vinegar tree - 70 pcs, almond - 30 pcs, pine - 100 pcs. (Photos 1-5).



Photo 1-3. Planting of seedlings and watering on the plot under the park in Cholpon village



Photo 4-5. Planting pine seedlings at the Cholpon village park site

10. Contractor and Aiyl Okmotu identified locations for planting seedlings (Photos 6-7); Contractor and Consultant Environmental specialists jointly with a representative of Aiyl Okmotu visited nurseries in Chon Kemin and Issyk-Kul to inspect tree seedlings (Photos 8-10).



Photo 6. Lot. 2. Examination of the tree planting site. Cholpon village, House of Culture park



Photo 7. Lot 2. Examination of the planting site trees. A park for a sports Kok-Jar village.

Photo 8. Chyrpyk Nursery in Issyk-Kul.



Photo 9. Nursery in Chon-Kemin



Photo 10. Issyk-Kul's "Chyrpyk" nursery

11. Changes were made to Lot 1 (Balykchy-Kochkor) junction design, to replace roundabout km. 02+706 to T-junction, because of unexpected land issues (see Section 2.4).

12. Consultant's Int. Safety Specialist on September 26, 2022 conducted training for Contractor's and Consultant's Safety Employees.

13. Environmental instrumental monitoring plan is not carried out timely. Water and air quality instrumental monitoring is performed by Laboratory of Department of Environmental Monitoring.

14. Scheduled for August and October instrumental monitoring of water and air quality in reporting period was actually carried out only in September, because Department of Environmental Monitoring (DEM) suspended works in connection with reorganization of SCEC into Ministry of Natural Resources, Environment and Technical Supervision of KR (MNREITN) and preparation of laboratory for accreditation under international standard ISO IEC 17025-2019 based as per SCEC letter to MNREITN KR #206 from 06.04.2022. Work was resumed in September. Next monitoring after September was scheduled for November, which was not done. DEM explained that since November 2022 all sampling trips are performed by orders of Minister or Deputy Minister of MNREITN, therefore no sampling trips were made (DEM letter #1-4/1 dated 09.01.2023). In November the Contractor requested Deputy Minister of Natural Resources and Environmental Protection to send specialists to carry out next instrumental environmental monitoring (letter G04-11.kg.2022 dated 28.11.2022). No response has been received to date.

15. There are no accredited laboratories in Issyk-Kul and Naryn oblasts. Chui ecological laboratory and Laboratories of State Sanitary and Epidemiological Surveillance Center in Bishkek and Kadamzhai were requested. Kadamzhai laboratory refused because of distance. Chui ecological laboratory - by reason of overload. Bishkek State Sanitary and Epidemiological Surveillance Center (BSSESC) laboratory agreed to provide services on a wait list in two to three months at earliest. BCHSES was able to conduct water and air quality monitoring in previous reporting period only in June, and refused to provide further services because of unaccreditation for environmental monitoring by laboratory.

16. 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.

17. 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.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES.

2.1 Project Description.

2.1.1 Project Rationale and Project Area.

18. 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.

19. 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.

20. 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.



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

21. 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.

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.

22. 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.

23. 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.

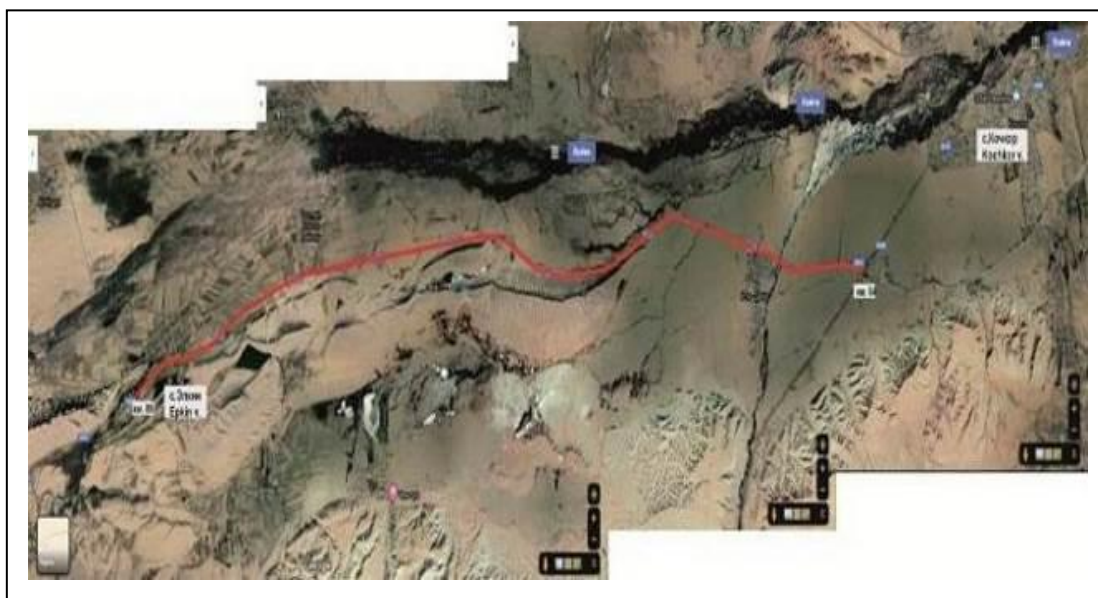


Figure3. Topographical map of Areas Traversed by Lot 2

2.1.2 Basic Project Information.

24. 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 Loan number: ADB Loan 3432-KGZ (SF) 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 | <ul style="list-style-type: none"> • Arek Story LLC • Balkchi Trans LLC • Shera Trans LLC. • Jungalsuukurulush Open Joint Stock Company In 2021 Shera Trans was replaced by Kyrgyzgidrospestroy LLC as a consortium partner with Zhagalmy |
| 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.

25. 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 <ul style="list-style-type: none"> • Overhead line -10kV • Overhead line - 0.4 kV • Communication line • Lighting poles • PVC pipes | poles poles poles pcs l.m. | 8 - 14 193 848 | 22 7 - 337 820 |
| Others | | Tree planting Archaeological survey and monitoring Removal of bus stops Environmental monitoring Auxiliary facilities | Tree planting Archaeological survey and monitoring Removal of bus stops Environmental monitoring 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 <ul style="list-style-type: none"> • Top pavement (SMA) layer • Coarse-grained asphalt at junctions • Leveling layer • Base course • Sub-base course • Asphalt concrete mixture on sidewalks | 6 cm thickness; vol. 42,505 m ³ 5 cm thickness vol. 682 m ³ 9 cm thickness; vol. 63,633 m ³ 20cm thickness; vol. 152,829 m ³ 25cm thickness; vol. 345,850 m ³ 4cm thickness; vol. 434 m ³ | |

2.1.4 Summary of Identified Negative Impacts of Project Implementation.

26. 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.

27. 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

28. 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.

29. 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.

30. 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 (Arec Stroy LLC, Zhagalmay LLC, Jungalsuukurulush Open Joint Stock Compan).

31. 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 (DDPSSSES).

32. 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 |
|--|--|
| Asian Development Bank | 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. |
| Ministry of Finance of the Kyrgyz Republic | Authorized state body responsible for coordination with ADB and other donors regarding external assistance issues. |
| Ministry of Transport and Communication of KR | 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. |
| Project Implementation Unit | 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. |
| Ministry of Natural Resources, Environment and Technical Supervision | Lead Government Environment Protection Agency is responsible for governmental environment policy and coordinates with other governmental agencies. Functions include: <ul style="list-style-type: none"> – development of environmental policy and implementation; – carrying out state environmental expertise; – issuing environmental licenses; – environmental monitoring; supervision of compliance with environmental legislation, established rules, limits and norms of natural resource use, standards for emissions and discharges of pollutants and waste disposal in the natural environment; |
| Ministry of Natural Resources, Environment and Technical Supervision | Lead Government Environment Protection Agency is responsible for governmental environment policy and coordinates with other governmental agencies. Functions include: <ul style="list-style-type: none"> – development of environmental policy and implementation; – carrying out state environmental expertise; – issuing environmental licenses; – environmental monitoring; – supervision of compliance with environmental legislation, established rules, limits and norms of natural resource use, standards for emissions and discharges of pollutants and waste disposal in the natural environment; |
| Department of Disease Prevention and State Sanitary and Epidemiological Surveillance of the Ministry of Health | 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 |
| Construction Supervision Consultant | 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.

33. 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.

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

35. 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.

36. 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.

37. 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 December 2022 is shown in Table 7.

