ENVIRONMENTAL MONITORING REPORT

Project Number: 49042-004
Grant 0509 / Loan L3451-TAJ, OFID Loan 12508P, CEF Grant 0510-TAJ
Reporting period: July-December 2020

Republic of Tajikistan: CENTRAL ASIA REGIONAL ECONOMIC COOPERATION (CAREC) CORRIDORS 2, 5, and 6 (DUSHANBE-KURGONTEPPA) ROAD PROJECT

Prepared by the Project Implementation Unit for road rehabilitation for the Ministry of Transport of the Republic of Tajikistan and the Asian Development Bank

April 2021

(DRAFT)

SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

(July - December 2020)

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Ministry of Transport of the Republic of Tajikistan

Financed by: Asian Development Bank and OPEC Fund for the International Development (OFID)

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TABLE OF CONTENTS

LIST OF FIGURES:

LIST OF TABLES:

LIST OF PICTURES:

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BOD	Biological Oxygen Demand
BOQ	Bill of Quantities
CO	Carbon Monoxide
COD	Chemical Oxygen Demand
CSC	Construction Supervision Consultant
dBA	Decibel A-weighting
EMP	Environmental Management Plan
EMR	Environmental Monitoring Plan
ES	Environmental Specialist
FIDIC	The International Federation of Consulting Engineers
HSE	Health, Safety, and Environment
IEE	Initial Environmental Examination
JICA	Japan International Cooperation Agency
$L_{Aeq\ 07\text{-}22}$	Daytime A-weighted equivalent continuous sound level
LHS	Left-hand side
MOT	Ministry of Transportation
MOTC	Ministry of Transportation and Communications
N/A	Not available
NCN	Non-Conformance Notice
NO2	Nitrogen Dioxide
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PPTA	Project Preparatory Technical Assistance
RCC	Reinforced Cement Concrete
RHS	Right-hand side
RoW	Rights of Way
SA-EMR	Semi-Annual Environmental Monitoring Report
SEMP	Site-specific Environmental Management Plan
SniP	Building Code
SO2	Sulfur Dioxide
TBA	To be assigned
ToR	Terms of Reference
TSP	Total Suspended Particles
TSS	Total Suspended Solids
USD	United States Dollar

I. INTRODUCTION

1.1 Preamble

1. This is the Semi-Annual Environmental Monitoring Report for the Dushanbe-Kurgonteppa road rehabilitation project, Phase 1. The report covers the monitoring period from July to December 2020. The supervising consultant of the project is Kocks Consult GmbH and the contractor is Xinjiang Beijing Ltd.

2. This report provides a review on how the environmental measures, needed to prevent and/or mitigate negative environmental effects associated with the development project, have been carried out by the contractor during the monitoring period. The report also provides a summary of the currently outstanding major and minor issues that need to be addressed, and suggestions for mitigation measures.

~~3.~~ This report is the sixth Semi-Annual Environmental Monitoring Report for the project.

1.2 Headline Information

4. The construction activities that have been carried out during the monitoring period have included: (i) utility relocation; (ii) earthworks; (iii) pavement (capping/subbase/aggregate base/asphalt binder course) and Bridges and Culverts; (iv) laying pipes; (v) R.C.C Boxes; (vi) concreting abutments; (vii) girders and other structural works; and (viii) precasting.

5. Several issues related to the environmental management of the project were identified during the monitoring of the project compliance. The issues were related to: (i) improper storing of soil and old asphalt due to blocking of natural drainage patterns; (ii) improper waste management; (iii) lack of medical staff; (iv) oil spills from maintenance; (v) inadequate use of PPE; (vi) lack of watering and dust suppression; and (vii) lack of traffic warning signs.

6. The ES of the supervising consultant carried out monitoring visits, discussed the issues with the contractor, and presented several correction measures to the contractor that need to be taken in to account in the implementation of the project during the monitoring period.

II. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

7. The Republic of Tajikistan (herein referred to as Tajikistan) is a landlocked, mountainous country with formidable geographic barriers that seriously constrain its ability to effectively participate in international trade. Its development efforts are further hampered by inadequate physical infrastructure, which needs investment and regular maintenance. Tajikistan is surrounded by China, the Kyrgyz Republic, Uzbekistan and Afghanistan. The current population of Tajikistan is approximately 9,5 million people (2020). Population density is 66 persons / km².

8. Dushanbe, the capital of Tajikistan, is the country's political and economic hub with a population of 916,000 in 2020 which is about 9.6% share of whole Tajikistan. Population density in Dushanbe is 7,250.0 persons / km².

9. The existing cross section allows four lanes only within the initial section of the road, from the starting point to Dushanbe gate. The rest of the existing RoW complies with 2 lanes only and widening of the RoW and the road's cross section is therefore required over nearly the whole Project length.

10. Taking the above described aspects of the Dushanbe to Kurgonteppa road together it becomes obvious that its rehabilitation/reconstruction is of urgent need.

11. The Project alignment is following the existing road alignment, which has reduced the potential impacts of the construction works.

12. In general, the study area is in a hilly terrain ranging in altitude from 736 to 1238 m (Phase 1 road level). Regarding its surface morphology it can broadly be divided from North to South into a rolling section which starts at km 0 and ends at km 14, a mountainous section which starts at km 14 and ends at km 21, a further rolling section from km 21 to km 27 and a second mountainous section from km 27 to the end of the road section.

13. The Project road forms the northern part of the Dushanbe-Nihzny Pyani road which by connecting Dushanbe and the province of Khatlon to Afghanistan, is one of the most significant international transport corridors in the country. Particularly since the opening of the Nihzny Pyani Bridge at the border with Afghanistan traffic volumes on the Project road have considerably increased and contributed much to its current state of deterioration of pavement conditions.

14. The 82 km long road section was divided into three phases according to priority. The first phase covers approximately 33.2 km of road section from Dushanbe to the south. The end of this first phase is located at village Chashmasor. The second phase than covers from Km 33.475 to Km73.050. These two Phases 1 and 2 are ADB-funded. The remaining 9.2 Km road section until Kurgonteppa is proposed for JICA funding.

15. The benefit of the proposed project will be improved connectivity and access to markets. The outcome of the project will be efficient movement of freight and passenger traffic along the Dushanbe – Kurgonteppa road. After implementation of both phases the project outputs will be: (i) 82.25 km of reconstructed road from Dushanbe to Kurgonteppa, (ii) strengthened road asset management system, and (iii) improved road safety.

16. Upgrading of the additional Korvon market road segment (1.85km total before the start point of Phase 1 on the south side of Dushanbe) has been added to the Phase 1 Project since it started. It will enable easy traffic flow through the bazaar area and reduce traffic bottlenecks at the points where traffic joins Kurganteppa road or turns left towards Dushanbe's suburbs. Traffic safety will be significantly improved, and accidents reduced, especially when the traffic from Bazaar joins busy Dushanbe-Kurganteppa road.

17. Ecologically significant structures along the project road are the Kofarnigon and Dahanakiik rivers, the Obi Shivo creek, and the tree rows that are stretching over many parts of the

Project road. Among the planted species are pines and cypresses. Where drainage or irrigation channels are running parallel to the Project road deciduous trees such as elms, planes, poplars and willows dominate.

18. The land use alongside the Project road can be divided into three broad main categories comprising urban environment and settlements, agricultural land and grassland (steppe) which for most of its part is used as pasture land. Most prominent agricultural crops are apples, grapes, cherries, apricots, pistachio and cotton. The land under cultivation is irrigated due to the generally dry climate. The following map which is taken from the JICA report (2015) provides a general overview of the land use characteristics near the Project area.

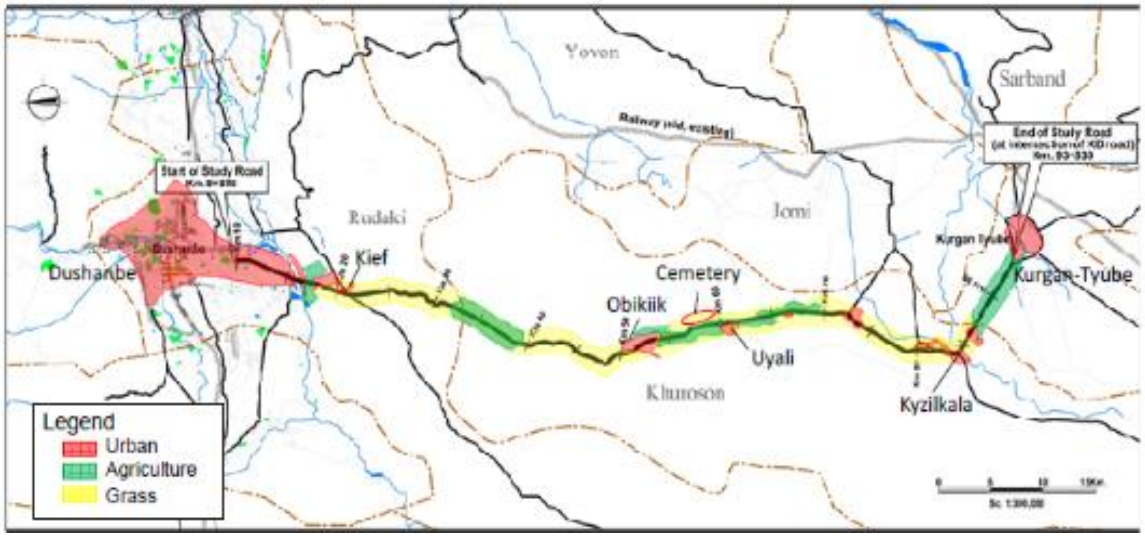

Figure 1 - Land use alongside the whole Project road

2.2 Project area

19. The project road starts at a gap in the central median immediately south of the junction of the project road with the major link to the dual carriageway that takes traffic into central Dushanbe. The project IEE was updated in May 2018 to include also a section from Korvon market to the original starting point of the road. ADB provided comments on the updated IEE in October, 2018 and the IEE has since been updated to accommodate these comments. This report on the Phase 1 road section is deal with the condition and the design of the first section of road from the Korvon market start point to Chashmasor, a distance of about 33.2 km.