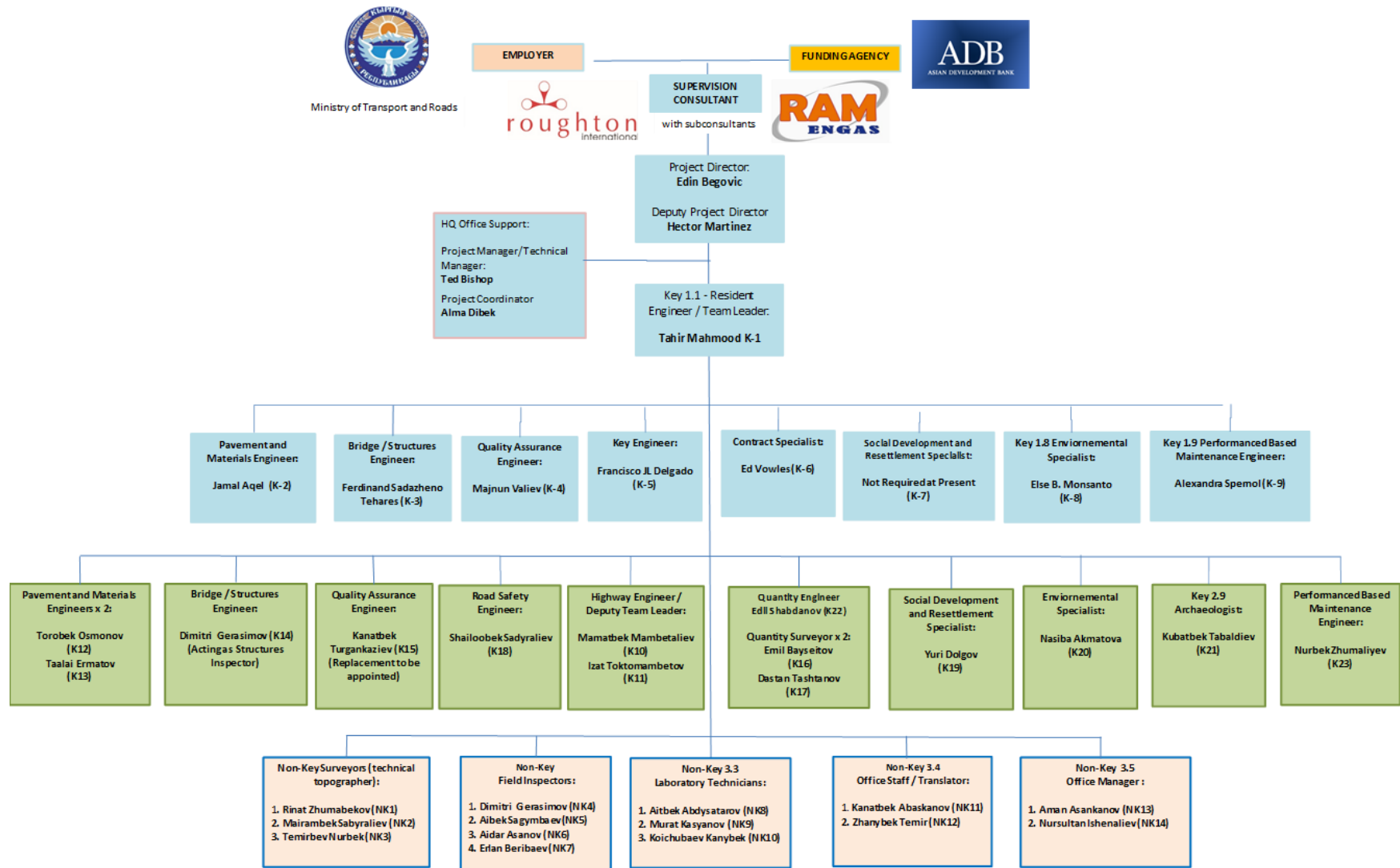


Figure 4. Organizational Structure of the Construction Supervision Consultant.

Table 7. List of Consultant's Staff.

| <i>International staff</i> | |
|-------------------------------------|--------------------------------|
| Project Director | Edin Begovich |
| Resident Engineer-Team Leader | Tahir Mahmood |
| Contract Specialist | Ed Vowles |
| Environment Specialist | Elsie Monsanto |
| PBM Engineer | Alexandra Spernol |
| Quality Assurance Engineer | Majnun Valiyev |
| Road Safety Engineer | Francisco Javier Lopez Delgado |
| Bridge/Structural Engineer | Ferdinand Tejares |
| <i>Local staff</i> | |
| Assistant Engineer -1 | Mamatbek Mambetaliev |
| Assistant Engineer -2 | Eldar Samarkulov |
| Pavement and Materials Engineer – 1 | Torobek Osmonov* |
| Pavement and Materials Engineer – 2 | Talai Ermatov |
| Quality Engineer | Kanatbek Turgangaziev |
| 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 | Temiraliyev Zhanybek |
| Office manager – 1 | Aman Asankanov |
| Office manager – 2 | Nursultan Ishenaliyev |
| PBM Engineer | Nurbek Zhumaliyev |
| Archaeologist | Kubatbek Tabaldiev |
| Topographer -1 | Rinat Zhumabekov |
| Topographer – 2 | Mayrambek Sabyraliev |
| Topographer – 3 | Temirbaev Nurbek |
| Site Inspector – 1 | Aidar Asanov |
| Site Inspector – 2 | Sagymbaev Aibek |
| Site Inspector – 3 | Dmitrii Gerasimov |
| Site Inspector – 4 | Erlan Berdibaev |
| Laboratory Technician – 1 | Aitbek Abdysatarov |
| Laboratory Technician – 2 | Murat Kasyanov |
| Laboratory Technician – 3 | Koichubaev Zhanybek |
| Environmental Protection Specialist | Nasiba Akhmatova |
| Resettlement Specialist | Yuri Dolgov |

2.3 Project Activities During Current Reporting Period.

2.3.1 Road construction works.

38. The Lot 1 has carried out following works (photos 11-21):

- **Clearing and grubbing.** Works include 37 hectares according to original project. Scope of work performed during the reporting period was - 13.01% since project start - 95%.
- **Excavation.** Excavation amount - 38331 m3. Total work performance from project start to end of December 2022 - 90%.
- **Removing existing asphalt.** Within reporting period, 7.3 km of asphalt was removed, which is 17% of all works, from project start to end of December 2022, 90% of works completed.
- **Backfill and earthen embankment:** Completed work 12.5%, from project start to end of December 2022 - 87%;
- **Subgrade.** Subgrade construction of 42.915 km includes compaction of 399,940 m3 of subgrade material. 22.4% was completed. Total completion from project start to end of December 2022 is 86.2%.
- **Subbase:** Sub-base construction of a total 42.915 km of road includes compacting 260,095 m3 of material, 39,245 m3 at the shoulders and 220,850 m3 on road. Completion is 16.3%. Total work completion from project start to end of December 2022 is 84%.
- **Base.** Base course work for a total length of 42.915 km includes laying and compaction of 92,737 m3 of base course material. Completion for this reporting period was 18.64%, and overall completion from project start to end of December was 77%.
- **Binder:** Project envisages laying and compacting the binder course on 42.915 km of road with a total volume of 38,390 m3. Completion for this reporting period was 33.3%, and overall completion from project start to end of December 2022 was 77%.
- **SMA Asphalt Pavement:** Project envisages laying and compaction of asphalt on 42.915 km of road with a total volume of 25,339 m3. Completion for this reporting period was 3.5%, and total completion from project start to end of December was 3.5%.
- **Culverts:** Project envisages construction of 63 culverts. Within reporting period, 22 pipes are completed and 6 culverts under construction, which is 35% of total completed culverts. Total number of culverts installed from project start to end of December was 57, i.e. 90%.
- **Bridge.** Bridge construction km 12+063 is 100% complete. Project envisages construction of one bridge. Total completion from project start to end of December 2022 is 100%.



Photos 11. Pipe excavation at km 22+575



Photos 12. Backfill and leveling of embankment at km 36+000-36+500 RHS



Photos 13. Backfill pipe 3rd layer km. 40+811



Photos 14. Completed culvert installation and waterproofing km 37+161



Photos 15. Concrete pouring of pipe wall km.22+255



Photos 16. Subbase construction km 11+320-11+380



Photos 17. Base layer km 33+000 - km 33+340 RHS.



Photos 18. Paving base in the 21+500-22+000 RHS section.



Photos 19 binder km 2+100-2+600 LHS



Photos 20. Paving binder at km 17+230 - km 17+500.



Photos 21. Paving SMA 3+140 LHS

39. The following works were carried out on Lot 2 (photo 22- 35):

- **Clearing and grubbing.** Works comprise 35 hectares according to original design. During reporting period, 2.6% of total works have been completed. Total completion of works from project start to end of December 2022 is 94%.
- **Excavation:** It includes excavation and disposal of unusable materials derived from rock cutting and excavation. Total amount of excavation under project is 9045 m³. Completion for this reporting period was 1 % of total quantity. Total completion from project start to end of December 2022 has reached 124 %.
- **Removal of Existing Asphalt.** During reporting period asphalt was removed from 4.5 km stretch of project road, which amounted to 16.6% of total works, from project start to end of December 2022 completion of 92%.
- **Fill and embankment:** Completed works for reporting period amounted to 21.2%, from project start to end of December 2022, completion of works amounted to 96%;
- **Subgrade:** Subgrade construction works were completed on 27.1 km of road with a total volume of 90,010 m³. Completion of works for this reporting period is 21.7%. Total completion from project start to end of December 2022 was 96%.
- **Subbase:** Subbase work is carried out on a total length of 27 km of road and includes laying and compaction of 152,626 m³ of subbase material; 26,220 m³ for shoulders and 126,516 m³ for main road. Completion of work on main road for this reporting period was 22.4%. Total work completion from project start to end of December 2022 was 95%.
- **Base.** Demand for base course in accordance with original design is 62,300 m³. Completion for this reporting period is 27.2%. Total implementation from project start to end of December 2022 is 95%.
- **Binder:** Laying and compaction of asphalt binder and asphalt wearing layer on road with a total length of 27.1 km and a volume of 62,300 m³. Completion of works for this reporting period is 36.1%. Total work execution from project start to end of December 2022 is 80%.
- **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.** Design envisages construction of 45 pipes. Within reporting period construction of 1 pipe was completed, 2 pipes are in the process of work. Total number of installed pipes from project start to end of December was 43, i.e., 96 %.

- **Bridges:** Construction of bridges km 65+410, km68+044, km86+261 and km88+795. Total completion for reporting period is 50%. Total completion since project start to end of December 2022 on bridge km 65+410 is 10% (photo; bridge at km 68+044 is 80%; 86+261 is 95% complete; and bridge km 88+795 is 95% complete.



Photos 22. Digging a pit for the construction of an underpass at km 86+325 RHS



Photos 23 Trenching and excavation at km 0+153 (new circle) for a new culvert



Photos 24. Grubbing the existing road surface at km 65+980 - km 66+220.



Photos 25. Backfilling of 3 layers of embankment 65+520-65+620



Photos 26. Planning sub-base material km 69+000-69+400 LHS



Photos 27. Subgrade material fill (2nd layer) km 69+820-70+400 LHS



Photos 28. Paving of base material km 85+248 RHS



Photos 29. Installation of the top layer of roadsides of km 84+000-84+300 RHS.



Photos 30. Backfill subgrade material at km 71+160-71+500 LHS.



Photos 31. Construction of the SMA at km 81+675-82+000 RHS.



Photos 32. Laying of binder layer km 87+100



Photos 33. Construction of the SMA at km 79+600-80+100 RHS.



Photos 34. Construction of the bridge at km 65+410. Construction of the foundation for the bridge piers



Photos 35. Concrete pouring of transition slab 1 km 68+044

2.3.2 Ancillary Works.

40. 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.

- Provision of houses for Contractor's personnel, offices, production sites, equipment maintenance workshops, fuel depots, crushing plants, material warehouses, asphalt plants, concrete mix plants, etc. This includes provision of necessary equipment, stationery, first aid supplies, and daily accommodation for staff and workers (Photos 36-52).
- The contractor obtained permits from local authorities and state environmental protection agencies to locate the camp and production base:
- For Lot 1 from the aiyl okmotu of Kok-Moinok aiyl aimag for the allocation of plot No. 368 dated 09/04/2020.
- Permission from the Issyk-Kul Territorial Department of Environmental Protection No. 45-1/2020 dated 09/04/2020
- For Lot 2 from the aiyl okmotu of Cholpon aiyl aimag for the allocation of plot No. 310 dated May 27, 2020.
- Resolution of the session of deputies of the VI convocation of the Cholpon ayilny Kenesh No. 35/4 dated 06/12/2020 on the allocation of a site for temporary use for a camp and a production base.
- Permission from the Naryn Territorial Department for Environmental Protection No. 45 dated 08/17/2020 Letter No. 02-4/553 dated 08/17/2020. 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.

41. Contractor's camp is located alongsine of Balykchy project section km0 – km43 at km16+100 RHS in 50 m distance, acreage 4,5 ha (photo 34). All necessary documents / approval from local authorities, and coordination with government environment agencies have been obtained (Letter ayil okmotu Kok-Moinoksky aimak on allocation of sites № 368 of 09/04/2020, permission of Issyk-Kul territorial administration of Environment Protection № 45-1/2020 of 09/04/2020).

42. Camp area includes: office and living accommodations, medical unit with doctor and first aid facilities, a prayer room (namazkana), a canteen with a kitchen block, separate toilets and showers for men and women, and an open space for recreation and gatherings in center of camp. Living accommodations for national staff and workers who do not live in neighborhood have a capacity of 60 people.

43. Emergency and firefighting measures are available. Fire extinguishers and fire boards are strategically distributed outside buildings, and rooms inside buildings are equipped with automated fire extinguishing systems. Various informational materials about COVID-19 and fire safety, emergency response is placed around buildings. During reporting period sanitary condition of camp space, living and working facilities were in good condition (Photos 36-47).



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



Photos 36. General view of the camp Lot 1 km 16 + 100 (RS).



Photos 37. Lot 1 camp and parking lot at km 16 + 100 (RS)



Photos 38. Lot 1 offices and information boards.



Photos 39. Namazkan Prayer Room



Photos 40. Laundry



Photos 41. Women's and men's restrooms.



Photos 42. Lot 1 First aid station, doctor





Photos 43. Lot 1 Dining room kitchen unit and cook.



Photos 44. Lot 1 canteen in the camp.



Photos 45. Domestic water tank (built-in).



Photos 46 Information boards on first aid, emergency response (earthquakes, floods, landslides, road safety, etc.).



Photos 47. Extinguishing media

Contractor's Campsite and Facility Area for Lot 2.

44. Contractor's camp Lot 2 is located on km 81 stretch of Project Section 2A "Kochkor-Epkin", 250 meters away from project site, 4.5 ha in area (Figure 7). All necessary documents/approvals from local authorities and approvals from government environmental protection agencies have been received (Letter to Aiyl Okmotu of Cholpon Aiyl Aimak on allocation of land plot No. 310 dated 27.05.2020 Decision of Cholpon Aiyl Kenesh Session VI Parliament No. 35/4 dated 12.06.2020 on allocation of land for temporary use for camp and production base, Permit of Naryn Territorial Department of Environmental Protection No. 45 dated 17.08.2020 Letter No. 02-4/553 dated 17.08.2020).



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

45. Camp is fenced and landscaped with planting of trees. Within camp are located: office, medical unit with a doctor and first aid facilities, living facilities for Contractor's personnel, parking area for construction equipment, canteen with kitchen unit.

Living accommodations for international and national staff and workers not living locally have a capacity of 45 people. Each living room has a bathroom and a shower room. During reporting period sanitary condition of camp site, accommodation and workplaces were in good condition (Photos 48-52).

46. Emergency and firefighting measures are available. Fire extinguishers and fire boards are strategically placed outside and inside the buildings. Various informational materials about COVID-19, safety management organization, fire safety measures, organizational structure for emergency response, etc. are placed around the buildings.



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



Photos 48. Offices and rooms for living in the Contractor's camp



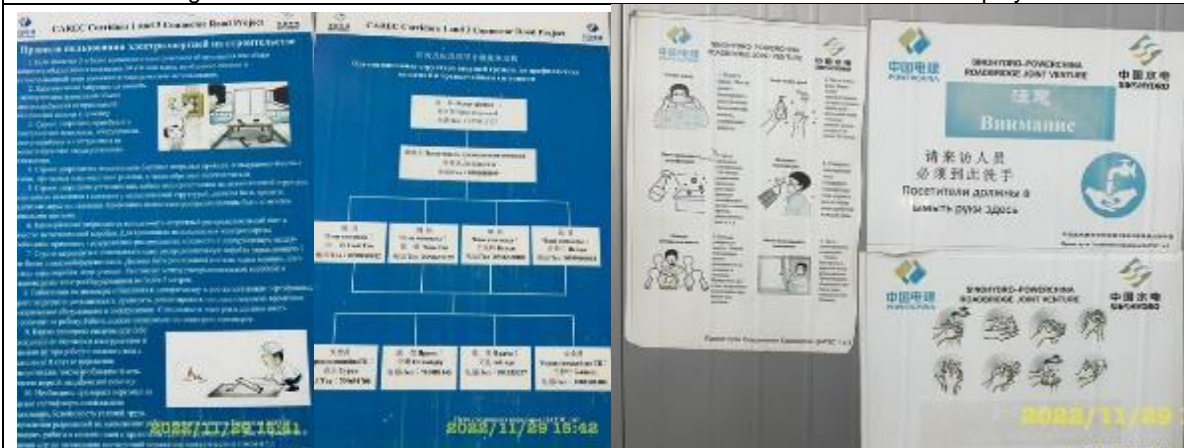
Photos 49. Women's and men's restrooms



Photos 50. Dining room with kitchen unit



Photos 51. Living rooms with bathrooms and showers in each room for the Contractor's employees



Photos 52. Information boards on COVID-19, organizational structure for emergency response, electrical safety, traffic safety, etc.