20. The Addendum to IEE was also submitted during the monitoring period for the CEF component that was added to the project. The final version of the report was submitted in April 2020 and approved in May 2020.

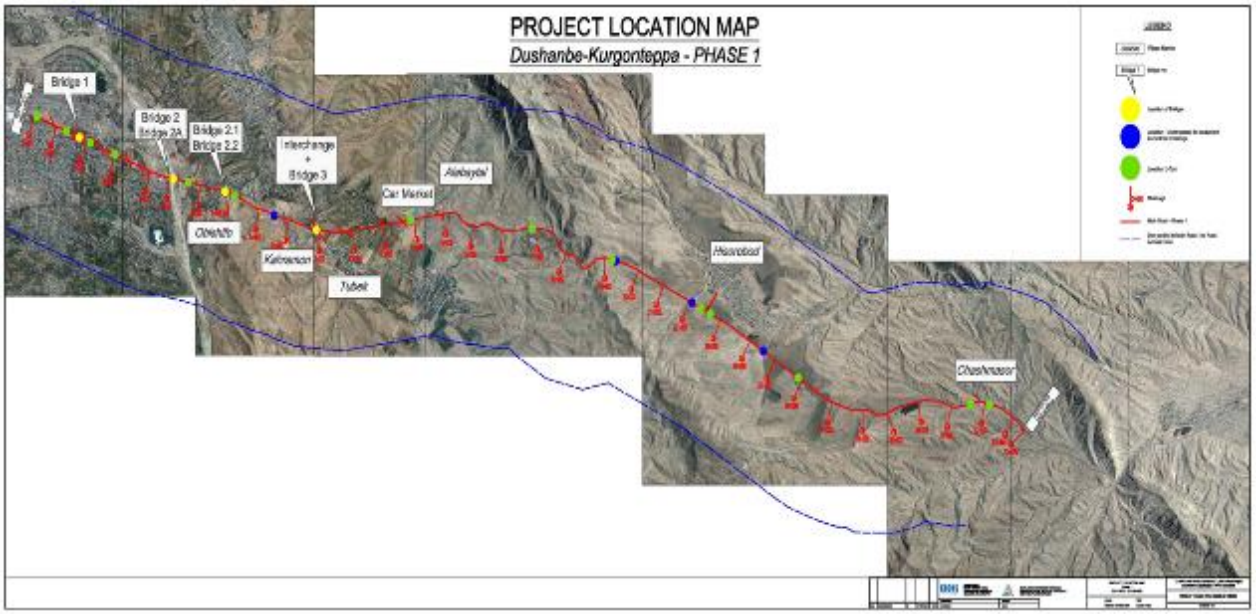

Figure 2 - Project road map and chainages

21. In addition to the ecologically sensitive structures, there are also socially sensitive receptors, namely residential areas along the road section.

22. The project will support the government's program to progressively improve the road by (i) expanding its width from two to four lanes, to address the impending capacity constraints; (ii) improving its surface condition by structural overlays of the existing pavement and construction of new pavements, to address the condition constraints; and (iii) providing well-designed safety facilities to address the existing road safety deficiencies. The project will also serve to take stock, draw lessons and analyze the institutional gaps on road safety and road asset management with the view to incrementally strengthening MOT's capacities on these aspects. This approach will support a policy dialogue that will run parallel with the progressive improvement of the road and will be closely coordinated with other development partners active in the transport sector.

2.3 Project Contracts and Management

23. ADB contracted the Kocks Consult GmbH; Germany in cooperation with FinnOC, and State Unitary Enterprise "Research, Design and Survey Institute" Tajikistan in December 2015 as a consultant for the PPTA and consequently for preparation of all documents which are required according to the ToR.

24. The basic information of the project Construction Supervision is as follows: (i) Consultant: Kocks Consult GmbH; (ii) Date of Contract Signature 28.6.2017; (iii) Commencement Date: 9.7.2017; and (iv) Contract Period: 42 months.

25. During the process of development and implementation of this Project, Contractor, and Employer have concluded a Contract with an objective that, all specialists are qualified; Professional Contractor should provide to Employer with high quality of the construction, and as per Technical Proposals perform all necessary works in high level. The Project Management Consultant/ Construction Supervision Consultant (PMC/CSC) and Employer have necessary education and experience in order to objectively assess the requirements

of the project. Works are implemented as per regulations of ADB, FIDIC, SniP and regulation norms of the Republic of Tajikistan as well as, in accordance with Special Contract Conditions and Technical Specifications which are set by the Employer. Quality Control is an integral part of the CSC work and their professional responsibility enabled maintain up to standards.

26. The agencies involved directly in the implementation of the project include: (i) Xinjiang Beijing, the contractor; (ii) Kocks Consult GmbH, the supervising engineer; and (iii) Project Implementation Unit for Road Rehabilitation (PIU) under the Ministry of Transport. The works at the Korvon market road section is being carried out by LLC "Company Rohsoz-7". The environmental specialist for this is Mr. Bashir Suriev.

27. The responsible persons for the environmental management and monitoring of the project are as follows:

    (i) PIU: Coordinator on environmental, social and gender issues: Mr. Eraj Mirzoev;

    (ii) PIU: Environmental Specialist: Guldavlat Ahmadbekova

    (iii) Supervising Engineer: International Environmental Specialist Mr. Toni Paju and National Environmental Specialist Mr. Isfandiyor Shukurov; and

    (iv) The Contractor: International Health and Safety Specialist Mr. Liang Hao Sheng and National Environmental Consultant Mr. Egamberdi Rustamov.

28. Ms. Guldavlat Ahmadbekova from PIU is responsible for the environmental management and monitoring from PIU's side. Mr. Toni Paju is responsible for carrying out intermittent monitoring, reporting, and providing training to the local counterparts and personnel who are involved in the day-to-day activities for environmental monitoring. Mr. Isfandiyor Shukurov is responsible for day-to-day monitoring of the project compliance from the supervising engineer's side. Mr. Liang Hao Sheng is responsible for health and safety compliance and Mr. Egamberdi Rustamov is responsible for the environmental monitoring and reporting from the contractor's side. The organizational diagram for the environmental monitoring in the project is presented below.

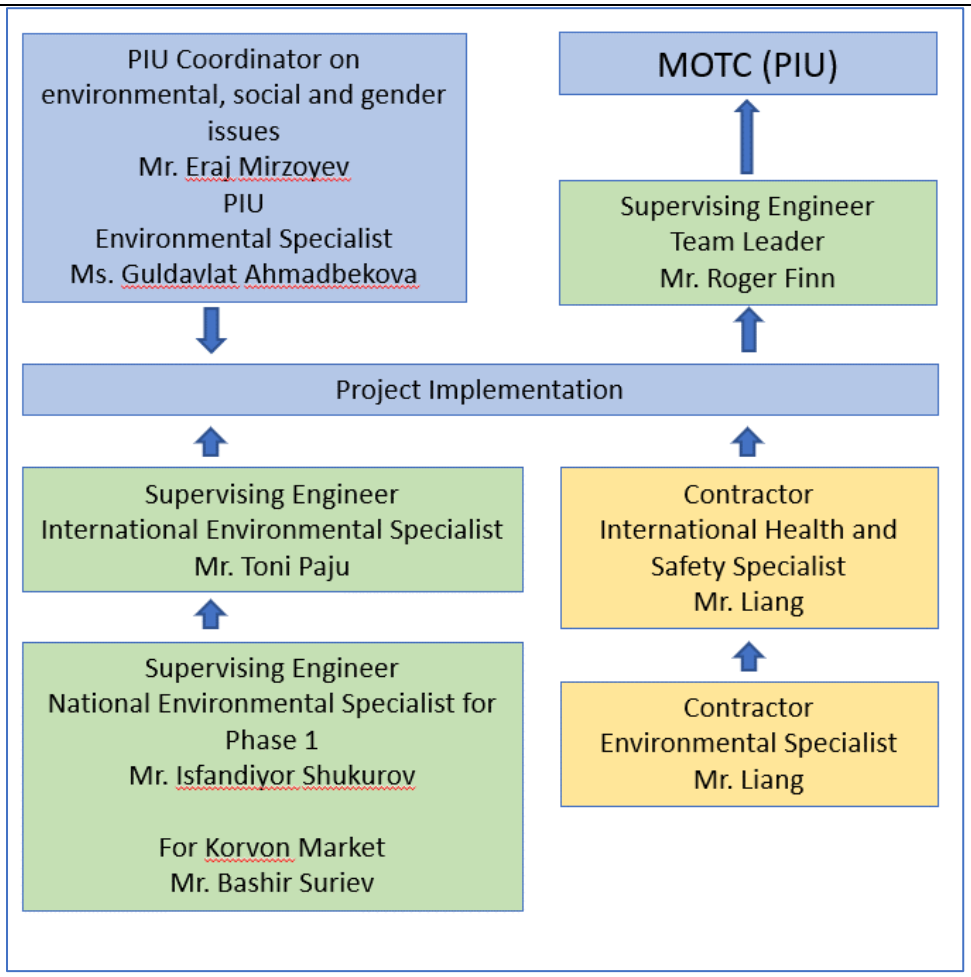

Figure 3 - The environmental management diagram of the project

29. There have been no significant changes to the environmental monitoring team from any of the parties side during the reporting period.

30. The project owner is the Ministry of Transport of Tajikistan. The Project Implementation Unit for road sector (PIU) is responsible for overseeing the implementation on behalf of the ministry.

2.4 Project Activities during Current Reporting Period

31. This is the sixth Semi-Annual Environmental Monitoring report. This report provides a review on how the environmental measures, needed to prevent and/or mitigate negative environmental effects associated with the development project, have been carried out by the contractor. The report also provides a summary of the currently outstanding major and minor issues that need to be addressed.