Contractor's Manpower.

47. During reporting period, total number of Main Contractor and Subcontractor personnel averaged 396, mostly locals. Main Contractor signed contracts with following subcontractors approved by Engineer:

- - Arek Construction LLC (Contractor's letter dated June 20, 2020)
- - Jagylmay LLC (Contractor's letter dated July 14, 2020)
- - Balykchy Trans LLC (Contractor's letter dated 29 July 2020)
- - Shera Trans LLC (Contractor's letter dated August 6, 2020)
- - Zhumgal Suu Kurulush OOO (Contractor's letter dated 5 July 2021)

48. During reporting period, one subcontractor, Arek Stroi LLC, worked. Engineer withdrew approval of subcontractor "Zhagylmay" by letter #335 dated June 6, 2022, other subcontractors were not mobilized.

49. No restrictions were placed on COVID-19 during reporting period. Following is a summary of Contractor's personnel information

Table 8. List of Contractor's Manpower.

| Personnel | Contractor SINOHYDRO | | Subcontractor (Arek Stroy) |
|--------------------------------------|----------------------|---------|----------------------------|
| | Local (Lot 2) | Foreign | Lot 1 |
| Administrative/ Engineer/ Technician | 19 | 17 | 41 |
| Operators and drivers | 44 | 3 | 66 |
| Skilled workers | 42 | | 45 |
| Unskilled labor | 49 | | 47 |
| Others | - | | 23 |
| <i>Subtotal</i> | 162 | | 222 |
| TOTAL | 174 | | 222 |

2.4 Description of Changes to Project Design.

50. During reporting period, changes were made to design of junction construction at km. 02+706): changing the roundabout km. 02+706 to T-intersection (Photo 53), because of unexpected land issues at this site, i.e., in early October 2022 on Lot-1 a private land plot was identified in project road ROW within roundabout boundaries, which had not been developed to date. In November, landowner installed a fence along contour 30m*50m.



Photos 53. T-junction design

Description of Changes to Agreed Construction methods.

51. In connection with the identified circumstances preventing the construction works during October 2022, several meetings were held with the participation of representatives of Balykchy City Hall, City Kenesh, Balykchy branch of GU "Cadastre", Department of Architecture Balykchy, UMC Balykchy, as well as GRP MOT&K KR. The owner of the land plot was offered three alternative options to exchange land plots, but he did not agree with all options.

52. On October 28, 2022, a meeting was held in Balykchy City Hall to make corrections to the project of construction of the traffic circle at section 1 (Balykchy-Kochkor) at km 2+706. At the meeting with the participation of representatives of the Mayor's Office, the City Kenesh, the DI "Kyrgyzdortransproekt", the Issyk-Kul oblast Department of the Ministry of Internal Affairs, the Balykchy branch of the State Enterprise "Cadastre", Balykchy Architecture Department, Balykchy SMS, other municipal structures, and the PIU MoTC KR, Consultant and Contractor discussed the proposed options for changes in the project. The following decision was agreed upon by those present: to support and agree upon the proposed variant, which envisages construction of a T-junction with the construction of curbs on safety islands with additional lateral branches of the roadway on the inner radius and with the installation of traffic lights regulation.

53. Representatives of the ADB mission visited the site on November 01, 2022 and were acquainted with the circumstances of the need to change the design solution at km 2+706. After discussion of the situation, recommendations were given to the Consultant and the Contractor to make adjustments in the design to take into account the necessary road safety measures.

54. On November 10, 2022, a videoconference was held with the participation of ADB, PIU MoTC KR and the Consultant on the project modifications at km 2+706. At the request of ADB, changes in the project should take into account the safety of vehicle and pedestrian traffic and should be agreed with the international specialist on road safety. After preparation of the design of the amended intersection at km 2+706, a social due diligence report should be prepared by December 10, 2022.

55. As recommended by safety engineers, drawings should include the following:

- - Vertical & horizontal beacon signaling.
- - Speed reduction lanes before left turns.
- - Installation of traffic lights, pre-alarms and road markings.
- - Speed reduction before entering a T-junction.
- - Concrete curb definition at safety islands with additional lateral bifurcation of the roadway on the inside radius.
- - Other clear definitions such as preliminary warning signs, final drainage plans prior to filtration, etc. to enhance T-junction safety.

56. В течение ноября 2022 года Подрядчиком подготовлен проект измененного пересечения на км 2+706 с учетом рекомендаций международного специалиста по безопасности дорожного движения. Однако в течение декабря 2022 года проект постоянно дополняется и проверяется на соблюдение всех необходимых требований безопасности. После всех необходимых согласований будет подготовлен отчет комплексной социальной проверки и направлен в АБР.

2.5 Description of changes in agreed methods of construction.

57. No changes have been made to construction methods

3.1 General Description of Environmental Safeguard Activities.

58. All environmental safeguard activities of the Contractor are based on the approved SSEMP (for Lot 1 approved in October 2020, for Lot 2 approved in November 2020). 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. The Contractor's environmentalist routinely conducts dialogues with local communities during site inspections to clarify project activities and resolve public complaints. Officially, during the reporting period, public hearings were held in May, organized by the Consultant with the participation of the Contractor; (iii)

carrying out monitoring by the contractor's and consultant's environmental specialist, 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.

59. 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.

60. 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.

61. Between July and December 2022, the IEC visited the project sites 23 times. The CLO SE and the Contractor jointly conducted visual and environmental quality monitoring. The scope of work and results of on-site inspections are summarized in Table 9. Selected photos of activities and results are presented at Photos (54-78).

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

| No | Date | Auditor's Name | Audit's object | Summary of any important audit observations. |
|---------------|------------|-----------------------------|---|---|
| July | | | | |
| 1 | 13.07.2022 | Akhmatova N. Beisheev I. | Monitoring of SSEMP implementation by Contractor on Lot 2 | Visual monitoring of all construction sites, unusable soil dumps, quarries and monitoring of the Contractor's environmental documentation. No SSEMP non-compliances took place. It is recommended to perform reclamation of old asphalt dumps at km. 19+960, km.20+100, km. 33+000. |
| 2 | 14.07.2022 | Akhmatova N. Beisheev I. | Monitoring Contractor's SSEMP implementation on Lot 1 with Contractor's ecologist | Visual monitoring of all construction sites, unsuitable soil dumps, quarries. No violations and non-compliances of SSEMP were observed. |
| August | | | | |
| 3 | 08.08.2022 | Akhmatova N. Beisheev I. | Monitoring of SSEMP implementation on Lot 2 with Contractor's ecologist | Visual monitoring of all construction sites, unusable soil dumps, and quarries. There were no irregularities or non-compliances with SSEMP |
| 4 | 09.08.2022 | Akhmatova N. Beisheev I. | Inspection of tree planting location selection on Lot 2. | Selection of tree planting sites was carried out taking into account availability of irrigation water and ensuring protection of seedlings planned for planting. |

| | | | | |
|------------------|---------------|-----------------------------|---|---|
| 5 | 10.08.2022 | Akhmatova N. Beisheev I. | Monitoring Contractor's SSEMP implementation on Lot 1 with Contractor's ecologist | Visual monitoring of all construction sites, production facilities. There were no irregularities or non-compliances with SSEMP |
| September | | | | |
| 6 | 12.09.2022 | Akhmatova N. Beisheev I. | Мониторинг исполнения ПУМОСКУ Подрядчиком на Lot 2 с экологом Подрядчика | There was a contamination of production base site with petroleum products on Lot 2. - which was eliminated. |
| 7 | 14.09.2022 | Akhmatova N. Beisheev I. | Мониторинг исполнения SSEMP Подрядчиком на Lot 1 с экологом Подрядчика | Visual monitoring of all construction sites, unusable soil dumps, quarries. Collection of materials for preparation of quarterly report |
| October | | | | |
| 8 | 12.10.2022 | Akhmatova N. Beisheev I. | Visiting Chon-Kemin nursery | Seedling inspection. |
| 9 | 13-14.10.2022 | Akhmatova N. Beisheev I. | Visiting Balykchy nursery | Seedling inspection. |
| 10 | 25.10.2022 | Akhmatova N. Beisheev I. | Monitoring of SSEMP implementation by Contractor on Lot 2 with Contractor's ecologist | Visual monitoring of all construction sites, dumping sites, quarries |
| 11 | 26.10.2022 | Akhmatova N. Beisheev I. | Visit to Charpyk Nursery in Issyk-Kul | Planning of old asphalt dumps km. 89+093 RHS |
| 13 | 27.10.2022 | Akhmatova N. Beisheev I. | Monitor SSEMP implementation by Contractor for Lot 1 with the Contractor's ecologist | Reclamation of old asphalt dumps on km. 70+180 LHS. |
| November | | | | |
| 14 | 03-04.11.2022 | Akhmatova N. Beisheev I. | Мониторинг выполнения Подрядчиком ПУОСКУ на Lot 1 и Lot 2 | Имело место загрязнение участков территории производственной базы нефтепродуктами на Lot 1. – которое было устранено |
| 16 | 28-30.11.2022 | Akhmatova N. Beisheev I. | Мониторинг выполнения Подрядчиком ПУОСКУ на Lot 1 и Lot 2 | Визуальный контроль всех строительных площадок, а также отвалов старого асфальта. Нарушений и несоответствий с SSEMP не было. |

| | | | | |
|-----------------|------------------|-------------------------|------------------------------------|---|
| | | | | Произведена рекультивация отвалов старого асфальта на км. 19+960, 20+100, 33+000 |
| December | | | | |
| 18 | 01.12.2022 г. | Akhmatova N. Beishev I. | Inspection of waste dumps on Lot 1 | Reclamation of old asphalt dumps at km. 19+960, 20+100, 33+000 Visual inspection of all construction sites as well as inspection of sites for removal of old asphalt. There were no irregularities and inconsistencies with the SSEMP. |
| 19 | 02.12.2022 г. | Akhmatova N. Beishev I. | Inspection of planted trees | |
| 20 | 12-14.12.2022 г. | Akhmatova N. Beishev I. | Site Inspection Lot 1 and 2 | Monitoring of construction sites, production facilities, quarries, waste dumps on Lot 1 and Lot 2 Technical reclamation of quarry located at km. 26+800 road LHS |



Photos 54. Lot 1. Production base. ABS and fuel oil storage



Photos 55. Lot 1. Parking of vehicles and equipment.



Photos 56. Lot 1. Production base. PRODUCTION FACILITY. Sanitary condition of the territory of the industrial base is satisfactory.



Photos 57. 3-chamber primary wastewater treatment tank BSU Lot 1.



Photos 58. Territory of the industrial base on Lot 1, polluted with oil products



Photos 59. Territory after cleaning from oil pollution.



Photos 60 Lot 1. Watering of unpaved sections of the road km. 03+200.



Photos 61. Recultivated old asphalt dump located at km.19+960 LHS



Photos 62. Reclamation of the old asphalt



of the old asphalt located at km. 20+100 RHS

Photos 63. Recultivated spoil of the old asphalt at km. 33+000



Photos 64. Performed technical reclamation of the quarry located at km.26+800 LHS.



Photos 65. Lot 1. Irrigation of unpaved sections of the road km. 32+350



Photos 66. Watering of unpaved road sections



Photos 67. Installation of parapets on Lot 1

Monitoring photos for Lot 2



Photos 68. Watering unpaved areas of roads to prevent dust.



Photos 69. Watering along Lot-2 for dust control.



Photos 70. Sanitary condition of the territory of the production base is satisfactory



Photos 71. Lot 2. Sanitary condition of the territory of the production base of the parking lot is satisfactory



Photos 72. Pit development at km 75+400



Photos 73. Stone Crusher in operation



Photos 74. Planning of the old asphalt dump at km 89+500



Photos 75. Sanitary cleaning of the project road



Photos 76. The AC plant on Lot 2. Tanks and reservoirs are marked



Photos 77. Lot 2. Water intake



Photos 78. Behind the bypass road reclaimed unusable soil dump located at km.65+520



Photos 79. Recultivated old asphalt dump, located at km 70+180, on the left side of the road



Photos 80. Leveling of the old asphalt dump located on the right side of the road at km. 89+093

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

62. 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 activities to eliminate SSEMP non-compliances.

63. Table 11 lists the status of the non-compliances/violations/recommendations identified during the site visits from July to December 2022, including the violations specified in the CSC letter Ref. KGZ4267/02/01/JPL/333 dated 18.06.2022. In the reporting period, the implementation of mitigating environmental measures can be assessed as good: non-compliances occurred in terms of pollution of the production base area with waste oils, as well as untimely dust suppression on the unpaved road sections during the passage of vehicles, which were eliminated on site. There were recommendations on necessity to start works on reclamation of waste quarries and dumps of old asphalt and unusable soil. Information is reflected in Table 11.

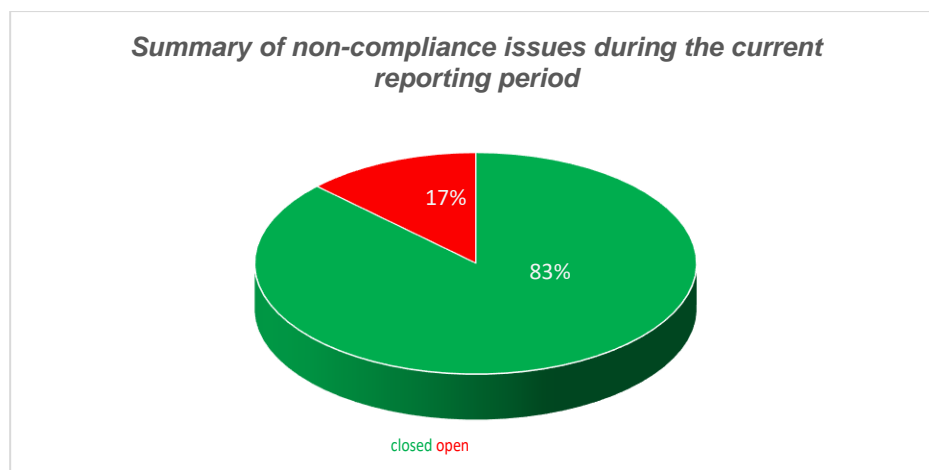
Table 11. Status of Corrective Measures for Non-Compliance Issues.

| No n/n | Comments, violations, recommendations | Corrective measures (CM) | Due dates | Status of the previous execution of the CM/ Timeframe for elimination of violations |
|----------------|---|---|------------------------|--|
| Lot - 1 | | | | |
| 1 | Discontinued use of old asphalt dumps at km.19+960, km. 20+100 and km. 33+000 and the quarry at km 26+800 | Provide reclamation | November 30, 2022 | Done |
| 2 | Pollution of area near the equipment repair box | Ensure cleaning up | Immediately | Done |
| Lot - 2 | | | | |
| 3 | Dumping of unusable soil at km. 65+480, old asphalt dump at km.70+180. | Provide reclamation of unusable soil dump at km. 65+480 and old asphalt dump at km.70+180 | Deadline is October 30 | Done |

| No n/n | Comments, violations, recommendations | Corrective measures (CM) | Due dates | Status of the previous execution of the CM/ Timeframe for elimination of violations |
|-----------|---|---|--|--|
| 4 | Waste water after washing the concrete mixing plant is discharged into water tight pit, | Provide a waterproof tank to collect waste water from the concrete mixing plant | Until 15 August 2022. Extended until March 2023 | In progress. Extended until March 2023. |

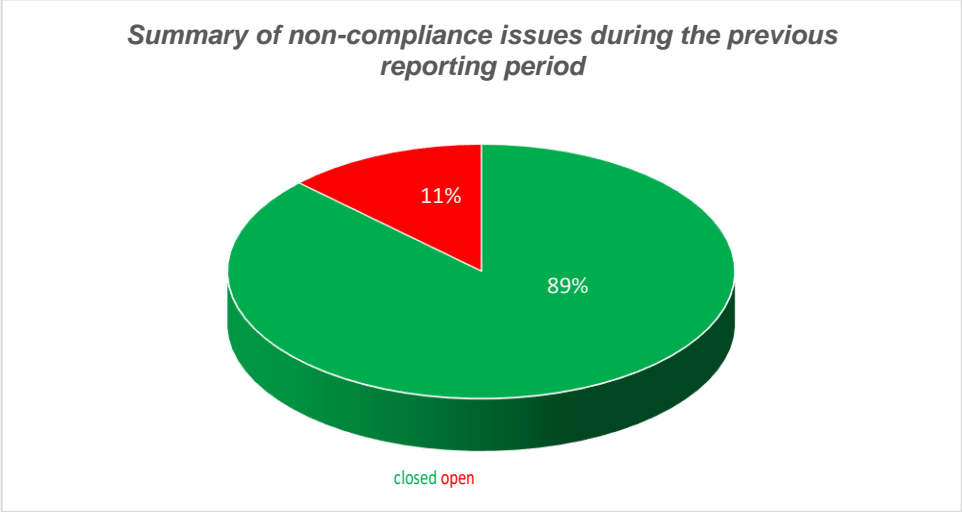
Summary of non-compliances based on current period notifications.

| | |
|---|------|
| Total number of non-conformities | 4 |
| Number of closed non-conformities | 3 |
| Inconsistencies, in the process of elimination | 1 |
| Percentage of closed items | 83 % |
| Non-conformities discovered during reporting period | 3 |
| Non-conformities closed during the reporting period | 3 |
| Percentage of closed items | 100% |



Summary of non-compliances for the previous reporting period.

| | |
|--|-----|
| Number of open non-conformities | 9 |
| Number of closed non-conformities | 8 |
| Inconsistencies, in the process of elimination | 1 |
| Percentage of non-conformities closed | 89% |



3.4 Trends.

64. In previous reporting period, CSC identified 9 non-compliances. 8 were corrected during previous period, and 1 remains unresolved. Non-compliance is related to discharge of wastewater from concrete batching plant (Lot 2) to terrain (pit). It is necessary to provide a watertight septic tank for collecting wastewater. In reporting period, the number of identified non-compliances was 100% eliminated.