32. This report presents a review of the progress, and a summary of the findings of the project between July and December, 2020. The international environmental specialist has provided support to the national counterpart during the monitoring period on the regular reporting and addressing the issues that have arisen. The national expert has carried out monitoring on a day-to-day basis and reported to the international specialist. The international specialist has been responsible for preparing the reporting for the project during the monitoring period.

33. The construction activities that have been carried out during the monitoring period have included: (i) utility relocation; (ii) earthworks; (iii) pavement (capping/subbase/aggregate base/asphalt binder course) and Bridges and Culverts; (iv) laying pipes; (v) R.C.C Boxes; (vi) concreting abutments; (vii) girders and other structural works; and (viii) precasting. The percentage of works completed during the monitoring period is in total **13.00 %.** The total progress of the works is now 85.02.

34. There were no major delays during the monitoring period due to the COVID-19 situation. No cases of COVID-19 were reported during the monitoring period. The main impact of the pandemic on the project has been the hindrances to monitoring activities, as some facilities of the contractor have been closed due to quarantine requirements.

Table 1 - Progress of work by month

No	Month, 2020	Construction Works
1	July	1.5 %
2	August	3.0 %
3	September	4.0 %
4	October	2.0 %
5	November	2.0 %
6	December	0.5 %
Works during the period		**13.00 %**

Table 2 - Progress of work by month

Month	**Total personnel mobilized (i.e. actually and regularly on the construction Site)**
July	4 Expat, 96 Local
August	4 Expat, 96 Local
September	4 Expat, 96 Local
October	13 Expat, 167 Local
November	13 Expat, 167 Local
December	2 Expat, 32 Local

35. The table below presents the type of works that have been carried out along the project road by chainage during the monitoring period.

Table 3 - Bridge and Underpass Work Progress (to end-December 2020)

Bridge No.	Location (km)	Type	Length (m)	Number of Span	Bridge Deck width (m)	Type of Work	Progress Status
B 1	1.795	Existing channel	14.8	1 * 14.1	27.30	Rehab	Rehabilitation
B 2	4.875 (RHS)	Kafirnigan river	298.9	9 * 33	15.4	Rehab	Replacement of bridge deck
B 2A	4+877 (LHS)	Kafernigan river	298.9	9 * 33	12.25	New	Construction of 78 pieces of piles were completed. Construction work on two abutment pier and eight intermediate piers completed. Replacement of defective beams is complete. Concreting of reinforcement layer, is completed for all spans. Work is complete on reinforcement of pavement blocks, cornices and curbs and waterproofing. Work in progress on bridge railing, expansion joints and bridge draining
B 2.1	6+650	Pedestrian	31.25	1 * 27	2.7	New	Construction of foundations is completed. Work on metal span is in progress on the plant.
B 2.2	6+694	Shur river	16.10	1 * 15	23.5	New	Construction of 22 piles completed. Construction of both abutments completed. All pre-stressed 15m beams are installed on piers. Reinforcement and concreting of cross beams and layer are completed. The construction of paving blocks (cornices) over the bridge is completed. Reinforcement and concreting of approach slabs are completed. Work is complete on reinforcement and concreting of retaining walls. Waterproofing is complete. Work in process on railings.

Bridge No.	Location (km)	Type	Length (m)	Number of Span	Bridge Deck width (m)	Type of Work	Progress Status
B 2.3	8+506	Animal crossing	7.6	1 * 6	28.5	New	Concrete works completed. Backfilling, reinforcement and concreting of approach slab on RHS and LHS completed. Waterproofing and concreting of the protective layer is completed. (Rapid flow, slope strengthening and railings) were not executed.
B 3	9+825	AZC Lyar Isanbay	33.9	1 * 33	22.5	New	All 52 piles are completed. Construction of both abutments are completed. Installation of Beams complete. The cross beams are complete. The reinforcement layer on the right side and the left side is completed. Approach slabs are complete. Retaining walls are complete. Work is complete on cornices and bridge curbs. Bridge waterproofing is done. Work is in progress for railings
B 3.1	19+625 (ПС/ЛС)	Animal crossing	7.6	1 * 6	29	New	Concrete works are finished. Backfilling, reinforcement and concreting of cross slabs for RHS and LHS are finished. (Rapid flow, slope strengthening and railings) were not executed.
B 3.2	22+180(ПС/ЛС)	Animal crossing	7.6	1 * 6	27.8	New	Concrete works are finished. Backfilling, reinforcement and concreting of cross slabs for RHS and LHS are finished. (railings was not done)
B 3.3	24+685 (ПС/ЛС)	Animal crossing	7.6	1 * 6	27	New	Concrete works are finished. Backfilling, reinforcement and concreting of cross slabs for LHS and RHS are finished. (Rapid flow, slope strengthening and railings) were not executed. Work is in progress on strengthening of right side.

Table 4 - Work Progress LHS/RHS (to end-December 2020)

LHS					RHS				
Station (Km)			Type of Work (See below)	Status (A = complete, B = in progress)	Station (Km)			Type of Work (See below)	Status (A = complete, B = in progress)
From	To	Length			From	To	Length		
0,275	4,660	4,385	11	A	0,275	4,660	4,385	11	A
4,660	4,727	0,067	8	A	4,660	4,727	0,067	5	A
4,727	5,026	0,299	9	Bridge 2	4,727	5,026	0,299	Bridge 2	
5,026	5,100	0,074	8	A	5,026	5,100	0,074	4	B
5,100	6,600	1,500	11	B	5,100	6,600	1,500	11	B
6,600	6,620	0,020	11	B	6,600	6,620	0,020	11	B
6,620	6,682	0,062	5	B	6,620	6,682	0,062	8	A
6,682	6,697	0,015	Bridge 2,2	B	6,682	6,697	0,015	Bridge 2,2	Leveling C
6,697	6,800	0,103	5	B	6,697	6,800	0,103	8	A
6,800	6,840	0,040	5	B	6,800	8,110	1,310	8	A
6,840	7,550	0,710	8	A	8,110	8,380	0,270	5	B
7,550	8,100	0,550	8	A	8,380	8,520	0,140	5	B
8,100	8,380	0,280	8	A	8,520	9,320	0,800	8	A
8,380	8,520	0,140	8	A	9,320	9,750	0,430	7	B
8,600	9,320	0,720	8	A					
9,320	9,520	0,200	8	A					
9,520	9,825	0,305	5	B	9,740	9,825	0,085	4	B
9,825	9,858	0,033		Bridge 3	9,825	9,858	0,033		Bridge 3
9,858	10,400	0,542	5	B	9,858	10,400	0,542	4	B
10,400	11,840	1,440	8	A	9,750	12,000	2,250	8	A
11,840	12,000	0,160	8	A	11,960	12,000	0,040	4	A
12,000	12,360	0,360	1	-	12,000	12,260	0,260	8	A
12,360	13,250	0,890	3	A	12,260	12,600	0,340	3	A
12,000	18,220	6,220	8	A			0,000		
12,360	13,440	1,080	11	B					
13,400	17,000	3,600	3	A	12,800	13,000	0,200	4	A

13,300	13,400	0,100	4	A	13,100	13,400	0,300	4	A
13,440	16,160	2,720	11	A					
14,250	14,600	0,350	4	A					
14,600	15,200	0,600	3	A					
15,200	16,350	1,150	3	A	13,740	13,920	0,180	11	B
15,070	15,960	0,890	11	B					
16,350	16,640	0,290	4	A	18,320	18,460	0,140	4	B
16,640	17,420	0,780	3	A					
16,400	17,160	0,760	11	B	19,000	19,500	0,500	3	A
					18,580	24,000	5,420	8	A
17,440	17,600	0,160	4	B			0,000		-
17,600	18,300	0,700	3	A	19,600	20,500	0,900	3	A
18,320	18,460	0,140	4	B					
18,460	19,200	0,740	3	A	19,860	20,400	0,540	11	B
18,620	24,000	5,380	8	A	20,600	21,080	0,480	4	B
19,860	20,380	0,520	11	A					
		0,000			21,200	22,000	0,800	3	A
		0,000		-	22,000	22,200	0,200	4	A
21,200	22,340	1,140	11	B			0,000		
22,380	23,180	0,800	11	B	22,260	22,600	0,340	3	A
23,240	24,000	0,760	11	A	21,080	22,540	1,460	11	A
		0,000			22,680	23,300	0,620	11	A
		0,000			23,340	24,000	0,660	11	A
		0,000			23,400	23,700	0,300	3	A
23,240	23,750	0,510	8	A	24,000	24,420	0,420	8	A
23,750	26,060	2,310	9	A	24,440	24,620	0,180	8	A
26,060	26,100	0,040	9	A	24,620	24,790	0,170	8	A
26,100	26,220	0,120	9	A	24,790	26,680	1,890	8	A
26,220	26,420	0,200	9	A	26,680	26,720	0,040	8	A
26,420	26,700	0,280	8	A	26,720	27,750	1,030	8	A
26,700	27,500	0,800	8	A	27,750	29,140	1,390	8	A
27,500	27,620	0,120	8	A	29,140	29,240	0,100	8	A
27,620	27,680	0,060	8	A	29,300	29,560	0,260	8	A

27,680	27,840	0,160	8	A	29,560	30,700	1,140	8	A
27,840	27,935	0,095	8	A	30,700	31,980	1,280	7	B
27,935	27,960	0,025	8	A	31,980	32,450	0,470	6	B
27,960	30,000	2,040	8	A	32,450	33,475	1,025	8	A
30,000	31,760	1,760	8	A					
31,760	33,220	1,460	8	A					
33,220	33,475	0,255	8	A					
TOTALS					**TOTALS**				

Total lengths (Kms) of each types of work COMPLETED	**LHS**			**RHS**		
	Design Length (Km)	**Complete**	**%**	**Design Length (Km)**	**Complete**	**%**
1 = Original road or ground, work not started				-		
2 = Clearing+grubbing						
3 = Bulk excavation						
4 = Embankment						
5 = Capping Layer	33,475	31.5	85	33,475	31.5	80
6 = Subbase	33,475	31.5	85	33,475	31.5	80
7 = Aggregate Base	33,475	31.5	85	33,475	31.5	80
8 = Asphalt Binder Course	33,475	31.5	85	33,475	31.5	80
9 = Asphalt Wearing Course	33,475	2	6	33,475	0	0
10 = Road Markings						
11 = Road furniture (kerbs, barriers, signs)	33,275	6,990	21,0	33,275	2,060	6,2

Table 5 - Status of Beams for Bridges (to end-December 2020)

Bridge No 2A & 3	The Contractor completed preparation of pre stressed beams for the bridges. 33m – 70 pieces. (Instead of 8 of defective beams, concreted 8 new beams), 15m – 12 pieces.