3.5 Unanticipated Environmental Impacts or Risks.

65. 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.

66. 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 |
|--|---|
| <ul style="list-style-type: none"> • Balykchy town. High road, beginning of the section km 0 + 000 - 0 + 300 • Tash-Sarai village, km. 11+000 • Chu river, Tash –Sarai village (bridge), km 11+500 • Irrigation ditch, km 12+055 • Chu river, gauging station, bridge, km 42+600 • Production base km 16+600 | <ul style="list-style-type: none"> • Kok-Jar village at km 65+985 • Chekildek village 70+003L • Epkin village, next to mosque km 86+540 • Production base at km 81+500 • Joon-Aryk river km 65+410 • Sazdyn Suusu river km 86+261 • Mukandyn suusu river km 68+044 • Kok-Jar river cemetery km 68+000 • Cemetery Chekildek village km 69+800 • Cemetery Cholpon village km 82+800 |

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

68. Sampling and laboratory analyses of air and water quality are 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 SCEC to the Ministry of Natural Resources, Environment and Technical Supervision of the KR was completed.

69. Instrumental monitoring of water and air quality in the reporting period was scheduled for August, October and December 2022, but was actually carried out only in September, which is due to the following circumstances:

- In connection with the reorganization of SCEC into the Ministry of Natural Resources, Environment and Technical Supervision of the Kyrgyz Republic (MNREATN) and due to the workload of the laboratory in preparation for accreditation according to the international standard ISO IEC 17025-2019 on the basis of a letter from SCEC to MNREATN KR № 206 dated 06.04.2022, DEM suspended the services and site visits, which were resumed in September.
- - Monitoring after September was scheduled for the month of November, which was not carried out. In accordance with ECT Letter #1-4/1 dated 09.01.2023, all sampling visits are conducted only by orders of the Minister or Deputy Minister of MNREETN, due to the fact that no sampling order was submitted to them, no site visit was conducted. The Contractor in November addressed to the Deputy Minister of MNREETN with the request to send specialists to conduct the next instrumental environmental monitoring (letter G04-11.kg.2022 dated 28.11.2022). No response has been received to date.

70. There were requests to the Chui Ecological Laboratory and the laboratories of the Center of State Sanitary and Epidemiological Surveillance in Bishkek and Kadamjay. The Kadamjay laboratory refused due to its remote location, and the Chui environmental laboratory refused due to its workload. The laboratory of the Bishkek Center for State Sanitary and Epidemiological Surveillance (BCSSES) agreed to provide services on a first-come, first-served basis not earlier than in two to three months. BCHSEN was able to conduct monitoring in April and June on a first-come, first-served basis and refused to provide further services due to the lack of accreditation of the laboratory to conduct environmental monitoring.

71. Instrumental noise and vibration monitoring was conducted in August and October 2022. The Contractor provided instrumental monitoring of air quality, vibration and noise in areas of high environmental sensitivity and socially sensitive receptors along the Project Road and at the quarries (Photos 81-86).



Photos 81. Lot 1, km 0+050. Noise and vibration measurements



Photos 82. Lot 1. Water intake from the Chu River.



Photos 83. Lot 2. km.66+125, Kok-Zhar village. Noise and vibration level measurements.



Photos 84. Lot 2. Quarry km.75+400. Noise and vibration level measurements.



Photos 85. Lot 2. Production base. Noise and vibration measurements



Photos 86. Lot 1. Production base. Noise and vibration measurements

72. 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.

Table 13. Results of instrumental monitoring.

| Location of the monitoring site | Monitoring period | CO mg/m ³ | NO ₂ mg/m ³ | SO ₂ mg/m ³ | Dust concentration, mg/m ³ | 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 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 |
| | August 2022 r. | | | | | 70 | 91 |
| | September 2022 r. | 0,7±0,14 | 0,081 | 0,138 | 0,164 | | |
| | October 2022 r. | | | | | 73 | 94 |
| 71. Tash-Sarai village 11+000 km 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 |
| | August 2022 r. | | | | | 70 | 88 |
| | September 2022 r. | 0,12 | 0,06 | 0,149 | 0,246 | | |
| | October 2022 r. | | | | | 64 | 85 |

| Location of the monitoring site | Monitoring period | CO mg/m ³ | NO ₂ mg/m ³ | SO ₂ mg/m ³ | Dust concentration, mg/m ³ | Noise level, dB | Vibration level | | |
|--|----------------------|-------------------------|--------------------------------------|--------------------------------------|--|--------------------|-----------------|--|--|
| Regulatory maximum permissible concentration of pollutants | | 5 | 0.085 | 0.5 | 0.5 | 80 | 112 | | |
| 72. Production base (Asphalt plant, crushing plant) Quarry km 16+600 Latitude 42°22'14 Longitude 76°04'53'' | June 2021 (baseline) | 0,7±0,14 | 0,033±0,0083 | 0,006±0,0015 | 0,012±0,0024 | 62 | 93 | | |
| | 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 | | | | | |
| | August 2022 r. | | | | | 61 | 91 | | |
| | September 2022 r. | 0,5 | 0,07 | 0,27 | 0,49 | | | | |
| | October 2022 r. | | | | | 57 | 89 | | |
| 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 | | |

| Location of the monitoring site | Monitoring period | CO mg/m ³ | NO ₂ mg/m ³ | SO ₂ mg/m ³ | Dust concentration, mg/m ³ | Noise level, dB | Vibration level |
|--|---------------------------------|-------------------------|--------------------------------------|--------------------------------------|--|--------------------|-----------------|
| Regulatory maximum permissible concentration of pollutants | | 5 | 0.085 | 0.5 | 0.5 | 80 | 112 |
| | August 2022 r. | | | | | 68 | 90 |
| | October 2022 r. | | | | | 51 | 84 |
| 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 |
| | August 2022 r. | | | | | 63 | 89 |
| | October 2022 r. | | | | | 61 | 88 |
| 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 |
| | August 2022 r. | | | | | 66 | 90 |
| | September 2022 r. | 0,5 | 0,053 | 0,122 | 0,164 | 57 | 92 |
| | October 2022 r. | | | | | | |
| 74. Chekildek village km 70+003 | 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 |

| Location of the monitoring site | Monitoring period | CO mg/m ³ | NO ₂ mg/m ³ | SO ₂ mg/m ³ | Dust concentration, mg/m ³ | Noise level, dB | Vibration level |
|---|--------------------------|-------------------------|--------------------------------------|--------------------------------------|--|--------------------|-----------------|
| Regulatory maximum permissible concentration of pollutants | | 5 | 0.085 | 0.5 | 0.5 | 80 | 112 |
| Latitude 42°19'44" Longitude 75°60'80" | Aug (baseline) | | | | | 59 | 94 |
| | 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 |
| | August 2022 r. | | | | | 65 | 88 |
| | September 2022 r. | 0,4 | 0,067 | 0,133 | 0,41 | | |
| | October 2022 r. | | | | | 69 | 92 |
| 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 |
| | August 2022 r. | | | | | 69 | 90 |
| | September 2022 r. | 0,18 | 0,05 | 0,142 | 0,246 | | |
| | October 2022 r. | | | | | 70 | 88 |
| 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 |

| Location of the monitoring site | Monitoring period | CO mg/m ³ | NO ₂ mg/m ³ | SO ₂ mg/m ³ | Dust concentration, mg/m ³ | Noise level, dB | Vibration level |
|---|-------------------|-------------------------|--------------------------------------|--------------------------------------|--|--------------------|-----------------|
| Regulatory maximum permissible concentration of pollutants | | 5 | 0.085 | 0.5 | 0.5 | 80 | 112 |
| | April 2022 | | | | | | 62 |
| | June 2022 | | 0,04±0,01 | <0,05 | 0,25 | | 56 |
| | August 2022 r. | | | | | 67 | 68 |
| | September 2022 r. | 1,3 | 0,062 | 0,163 | 0,164 | | |
| | October 2022 r. | | | | | 63 | 75 |
| | Aug 2021 | | | | | | 52 |
| | Oct 2021 | | | | | | 67 |
| Quarry km. 71+500 north side of the road Latitude 42°18'83 Longitude 75°58'95'' | Dec 2021 | | 0,012 | 0,05 | 0,347 | | 69 |
| | April 2022 | | | | | | 66 |
| | June 2022 | | | | | | 70 |
| | August 2022 r. | | | | | 65 | 91 |
| | October 2022 r. | | | | | 54 | 85 |
| | Aug 2021 | | | | | 52 | 98 |
| | Oct 2021 | | | | | 67 | 83 |
| Quarry 75 + 400 near the house st. Orkoshov M, 30 Latitude 42°19'27 Longitude 75°54'45'' | Dec 2021 | | 0,012 | 0,05 | 0,347 | 69 | 90 |
| | April 2022 | | | | | 67 | 83 |
| | June 2022 | | | | | 53 | 88 |
| | August 2022 | | | | | 64 | 90 |
| | October 2022 | | | | | 59 | 87 |