Table 6 - Pipe and box culverts (to end-December 2020)

The following locations the installation of pipe culverts is in progress/completed:

No	Location	No of Barrels	Diameter(m)	Remarks
1	1+974	1	1,5	Completed
2	2+167	1	1.5	Completed
3	2+181	1	1.5	Completed
4	2+676	1	1.2x0.8	Clearing not started
5	3+566	1	1.5	Clearing not started
6	3+900	1	1.5	Finished. (Without approved drawing).
7	5+449	1	2x2.5	Completed
8	5+580	1	1.5	Completed
9	5+912	1	1.5	Completed.
10	6+640	1	1*1	Completed. (The head walls and wing walls of the LHS are left)
11	7+175	1	4.0x2.5	RHS is finished. Pile cap pit for the LHS is in process
12	7+757	2	2x2.5	Completed. (Gabion is not done at outlet)
13	8+417	2	4.0x2.5	Completed. (Retaining wall is not done yet on the RHS)
14	9+710	1	1.5	LHS has been done but it does not match the project drawing and is not approved by Engineer.
15	9+818	1	1.5	Not Started
16	9+840	1	1.5	Not Started
17	10+712	1	1.5	Completed.
18	10+735	1	4*2.5	RHS and LHS are completed, headwall of LHS is left waiting for relocation of water pipes.
19	11+508	1	1.5	Completed. (Gabion is not done at outlet)
20	11+890	1	2x2x2.5	Completed
21	12+093	1	1.5	Completed. (Is not strengthened with rock fill)
22	12+182	1	1.5	Completed. (Is not strengthened with rock fill)
23	12+220	1	4x2.5	Complete.
24	12+580	1	1.5	Completed. (Headwall and wingwalls of the LHS were concreted not according to the design).

No	Location	No of Barrels	Diameter(m)	Remarks
25	12+900	1	4x2.5	Installation at RHS and LHS are completed; Work in process on headwalls and stairs for the LHS and RHS.
26	13+272	1	1.5	Completed. (Gabion is not done at outlet)
27	13+684	1	1.5	Completed (Gabion is not done at outlet)
28	14+018	1	1.5	Completed (Gabion is not done at outlet)
29	14+323	1	1.5	Completed (Gabion is not done at outlet)
30	14+340	1	1.5	Completed (Gabion is not done at outlet)
31	15+117	1	1.5	Completed (Gabion at outlet and rapid flow are not done)
32	16+442	1	1.5	Completed (Gabion at outlet and rapid flow are not done)
33	16+856	1	1.5	Completed (Gabion is not done at outlet)
34	17+450	1	1.5	Completed
35	17+478	1	1,5	Completed (is not strengthened with monolithic concrete)
36	18+392	1	2.0x2.0	Not Started.
37	19+642	1	1.5	Completed (Gabion is not done at outlet)
38	19+838	1	1.5	Completed (Gabion at outlet and rapid flow are not done)
39	20+400	1	4x2.5	Completed (Gabion is not done at outlet)
40	21+382	1	1.5	Completed (Gabion is not done at outlet)
41	22+108	2	1.5	Completed (Gabion is not done at outlet)
42	23+225	2	1.5	Completed (Gabion is not done at outlet)
43	24+007	1	4x2.5	Completed
44	24+490	1	4x2.5	Completed (Gabion is not done at outlet)
45	25+474	1	1.5	Completed
46	26+761	1	1.5	Completed
47	27+980	1	1.5	Completed (Gabion at outlet and rapid flow are not done)
48	28+735	1	1.5	Completed.
49	29+277	1	1.5	Completed.
50	29+910	1	1.5	Completed. (Gabion at outlet and rapid flow are not done)
51	30+448	1	1.5	Completed..
52	30+795	1	1.5	Completed.
53	31+210	1	4.0x2.5	Completed.
54	31+766	1	4.0x2.5	Completed. (Without approved drawing).
55	32+452	1	1.5	Completed.
56	32+944	1	4.0x2.5	Completed.

No	Location	No of Barrels	Diameter(m)	Remarks
57	33+240	1	1.5	Completed

2.5 Description of Any Changes to Project Design

36. Worth of changes have been suggested to the project design so far. These are described in the table 7 below.

Table 7 - Proposed design changes (to end of June 2020)

SN	Description	Estimated Time Effect*	Proposed to be included in Variation No. …….	A Approved by Technical Commission on ……. (date)
	CP-01 (Km0+275-33+475, Beixin)			
	a) Items Already Finally Approved and Packaged As Variations			
	Realignment from LHS to RHS, from Km 19+500 - 26+500	TBA	1	
	Km4+170LHS Traffic Police Post (Gissar Junction)	TBA	1	
	Changed original Items / new items (5 No.)	TBA	1	
	Unsuitable excavation (225,000m3)	TBA	2	
	Common Excavation (due to slope change + realignments) (only new slopes- see separate item for regrading of existing 8V:1H slopes) Change of cut slope angle from 8V:1H to 2V:1H with 2m berms at 6m vertical spacing, subgrade replacement with suitable fill (additional bulk excavation cost) (700,000m3 @ USD 1,83)	TBA	2	
	Additional capping layer due to lack of suitable existing gravel material under subbase in cut areas, and for new fill areas (140,000m3 @ 5.34)			
	Increased rock excavation (due to slope change + realignments) (+47,500 m^3)	TBA	2	
	Provisional Extension of Time to 30/6/2021	255	3	
	Transfer of Solar PV Road Lighting from CEF Fund (for Km 0+275 - 33+475 only, this item will be a separate additional cost for Phase 2 also)	TBA	4	
	'Hard Soil' (290,000m3)		4	
	Block Paving instead of topsoil+grassing for median, and 40mm wearing course for footpaths (ref. Engineer's letter ..... To PIU).	TBA	4	

	New items and rates (5 no.) 1) Research and design costs of engineering structures 2) Determination of unit rate for R/C Pipe DN 1500 mm 3) Determination of unit rate for kerb stones 100x45x18 cm (Increase of median kerb size (from 100x30x15, to 100x45x18), and quantity to 48,000LM) 4) Determination of unit rate for steel linear pipelines 5) Determination of unit rate for R/C ditches B10	TBA	5	
	SUB-TOTAL			
	b) Items Not Yet Finally Approved and Packaged As Variations			
	5% Retention Money (USD 2.37M) assumed included in the gross VO amounts up to final Contract Price (USD 67.56M ?), so not added separately.	N/A	N/A	
	Price Adjustment On Original Items.	N/A	TBA	
	Increased utility relocation costs			
	Increased embankment fill rate on original volume (533,000 m^3 @ USD1.8/m^3)			
	Increased embankment fill volume (154,139 embankment + 225,000 m3 unsuitable material replacement, @ USD 5.34/m3) (NOTE: 'STONE FILLING' TO BE ADDED TO THIS IF NOT SEPARATELY APPROVED)			
	Realignment from Km 17+500 - 19+500 including high embankment from Km 18+340 – 18+460 (additional cost of gabions and geofabric)	TBA	TBA	
	Km 9+500 - 10+200 Tubek Interchange: Additional ramps/lanes/walls required by Traffic Police to make clover leaf junction			
	Extended General Items including Engineers Facilities (assuming completion by 30/6/2021)	TBA		
	Contractor's Claims (Contractor's Claims 1-5 (Errors in benchmarks and original design, additional design costs due to instructed changes, unsuitable material for embankments)additional survey and design costs, abortive construction works, other items)	TBA	TBA	
	Estimated acceleration+prolongation cost for completing by 30/6/2021	0	TBA	
	Reserve for other Contractor's Claims			
	Dispute Board Costs	N/A	TBA	
	Change of cut slope angle from 8V:1H to 2V:1H with 2m berms at 6m vertical spacing (reaccessing to slopes already cut to 8V:1H at time of this instruction) (150,000m3@ USD7)	TBA	TBA	
	Relocation and amendment of U-turns, as required by Traffic Police (2 No. At Km 3+600 - 4+800 (may be replaced by Traffic lights at Km 4+170 (Gissar Junction), and 2 No. at Km31-32)	TBA	TBA	See Note 1.
	Relocation and amendment of U-turns, as required by Traffic Police (2 No. At Km 3+600 - 4+800 (may be replaced by Traffic lights at Km 4+170 (Gissar Junction), and 2 No. at Km31-32)	TBA	TBA	See Note 1.