Table 7. Results of laboratory tests of surface water quality.

| Sampling location | Selection period | Transparency, cm | Petroleum products | BOD ₅ , mgO ₂ /dm ³ | Suspended substances, mg/l | Notes |
|---|--|--------------------|--------------------|--|----------------------------|------------------------------|
| maximum allowable concentration for water reservoirs of domestic category | | Not less than 20 | 0,05* / 0,3** | 3* / 2-4** | Increase 0,25/0,75 | |
| Lot 1 | | | | | | |
| 148. the river Chu | December 2015 (background) | 41 | <0,05 | | | |
| | June 2021 (background) | 24 | 0,012 | 1,3 | 3,2 | |
| | October 2021 (construction work in progress) | 24 | 0,07 | 1,29 | 0,8 | |
| | December 2021. | 15 | 0,066 | 2,0 | 13 | |
| | June 2022 | 13 | 0,03 | 2,3 | 15 | |
| | September 2022 | 45 | 0,0155 | 0,64 | <3,0 | |
| 149. Irrigation canal | June 2021 (background) | 26 | 0,02 | 2,5 | 3,0 | |
| | October 2021 (construction work in progress) | 25 | 0,15 | 1,23 | 0,6 | |
| | December 2021 | There was no water | | | | |
| | June 2022 | 14 | 0,02 | 2,3 | 11 | The work was carried out |
| | September 2022 | 43 | 0,0155 | 0,28 | <3,0 | |
| 150. Chu River, Hydropost. Orto-Tokoi Reservoir km. 42+600 | December 2015 (background) | 37 | <0,05 | 0,3 | 3,0 | Background measurements 2015 |
| | June 2021 (background) | 23 | 0,017 | 1,1 | 3,4 | |

| | | | | | | |
|----------------------|----------------------------|------|--------|------|------|------------------------------|
| | October 2021 | 22 | 0,04 | 0,3 | 0,8 | |
| | December 2021 | 20 | 0,048 | 3,2 | 18,0 | |
| | June 2022 | 24 | 0,01 | 2,8 | 16,0 | |
| | September 2022 | 45 | 0,0125 | 0,63 | <3,0 | |
| Lot 2 | | | | | | |
| 151. | December 2015 (background) | 40 | <0,05 | | | Background measurements 2015 |
| Joon-Aryk River. | June 2021 (background) | >50 | 0,03 | 1,4 | 1,4 | |
| km.65+410 | October 2021 | 40 | 0,04 | 1,24 | 0,6 | |
| | December 2021 | 13,4 | 0,05 | 1,4 | 18,4 | |
| | June 2022 | 12 | 0,03 | 1,2 | 20 | |
| | September 2022. | 37 | 0,095 | 2,54 | <3,0 | |
| 152. | June 2021 (background) | 39 | 0,026 | 0,3 | 3,0 | |
| Sazdyn-Suusuu river. | October 2021. | >50 | 0,07 | 0,46 | 7,6 | |
| km. 86+261 | December 2021. | 18 | 0,062 | 1,5 | 15,2 | |
| | December below the bridge | 17,1 | 0,045 | 1,4 | 27,2 | |
| | June 2022. | | | | | |

| | | | | | | |
|---|--------------------------|-------|--------|------|------|--|
| | Before the bridge | 15 | 0,04 | 1,9 | 17 | |
| | After the bridge | 14,5 | 0,04 | 1,7 | 15 | |
| | September 2022. | 24 | 0,085 | 0,87 | <3,0 | |
| 153. Mukandyn-Suusuu river. Km.68+044 | June 2021 (background) | 10 | 0,026 | 1,1 | 20 | |
| | October 2021 | 38 | 0,06 | 2,2 | 12 | |
| | December 2021 | 1,0 | 0,064 | 1,4 | 70 | |
| | June 2022 | 12 | 0,03 | 1,8 | 25 | |
| | September 2022 | 45 | 0,0125 | 0,63 | <3,0 | |
| 154. Zhar-Korundu river. km. 88+795 | June 2021 (background) | 39 | 0,022 | 2,5 | | |
| | October 2021 | 35 | 0,04 | 3,8 | 0,4 | |
| | December 2021 above road | 14,2 | 0,05 | 4,6 | 26 | |
| | Below the road | 2,5 | 0,042 | 2,3 | 30 | |
| | June 2022. | | | | | |
| | before the bridge | 18 | 0,02 | 2,18 | 20 | |
| | after the bridge | 15 | 0,025 | 2,0 | 17 | |
| September 2022 | 19 | 0,015 | 1,19 | <3,0 | | |

4.2. Trends.

73. In reporting period, instrumental monitoring of air, water, noise and vibration quality in construction sites was provided. Consultant, through continuous engagement with Contractor, achieved increase of Contractor's responsibility in environmental protection issues, decrease of repeated non-compliances of Contractor's side.

4.3. Summary of Monitoring Outcomes.

74. During this reporting period, Contractor's performance is evaluated as satisfactory. Contractor ensured timely elimination of non-compliances and recommendations on SSEMP implementation. Only one non-conformance could not be completed by deadline. CSC will continue to work closely with Contractor and subcontractors to maintain compliance of Project with environmental safeguards:

In the reporting period, instrumental measurements of noise and vibration levels in August and October, and the quality of environmental components (atmospheric air, water) in September were carried out. Scheduled for August and October instrumental monitoring of air and water quality was conducted in September, because in connection with preparation for accreditation of the laboratory to international standard ISO IEC 17025-2019 on the basis of the letter of SCEC to MNRETN KR №206 from 06.04.2022, - due to the workload of DEM suspended the provision of services and visits to the sites, which were resumed in September. The next monitoring after September was scheduled for November, which was not performed. In accordance with DEM letter #1-4/1 dated 09.01.2023, all sampling visits are conducted only by order of the Minister or Deputy Minister of MNRETN, due to the fact that no sampling order was received by them, no site visits were conducted. The Contractor in November addressed to the Deputy Minister of MNRETN with the request to send specialists to conduct the next instrumental environmental monitoring (letter G04-11.kg.2022 dated 28.11.2022). No response has been received to date.

75. According to instrumental studies, we can conclude that there is no impact of construction works on environment. Since the concentrations of substances by determined components in air and water are within the prescribed maximum permissible concentrations.

4.4 Material Resources Utilization.

4.4.1 Current period.

Water Resources

76. 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.

77. To provide water for dust suppression, Contractor obtained permission from local authorities to intake water from following 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.

| No | Water source | GPS coordinates |
|------------------|----------------------|----------------------------|
| <i>For Lot 1</i> | | |
| 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 |
| <i>For Lot 2</i> | | |
| 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.

78. 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.

79. As of end December 2022, Contractor holds 21 quarries for construction material. Table 15 shows characteristics of these quarries.

80. Environmental mitigation measures envisaged by the Quarry Management Plan are being implemented, namely: the topsoil has been removed, the boundaries of quarry areas are marked, and sprinkling of excavated material and access roads to quarry sites is carried out.

81. Withing reporting period quarries at km.16+600, km. 22+700, km.26+800 and km.34+240 were operated on Lot 1. And development of quarries km. 71+500, 75+400, km.81+300, km.86+000 and km.89+093 on Lot 2.

82. During reporting period, quarry development at km.26+800 was completed and technical reclamation was performed in December (photo 64).