	Km 0+275 - 3+660 LHS+RHS - Additional footpath (2.25m wide) with 100x30x15 footpath kerb only (no covered side drains) (offset by reduction of original BOQ quantity)	TBA	TBA	
	'Stone filling'	TBA	TBA	
	Additional suitable fill (assumed 150mm average across whole site), for replacement, and/or for raising road level, in very poor (heaving weak saturated soils / old dumped materials / high ground watertable / springs etc) original ground below embankments and/or subgrade in cut areas (where not due to Contractor‘s negligence) (75,000m3 @ 3.47)			See Note 1.
	Additional 100mm fill below capping layer in cut areas, to achieve 95% compaction (50,000m3 @ 3.47)			See Note 1.
	Additional 550mm common excavation for the above two items (275,000m3 @ 1.83)			See Note 1.
	Other item changes (due to instructions or ‚natural‘ uninstructed changes e.g. differing ground levels)			
	Possible savings on other items?			
	SUB-TOTAL			
2	**OTHER POSSIBLE ITEMS NOT YET INCLUDED IN ABOVE**			
	Km 4+727 - 5+026 Bridge 2 (Kafarnigan River) – reconstruction of Existing Bridge 2			
	Km 4+727 - 5+026 Bridge 2 (Kafarnigan River) – possible additional river training works			
	Km0+275-3+660 - additional lane on each side proposed by Prime Minister during site inspection on 9/7/2019 (Type 2B Cross section) (ref. Engineer's letter 1422 of 27/2/2020 To PIU).	TBA	TBA	
	Lined channel from Km31+766-33+290RHS (ref. Engineer's letter 1298, 16.11.19 , item 1 to PIU)	TBA	TBA	
	Bridge 2.2 additional lined channel for 100-150m on upstream and downstream sides (ref. Engineer's letter 1383 of 29.01.20. To PIU)			
	Mother+Baby Rooms, and toilets (2 No. (LHS+RHS) of each in 4 places, total 8No., + 8 No. market stalls ?)			
	Additional Police Post Works at Km20 LHS			
	SUB-TOTAL			
3	CP-03 Korvon Market Road Improvement (1.75kms, 6 lane)	0 (complation date 17/11/2020	TBA	
4	CS-01 Construction Supervision Consultancy Contract			
	VO1 Design for Hulbuk-Temirmalik and 2 other roads	N/A	CS VO1	
	VO2 Increased Construction Supervision Costs (to 31/10/2020)	N/A	CS VO2	

	VO3 Increased Construction Supervision Costs (to 30/6/2021)	N/A	CS VO3	
	SUB-TOTAL			
	TOTAL (ITEMS 1-4)			
	(* Further details to be provided when available)			
	Note 1. Cost assumed covered by other Variations .			
	TBA = To Be Advised			

2.6 Description of Any Changes to Agreed Construction Methods

37. No changes have been proposed to the construction methods.

III. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

38. The national environmental specialist of the supervising consultant has visited the project area on a day-to-day basis during the monitoring period to verify the state of the implementation of the environmental safeguards. In addition, ADB has not been able to conduct field mission during the monitoring period due to the COVID-19 situation (only a restricted Mission from 16-30/11/2020).

39. In addition to the national environmental specialist, the international environmental specialist of the supervising consultant has provided support to the national specialist during the monitoring activities and been responsible for the reporting during the period, based on the monthly reports provided by the national specialist and other correspondence as issues have arisen.

40. The contractor has submitted the environmental reports during the monitoring period. The monitoring results for the air quality, noise, and water quality are included in Annex 1 and 2. In addition, this report is done based on the reporting of the national environmental specialist.

3.2 Site Inspections

41. The following table presents the inspections made by the environmental safeguard staff during the current reporting period:

Table 8 - Environmental Inspection Schedule

No	Date	Staff Present
1	Daily during July-December, 2020	Environmental Specialist - Isfandiyor Shukurov
2	Weekly during July-December, 2020	Contractor's Environmental Specialist Egamberdi Rustamov and HS Specialist - Hao Sheng Liang

42. The main findings during the monitoring period were as follows: (i) roads along the project road were not regularly watered during dry times, as the CSC national environmental specialist observed the road being dry and dusty during many of his visits; (ii) inadequate PPE were worn by all employees on many occasions, which was a recurring issue; (iii) bitumen barrels at the asphalt plant are stored opened and next to waterways; (iv) the used bitumen barrels were scattered around the asphalt plant; (v) spills, used batteries, oils, and metal scraps were left lying around at the contractors main camp at km9+000; (vi) at the concrete batching plant there was dustiness and inadequate fire-fighting equipment; (vii) soil dumps have not been stabilized along the project road and soil has been dumped to block natural drainage patterns; (viii) maintenance of vehicles is being done outside of the designated areas; (ix) inadequate safety precautions at the quarry site at km5+000 due to the absence of fencing; and (x) trucks at the quarry are being overloaded and not covered with tarpaulin.

3.3 Issues Tracking (Based on Non-Conformance Notices)

43. The Engineer provided the contractor a notes of non-compliance on: (i) two letters on the use of vibratory roller that caused damage to roadside buildings (November and December, 2020); (ii) inadequate warning and traffic signs (September, 2020); (iii) inadequate health and safety provision (October, 2020); and (iv) two letters on the COVID-19 action plan (November, 2020). Altogether 11 non-conformance notices were sent during the monitoring period and the issues have also been discussed verbally with the appropriate experts.

44. No new issues emerged during the monitoring period and all issues that required corrections from the contractor were recurring ones. The contractor has addressed the lacking of warning signs at km19 and km 22 from the previous report. The issue of not implementing a waste management checklist and storing bitumen barrels next to waterways were integrated to other issues, which reduces the number of open issues altogether by three.

45. There are still 21 outstanding issues from the previous monitoring periods which have not been addressed.

46. The methods applied by the CSC for correcting the environmental non-compliance were submission the non-conformance notices and verbal discussions with the staff of the contractor.

47. The status of implementation of the corrective action plan from the previous report has not changed during the current monitoring period. A lot of work still remains to reach full compliance.

48. The status of implementation of the CAP recommended for July-December 2020 is presented in the Table 9 below.

Table 9 – Status of issues and corrective actions from the previous monitoring period

#	Issue	Action required	Status
ISSUES OUTSTANDING FROM THE PREVIOUS SAER(S)			
1	First aid kits are available at the vehicles working in the sites, but not at all of the roadside construction areas.	1. The contractor should provide first aid kits to the road site construction sites so that they are readily available in case they are needed.	repeating
2	Contractor is not implementing the waste management checklist from the SEMP.	1. The contractor should assign a person responsible for utilizing the waste management checklist from the SEMP.	Integrated to specific waste related issues
3	Many of the chemical containers did not have proper labelling or warning signs.	1. The contractor should ensure that all chemical containers are properly labelled and include the appropriate warning signs.	repeating
4	The contractor does not have any planting stock available.	1. The contractor should carry out testing of the different plant species to ensure best alternative for revegetation.	repeating

		2. The contractor should acquire seeds/seedlings in stock for revegetation activities.	
5	Topsoil is not being stored separately at all spoil dumps.	1. The contractor should store the top soil separately at the spoil dumps for revegetation activities.	repeating
6	The contractor has not submitted environmental reports or included erosion monitoring to their environmental reporting.	1. The contractor should submit monthly and quarterly environmental reports. 2. The contractor should include erosion monitoring, including photographs, to its environmental reporting.	Addressed
7	Operation of the asphalt plant.	1. The contractor should build an impermeable platform for the storage of bitumen, which will contain any potential leaks. 2. The contractor should ensure that any new bitumen is stored in containers meant for the storage of hazardous substances. 3. The contractor should ensure that all used bitumen containers are managed as hazardous waste. 4. The contractor should clean up any polluted soil in the area and manage it as hazardous waste.	Partially fulfilled (Items 1, 2, are addressed)
8	Hazardous waste was being stored outside on open ground, where it is subjected to weather conditions.	1. The contractor should designate a spot that has an impermeable surface and is in a sealed room where weather conditions won't affect the waste, where the hazardous waste is collected. 2. The contractor should also keep notes on the management of the waste (e.g. who has picked up which waste, when, and what amount).	repeating
9	Access road to the quarry around km 5+000 and elsewhere along the project road were not watered during dry times.	1. The contractor must ensure that adequate level of dust suppression is upheld during dry times.	Partially fulfilled (from September the contractor increased no. of trips for road watering and decreased the level of dust suppression)
10	No signal vests and helmets were worn by all employees on many occasions.	1. The contractor must enforce the use of signal vests strictly.	Addressed (photos are provided in the report)
11	Bitumen barrels at the asphalt plant were stored opened and next to waterways.	1. The contractor needs to provide lids to the bitumen barrels and store them according to the SSEMP away from waterways.	Integrated to the operation of the asphalt plant issues

12	No PPE was worn by the staff at the asphalt plant and the concrete batching plant.	1. The contractor needs to enforce the use of PPE strictly.	Addressed
13	Bitumen leaks were observed at the asphalt plant and at the contractors main camp at km9+000.	1. The contractor must clean up bitumen spills and ensure that further spills are minimized and contained.	Partially fulfilled
14	Used batteries and metal scraps were left lying around.	1. The contractor needs to follow the waste management plan as described in the SSEMP and manage and store waste properly.	repeating
15	Soil dumps have not been stabilized along the project road.	1. The contractor needs to stabilize the spoil dumps to ensure they will not collapse.	repeating
16	Maintenance of vehicles is being done outside of the designated areas.	1. The contractor must refrain from maintaining the equipment on surfaces that are not impermeable.	repeating
17	There is absence of fencing at the quarry site at km5+000.	1. The contractor needs to provide fencing to the borrow area and ensure that children are not permitted to enter there.	repeating
18	Soil has been observed to have been dumped together in the same places with stripped asphalt at km17+900.	1. The contractor needs to remove the asphalt and store it in the approved area, where the rest of the asphalt is being stored.	Addressed (Asphalt concrete is cleaned and re-stocked at km 19+500 RHS)
19	Lack of warning signs was observed around km19+000 and km22+000.	1. The contractor needs to organize the adequate warning signs in place as soon as possible.	Addressed
20	Noise monitoring was not carried out quarterly.	1. The Contractor needs to carry out the monitoring quarterly, and report the results in their environmental reports.	Carried out
21	Spoil was dumped in natural drainage channels and unauthorized sites in several places between km13+000 and km32+000.	1. The Contractor must immediately remove this spoil and transfer it to a safer location for storage.	Partially fulfilled (from km 29 + 260 to km 30 + 200 the channel is cleared).
22	Overloading of the trucks at the quarry site.	1. The Contractor must not overload the trucks at the quarry.	Addressed (all trucks are controlled)
23	COVID-19 pandemic related risks.	Contractor must develop a COVID-19 action plan as part of SSEMP and submit to PIURR	Done

49. Data on the number of closed and open issues are presented below. This data is based on the issues, that were observed and have been closed or remain open during the monitoring period.