Table 15. Characteristics and Status of Quarry Areas.

| No | Location | | Volume (m3) | Land Area (ha) | Distance from the road | Yes/no development was in progress |
|-------|------------|------------|-------------|----------------|------------------------|------------------------------------|
| | Station | Village | | | | |
| Lot 1 | | | | | | |
| No1 | km. 5+500 | | 600 000 | 5,09 | 430 m | No |
| No2 | km. 7+100 | | 164 000 | 4,1 | 122 m | No |
| No3 | km. 7+200 | | 195 200 | 4,88 | 122 m | No |
| No4 | km. 9+000 | Boz-Barmak | 380 000 | 7,6 | 25 m | No |
| No5 | km. 16+600 | | 1 744 000 | 43,6 | 42 m | Yes |
| No6 | km. 16+600 | | 51 000 | 12,84 | 42 m | Yes |
| No7 | km. 16+600 | | 113 000 | 2,83 | 42 m | Yes |
| No8 | km. 19+360 | | 66 500 | 22,16 | | No |
| No9 | km. 20+600 | | 65 600 | 1,64 | 120 m | No |

| | | | | | | |
|-------|------------|-------|---------|------|-------|-----|
| №10 | km. 22+700 | | 380 000 | 9,5 | 37 m | Yes |
| №11 | km. 26+800 | | 488 000 | 12,2 | 80 m | Yes |
| № 12 | km. 34+240 | | 245 600 | 6.14 | 325 m | Yes |
| № 13 | km. 39+450 | | 164 000 | 4.1 | 520 m | No |
| № 14 | km 43+400 | | 124 000 | 3.1 | 40 m | No |
| Lot 2 | | | | | | |
| №15 | km. 71+500 | | - | 5,2 | 5 m. | Yes |
| №16 | km. 75+400 | | 108 000 | 2,7 | 30 m. | Yes |
| № 17 | km.81+200 | | - | 5,6 | 50 m | No |
| №18 | km 81+400 | | 375 000 | 7,5 | | Yes |
| №19 | km 81+400 | | 305 000 | 6,1 | | Yes |
| № 20 | km. 86+000 | Epkin | 85 000 | 2,0 | 20 m | Yes |
| № 21 | km. 89+093 | | 105 145 | 0.77 | | Yes |

Cement, Asphalt, and Reinforcing Steel Bars.

83. 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.

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.

84. From the start of the project until end of June 2022. From quarries Contractor removed 476 716 m³ of fill/rock/cumulative material for Lot 1 and 630,455 m³ 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 30 December 2022.

Table 16. Contractor's Construction Materials Utilization.

| Material | Total Demand | Total Utilized | % Completion | Remaining Quantity | Unit |
|----------------------------|--------------|----------------|--------------|--------------------|----------------|
| Bitumen | 14 492 | 8946 | 61.73% | 5545 | ton |
| Aggregates | 110 471 | 98533 | 89.2% | 11938 | m ³ |
| Crushed stone mix | 158 913 | 158913 | 100% | 0 | m ³ |
| Bridge slab | 41 | 41 | 100 | 0 | pcs |
| Precast pipe 1.0m diameter | 64 | 64 | 100% | 0 | pcs |
| Precast pipe 1.5m diameter | 5 | 5 | 100% | 0 | pcs |

Source: CSC Monthly Progress Report, May 2022

4.5 Waste management.

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

- unusable soil
- removed old asphalt and demolished concrete slabs
- domestic solid waste (biodegradable and non-biodegradable) from the kitchen, dining areas, offices and camps
- wastewater and solid waste generated by personnel at construction camp

86. 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) (LS/RS) | Spoil capacity | | | Spoil quantities m ³ | As of december 30 2022 | Assessment of conditions and compliance to environmental protection measures |
|--------------|-----------|------------|---------------------------------------|----------------------|----------|--------------------------|------------------------------------|------------------------|--|
| | Station | Village | | 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 | Soil is spread out and leveled. Reclamation is required. |
| 5 | km 80+900 | - | 70 (LS) | 4200 | 3 | 12 600 | 12000 | Activity is completed | The leveling is done, there is a sign |
| 6 | km 89+090 | - | 60m (RS) | 12000 | 1,8 | 21 800 | 18000 | Still active | The leveling is done, there is a sign |

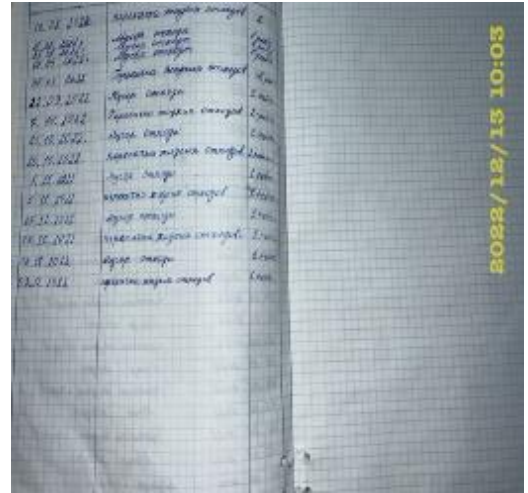
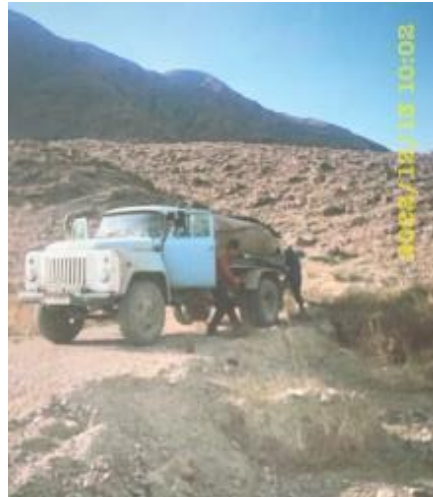
Table 18. Features and Status of Scarified Asphalt Disposal Site

| № | Location | | Distance from the road (m) | Spoil capacity | | | Disposed Quantity m ³ | As of december 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 |

87. Solid domestic waste is removed (photos 87, 88 and 93) and placed in municipal landfill in Balykchy and Cholpon villages. Cholpon. Wastewater is transported (photos 89, 90 and 92) to treatment facilities of Balykchy in accordance with contract with the municipal enterprise of Balykchy - "Gorvodokanal". Balykchy - "Gorvodokanal".



Photo 87-88. Lot 1 Removal of solid domestic waste



Photos 89-90. Lot 1. Liquid waste removal. Photo 91. Waste Log for Lot 1.



Photo 92. Lot 2. Liquid waste removal



Photo 93. Removal of solid waste on Lot 2.

4.5.1 Current period.

88. In reporting period, total amount of unusable soil from excavation works was 20881 m³; 8571 m³ - from Lot 1 and 12310 m³ - from Lot 2. All materials were delivered to the disposal sites as shown in Table 17.

89. During reporting period, amount of asphalt removed from Lot 1 was 5208 m³. Materials are disposed at approved landfills as shown in Table 18. Amount of asphalt removed from Lot 2 was 3,968 m³. Old asphalt was used for arrangement of intra-village earth roads in Epkin, Cholpon and Kok-Djar villages, the remaining asphalt was stockpiled in waste dumps.

90. 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. Amount of solid waste for in the reporting period for Lot 1 was 6,000 kg, for Lot 2 - 3,300 kg.

4.5.2 Cumulative Waste Generation.

91. Major part of waste generated is soil and cut asphalt, as mentioned above. Total amount of waste from project start until end of December 2022 is 434,490 m³. The cumulative domestic solid waste generated by the Project is 21 796 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.

92. There are no records of the quantity of the various types of liquid wastes generated as these are difficult to quantify. 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.

93. 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.

94. 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 36-52). Good living conditions have been created for workers. Contractor provided workers with disinfectants, antiseptics and personal protective equipment (masks, respirators, and gloves), also disinfectants and antiseptics were installed in all public places.

95. 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.

96. 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.

4.6.2 Trainings

97. Some trainings were carried out for the project during the previous years as discussed in the previous reports. In reporting period on September 12, 2022 road safety training was conducted by consultant's international road safety specialist for Consultant's and Contractor's personnel. For whole period of project implementation to date 5 trainings on Environment and 3 trainings on Safety. Additional trainings on Safety should be conducted.

5. FUNCTIONING OF THE SEMP.

5.1 SEMP Review.

98. 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. SEMP is effective. The envisaged mitigation measures are relevant and do not require changes. The contractor is able to implement the established SEMP requirements. 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.

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

100. 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.

101. 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.

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

- Provide installation of a septic tank to collect wastewater from Concrete Batching Plant on Lot 2.
- Provide required PPE to both CSC and Contractor's workers and personnel, including helmet, safety boots or boots. Special PPE shall be provided for hazardous work, including safety harnesses for work at heights (if applicable), protective mask for welders, protective gloves for mechanical workers, etc.
- Recording and Photo-Documenting Consultation Meetings with Local Communities or Communities

7. SUMMARY AND RECOMMENDATIONS.

7.1 Summary.

103. In general, as a result of monthly inspections and monitoring of construction sites, Contractor has satisfactory performance in mitigating and preventing negative environmental impacts of works. Most of identified discrepancies and non-compliances were eliminated by Contractor within deadlines. It should be noted that in this period there were fewer non-compliances noted compared to previous reporting periods.

7.2 Recommendations.

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