Figure 4 - Open issues, including the newly emerged issues, and closed issues during the project

3.4 Trends

50. The trends on the number of issues that have been reported for the Semi-Annual Monitoring Reports submitted during the project are presented in the table below. Approximately half of the issues that have emerged since the start of the project remain unresolved.

Table 10 - Number of open and closed issues during the project

	Open	Closed	New Issues Emerged
Semi-Annual Environmental Monitoring Report (January-June, 2018)	31	0	31
Semi-Annual Environmental Monitoring Report (July-December, 2018)	21	12	2
Semi-Annual Environmental Monitoring Report (January-June, 2019)	32	1	12
Semi-Annual Environmental Monitoring Report (July-December, 2019)	20	9	1
Semi-Annual Environmental Monitoring Report (January-June, 2020)	22	1	2
Semi-Annual Environmental Monitoring Report (July-December, 2020)	13	10	0
TOTAL NEWLY EMERGED AND CLOSED ISSUES DURING THE PROJECT		**33**	**48**

3.5 Unanticipated Environmental Impacts or Risks

51. The only unanticipated environmental impact for the project so far, has been the discovery of the endangered steppe turtles by the borrow area at km 14+200 in April, 2018. This was reported in SA-EMR of July-December, 2018 and has been included in the comments made to the contractor. The contractor has refrained from using the borrow area in the project.

IV. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted During the Current Period

52. The CSC's national environmental specialist has visited the project site daily during the monitoring period. The visit was made to inspect the environmental management and monitoring of the project, including borrow areas, dumping areas, asphalt plant and aggregate crusher, work camp, and the current progress of the works. In addition to this, the contractor's ES have visited the site on a weekly basis. The following chapters present the progress regarding each of these areas of the project and describes how the recommendations made by the ES had been implemented.

4.1.1 Air Quality

53. The contractor is carrying out quarterly monitoring for air quality with support of lisenzed analytical laboratory. This should be adequate for the purpose of the project.

54. The air quality monitoring points are illustrated in the map below.

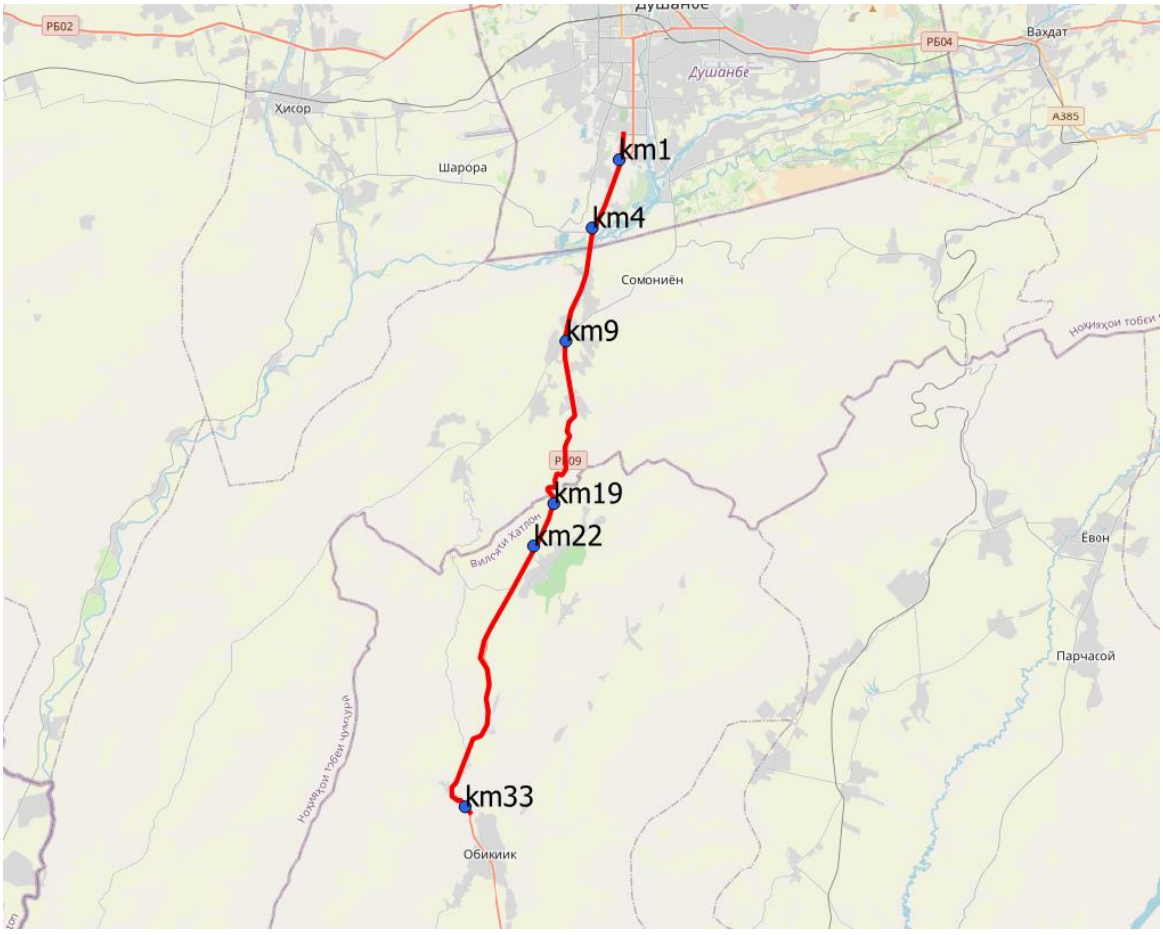

Figure 5 - Locations for air quality monitoring

55. The values obtained for different pollutants from the air quality measurements have not exceeded the guideline values. The results are below the standard values for all indicators during the March monitoring. The monitoring results along with the guideline values are presented in the table below.

Table 11 - Air quality monitoring results and the corresponding standards

KM 4+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0.07	0,15	0,007	0,15
Carbon Monoxide (mg/m^3)	1,6	2,9	1,1	3,0
Nitrogen Dioxide (mg/m^3)	0,0007	0,009	0,006	0,04
Sulphur Dioxide (mg/m^3)	0,0008	0,007	0,005	0,05
KM 6+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0,05	0,15	0,008	0,15
Carbon Monoxide (mg/m^3)	1,9	2,8	2,0	3,0
Nitrogen Dioxide (mg/m^3)	0,001	0,03	0,002	0,04
Sulphur Dioxide (mg/m^3)	0,030	0,02	0,001	0,05
KM 9+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0,09	0,15	0,006	0,15
Carbon Monoxide (mg/m^3)	2,1	2,9	1,3	3,0
Nitrogen Dioxide (mg/m^3)	0,0002	0,02	0,002	0,04
Sulphur Dioxide (mg/m^3)	0.001	0,03	0,003	0,05
KM 19+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0,008	0,11	0,004	0,15
Carbon Monoxide (mg/m^3)	1,7	2,8	1,8	3,0
Nitrogen Dioxide (mg/m^3)	0,001	0,01	0,001	0,04
Sulphur Dioxide (mg/m^3)	0.0004	0,02	0,002	0,05
KM 22+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0,07	0.10	0.005	0,15
Carbon Monoxide (mg/m^3)	2,1	1,6	1,4	3,0
Nitrogen Dioxide (mg/m^3)	0,0004	0,005	0,002	0,04
Sulphur Dioxide (mg/m^3)	0.0006	0,006	0,001	0,05
KM 29+000				
Indicators	**Baseline Measurement**	**Measurement July, 2020**	**Measurement December, 2020**	**Standards for Tajikistan**
Total Suspended Particles (mg/m^3)	0,03	0,10	0,003	0,15
Carbon Monoxide (mg/m^3)	1,1	1,9	1,1	3,0
Nitrogen Dioxide (mg/m^3)	0,0003	0,003	0,001	0,04
Sulphur Dioxide (mg/m^3)	0.0005	0,003	0,001	0,05

56. During the monitoring, the access road to the quarry around km 5+000 and elsewhere along the project road were not watered constantly during dry times, as the CSC

environmental specialist observed dustiness and dry roads during his monitoring visits. This was observed by the Consultant during routine monitoring on several occasions. The contractor has been advised several times to correct this, but has not acted upon the advice. This is a recurring issue and the CSC will continue to push for compliance.

4.1.2 Noise and Vibration

57. The contractor is carrying out quarterly monitoring of noise level. The SEMP does not include provisions for vibration monitoring and hence the contractor has not carried out monitoring of vibration. The noise measurements are being done with model TESTO-815 noise meter.

58. The methodology for the noise measurements is taking a measurement 3 times, with at least 10 minutes time interval for each measurement. A survey is taken for both morning (09:00-12:00) and afternoon (14:00-16:00) times and the indicator is the average of these values.

59. The locations for the noise monitoring have been included the map below.

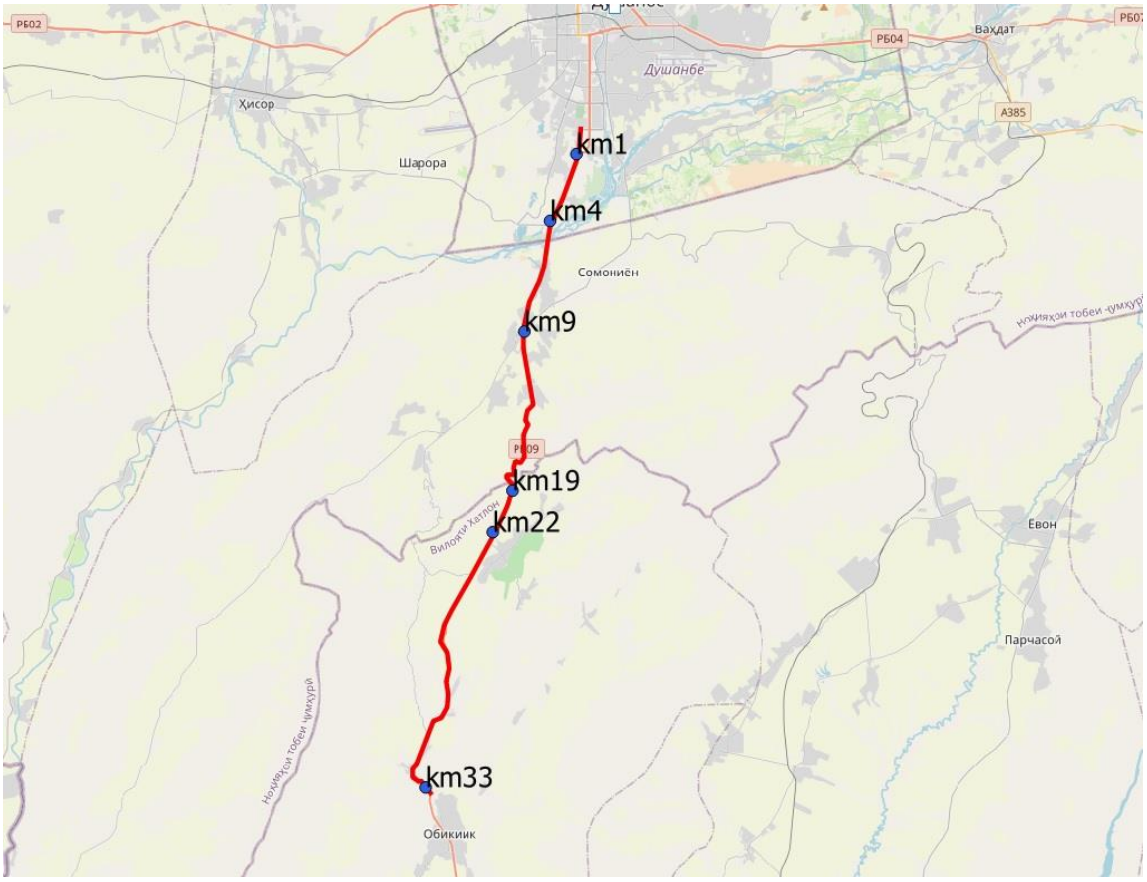

Figure 6 - Locations for noise monitoring

60. In both September and December, the contractor carried out several measurements for noise. The values in the table 10 are the average noise level values between the measurements at 9:00-12:00 and 14:00-16:00. All of the values obtained for noise measurements are typical for highways in the daytime. Some of the monitoring points were

outside residential areas and hence the guideline values are higher. There was no exceedance of noise limits during the noise monitoring. The monitoring results along with the guideline values are presented in the table below. The main issue regarding noise is that the lack of hearing protection that was observed during the monitoring is a serious issue and can lead to permanent hearing impairments to the workers working at these sites. The contractor was advised to improve the situation and ensure that all workers wear hearing protection.

Table 12 - Noise monitoring results and the corresponding standards

Location	Baseline Measurement (dBA)	Measurement September, 2020 (dBA)	Measurement December, 2020 (dBA)	Tajikistan Standards by Type of Measurement Location	
				Night Time (dBa)	Day Time (dBa)
KM1+000	53,0	44.9	51.4	45	55
KM4+000	50,5	49.2	50.3	45	55
KM9+000	53,3	48.2	53.7	45	55
KM19+000	53,7	45.7	51.2	45	55
KM22+000	67,2	49.9	49.9	70	70
KM33+000	66,4	49.6	52.1	70	70

61. The lack of PPE use was an outstanding issue already from before, and it is very likely that the negligence has led to permanent hearing damage with many of the staff who is working for the project. No complaints have been received from the workers in verbal or written form on this issue. The CSC will continue to push for compliance.

4.1.3 Water Quality

62. The contractor is carrying out quarterly monitoring water quality. The locations for the water quality measurements are presented in the map below.

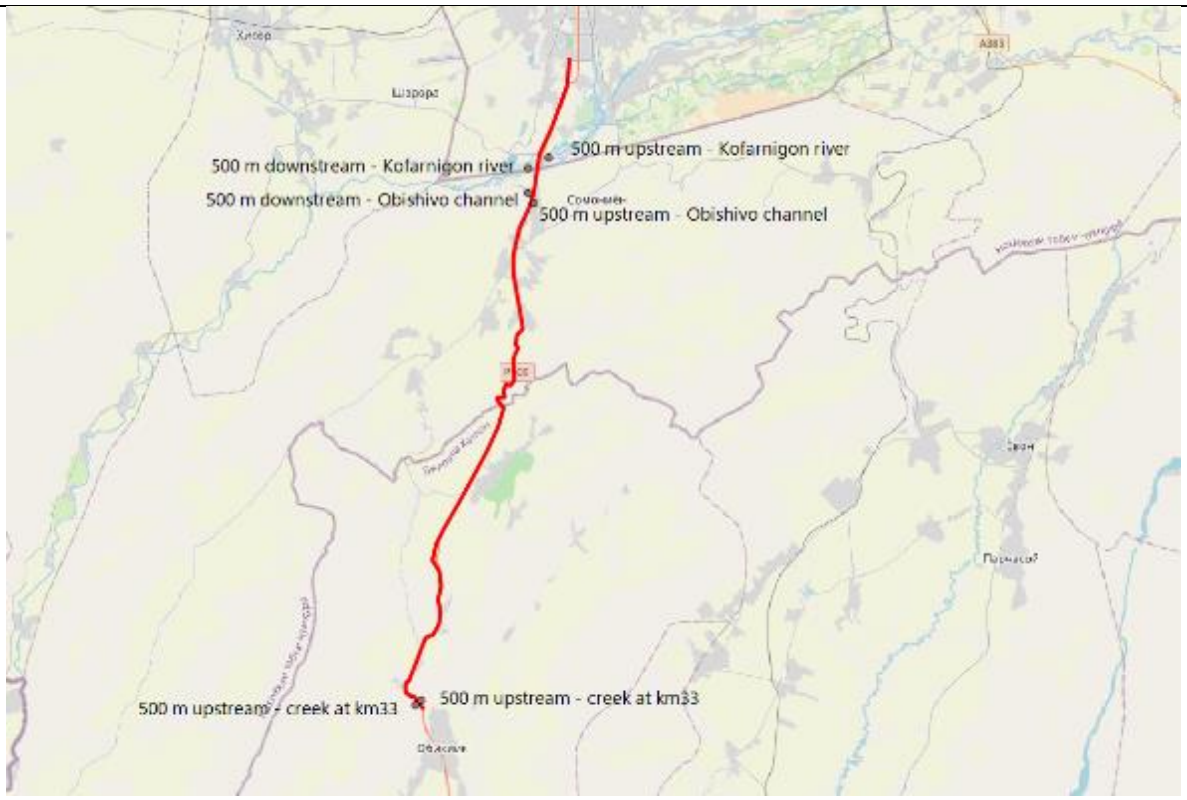

Figure 7 - Locations for water quality monitoring

63. The results of the water quality measurements (table 8), along with the guideline values (table 9) are presented below. The TSS values have been exceeded in every measurement during the monitoring period as per the standards of Tajikistan for water quality. However, the values are not significantly different to the baseline values that were observed in the beginning of the project and hence are not a cause for concern. No other exceedance of values compared to the Tajikistan standards for water quality were observed.

Table 13 - Water quality monitoring results

Kofarnigon River							
	Tajik	Baseline, March, 2018		September, 2020		December, 2020	
Indicator	Standard	500 m upstream	500m downstream	500 m upstream	500m downstream	500 m upstream	500m downstream
Suspended Solids (mg/l)	50	102,0	117,3	86.0	89,2	70.0	71,2
pH	6.5-8.5	6,5	7,3	6,2	6,4	6,5	6,5
Dissolved Oxygen (mg/l)	N/A	7,8	7,8	6,5	7,0	6,3	6,0
Oil and fat (mg/l)	0.05	N/A	N/A	0,00	0,00	0,00	0,00
Conductivity (S/m)	N/A	228	228	65	67	65	66
Temperature	N/A	8,0	8,0	12	12	4	5
Lead (mg/l)	0.006	0,00001	0,00001	N/A	N/A	N/A	N/A
Turbidity	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BOD	30	N/A	N/A	1,8	1,6	1,5	1,6
Coli index	400	N/A	N/A	671	659	561	579

Obi Shivo Channel							
	Tajik	Baseline, March, 2018		September, 2020		December, 2020	
Indicator	Standard	500 m upstream	500m downstream	500 m upstream	500m downstream	500 m upstream	500m downstream
Suspended Solids (mg/l)	50	101,2	100,4	99,5	102,9	105	112
pH	6.5-8.5	N/A	7,4	7,1	7,3	7,3	7,5
Dissolved Oxygen (mg/l)	N/A	6,9	5,9	5,7	5,9	5,9	6,8
Oil and fat (mg/l)	0.05	0,0001	0,0000	0,00	0,00	0,00	0,00
Conductivity (S/m)	N/A	200	198	567,1	574,1	577,0	579,1
Temperature	N/A	5	7	11	11,7	6,0	6,0
Lead (mg/l)	0.006	0,00000	0,00000	N/A	N/A	N/A	N/A
Turbidity	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BOD	30	N/A	N/A	3,1	3,2	3,0	3,1
Coli index	400	N/A	N/A	1000	1000	1010	1013
Creek at KM33+000							
	Tajik	Baseline, March, 2018		September, 2020		December, 2020	
Indicator	Standard	500 m upstream	500m downstream	Next to the Road		Next to the road	
Suspended Solids (mg/l)	50	N/A	N/A	189,0		199,5	
pH	6.5-8.5	N/A	N/A	8,2		8,3	
Dissolved Oxygen (mg/l)	N/A	N/A	N/A	8,6		8,6	
Oil and fat (mg/l)	0.05	N/A	N/A	0,00		0,00	
Conductivity (S/m)	N/A	N/A	N/A	564		641	
Temperature	N/A	N/A	N/A	12		7	
Lead (mg/l)	0.006	N/A	N/A	N/A		N/A	
Turbidity	N/A	N/A	N/A	N/A		N/A	
BOD	30	N/A	N/A	3,0		3,0	
Coli index	400	N/A	N/A	1000		1000	

64. Bitumen barrels at the asphalt plant were stored opened and next to waterways. This is one of the main water quality related concerns in the project. It is also an outstanding issue from several earlier reports.

4.1.4 Environmental, Health and Safety Issues

65. The project has had several health and safety related concerns observed during the monitoring period. Firstly, no signal vests were worn by all employees on many occasions and secondly, wearing hearing protection and helmets were often neglected. This was a recurring observation during the monitoring period. During the monitoring period, the project noted issues related to health and safety were improved. Employees were observed to wear warning vests and helmets.

Photo 1 – Lack of fencing at the borrow area (km5+000), July 2020.

66. Wearing of the PPE is not also enforced strictly, as employees have been observed working around high noise level without the proper hearing protection. The contractor has

been advised repeatedly to correct these practices already in the previous reports. The CSC will continue to press the contractor for compliance on this.

67. During the previous monitoring period, children were observed at the quarry site at km5+000 due to the absence of fencing. This is a clear health and safety risk. The fencing is still not in place. The contractor was once again advised to fence the area to correct the non-compliance.

4.1.5 Borrow Areas and Quarries

68. The biggest borrow area of the project is located towards the beginning of the road section, roughly 5+000 kilometres to the west side of the road from the junction towards Chimteppa. The borrow area is located right next to a residential area, and the hauling route travels next to houses for almost full length of the way from the project road. As mentioned earlier, inadequate dust suppression was being done on the hauling route to this borrow area during sunny days. During reporting period the Contractor increased the number of trips for watering of the project road and decreased the level of the dust suppression.

Photo 2 – The Road watering was increased to decrease the dust suppression - July, 2020.

69. There is also another borrow area in use for the project. This is located at a more remote location around km 24+000. The access road to this borrow area does not traverse any residential areas.

Photo 3 – Some dust suppression has also been done, but fencing is absent and dustiness often persists – August, 2020

4.1.6 Asphalt Plant

70. The asphalt plant is located in an open area by the Kofarnigon riverside at Km3+100LHS. It is surrounded by small ponds and water reeds. It is less than 1,000 metres to the nearest residential areas, and approximately 200 metres from the river, which are both in conflict with the SEMP. Management of bitumen and waste at the plant is in very poor shape. Bitumen is stored in old vegetable puree canisters and many of them in very poor condition.

71. The used bitumen canisters have been dumped on open ground, and some bitumen canisters were found from the small ponds in the area during earlier visits by the ES. The state of the environmental management at the plant still requires improvement. The observations regarding the environmental management at the asphalt plant are presented in pictures below. The soil is polluted by leaked bitumen at the bitumen storage site, which means that cleaning operations have to be carried out by the contractor in the area at the closing of the plant. These are recurring issues.

4.1.7 Aggregate Crusher

72. The contractor is buying the aggregate for the project from one of the existing quarries. The aggregate crusher, which is owned by the supplying company, is located on the riverbank, along with many other aggregate crushers of other companies. Although this is not an optimal solution, it will not produce any new environmental impacts and is as such acceptable.

4.1.8 Work Camp and Waste Management

73. One of the main issues at the contractor's main camp at km9+700 is poor waste management. Although the camp is seemingly in an organized and tidy condition, there have been several observations where the environmental management of the camp is not being done in accordance with the SSEMP.

74. About 193 workers live currently in the camp (Tajiks and Chinese). All necessary sanitary facilities have been provided (water, toilets, showers). There is an agreement for taking care of patients at the camp with the local hospital of Rudaky district. The kitchens and

dining room are in good condition. The SSEMP in hard copy was available in field office of the Contractor.

75. There were enough containers for waste.

76. The Complaints logbook is available in the field office of the Contractor. The Contractor has installed several post boxes for the submission of complaints if any arise from the residents. PIURR informed jamoats in the district that people living in the area of construction camp and road can use those boxes for the submission of their complains. No complaints have been registered so far.

77. During the CSC environmental specialist visits, oil/lubricant spills were observed at the maintenance area of the camp and maintenance of vehicles was being done on open ground. The storage of fuel is in compliance and meets the requirements (fenced, placed on impervious basis and has containment area).

78. No containers for the oily clothes, gloves, etc. had been provided and there is no waste separation.

79. The construction camp at km 24 is used by about 14 workers. No observations of poor environmental management at this camp were made by the ES of the CSC.

80. As a new issue it was observed that there was not adequate medical staff available at the camp.

81. No contracts for management of hazardous waste have been presented by the contractor. The contractor has been unable to give a clear description of the waste management process for hazardous waste, and claimed that all of it was being collected from the camp by local small companies for reuse. No documents were available to support this claim. Hazardous waste, such as used batteries, is being stored outside on open ground, where it is subjected to weather conditions. This is a recurring issue from already earlier monitoring periods. The CSC will continue to press the contractor on compliance on this issue in the next monitoring period.

Photo 4 - Improper waste storage at the contractors main camp, km 9+700 - October, 2020.

4.1.9 Flora and Fauna

82. No issues regarding flora and fauna were observed during the field visits by the national environmental specialist during the regular monitoring activities. No cutting of trees occurred during the monitoring period.

4.1.10 Soil and Spoil Management and Erosion Control

83. The spoil disposal and storage sites are scattered throughout the road section from km 13 onwards. Old asphalt and spoil were dumped in the same place at km 17+900.

84. The most serious issue regarding the spoil management is the dumping of spoil on top of natural drainage patterns, which can cause instability and disturbance to the hydrology of the area. This was observed especially at km13+000, km27+000 and km29+000. This issue remains unresolved.

4.2 Trends

85. The same trend of neglecting the recommendations made by the ES continues with the contractor. Other than that, the issues that have occurred are part of a pattern of poor environmental management regarding key themes in the project.

86. The expected outcome of the project, if the current trend of neglect continues, is that the contractor will finish the project and leave behind areas of polluted soil, health and safety impacts for the local workers, etc.

4.3 Summary of Monitoring Outcomes

87. At this point, no changes to the monitoring of the project are proposed. As the work progresses, the monitoring framework should remain the same also for the next semi-annual reporting period.

88. No significant impacts from the project based on the water, air, and community noise monitoring were observed during the monitoring period. The main impacts of the project have occurred due to negligence with procedures such as waste management, poor road safety control, and lack of adherence to the SEMP.

4.4 Material Resource Utilization

4.4.1 Current Period

89. The data from the monitoring period and the cumulative resource use is presented in chapter 4.4.2. Reliable figures for the monitoring period were not available at the time of writing this report, and they will be added as soon as possible:

Table 14 - Consumption of Electricity and Water during the monitoring period

	Electricity (kWh)	Water (cubic meters)
Consumption of Electricity and Water for the reporting period	317000	6136

4.4.2 Cumulative Resource Utilization

90. The cumulative resource use for the project is as follows:
    1. Water, total =117,300 m^3
    2. Electricity, total = 601,451 kWh

4.5 Waste Management

91. The waste management activities include the collection of waste from the main camp site, where the municipal waste generated in the project is stockpiled in. According to the contractor, the waste dumping site for municipal waste outside the main camp is being emptied regularly.

92. According to the contractor, hazardous waste materials were picked up from the main camp, where they are stored, by local small entrepreneurs and companies. During the visit of the ES, the hazardous wastes were either stored in open barrels or collection vessels of some kind (waste oils), or stored on open ground in the back of the camp (used batteries, tires, metal scrap, etc.)

93. The verification of the waste management for the hazardous waste was still not possible due to the fact, that the contractor had not signed any contracts with the local waste contractors. The contractor does have an agreement with Rudaki district government which states that the district government will take care of the collection of the waste when the pit is full, and the contractor will pay for it accordingly.

94. The ES has restated the requirements to sign contracts, maintain records of the amounts of hazardous waste generated, and keep receipts of the collection of waste once again.

4.5.1 Current Period

95. The waste streams reported by the contractor for the current period are presented in the table below:

Table 15 – Waste streams and quantities

Waste Type	Waste Quantity	Unit
Earthwork spoil	178594	m3
Stripped asphalt	198	m3
Processed oil	2126	l
Municipal waste	94	tons

4.5.2 Cumulative Waste Generation

96. No figures exist from the first two monitoring periods on the quantities of waste. Assuming a constant waste generation rate, which is a conservative estimate as the waste streams were likely smaller in the first monitoring period of the project, the table below presents the estimate of the total cumulative waste generation:

Table 16 – Estimated cumulative waste streams and quantities

Waste Type	Waste Quantity	Unit
Earthwork spoil	653594	m3
Stripped asphalt	1860.5	m3
Processed oil	13526	l
Municipal waste	8470	tons

4.6 Health and Safety

4.6.1 Community Health and Safety

97. Although the CSC has had to issue regular instructions to the Contractor to improve the standard of temporary traffic management/diversions, warning signs and watering in dry weather, the few accidents which have occurred during the current monitoring period have generally been largely due to reckless behavior by drivers.

98. The contractor has a complaint register at the main camp which should help with the monitoring of any community health and safety issues (such as noise disturbances). No complaints were reported to be registered between July and December, 2020.

99. The Contractor filed again for inability to resume work due to the COVID-19 situation, but the CSC denied this based on the grounds that there was no government lockdown or other order in place that would restrict work. The CSC prepared guidelines on how to reduce the risk of COVID-19 cases through a code of conduct in the previous monitoring period and the Contractor has submitted the plan based on this. This is included as Annex 4.

4.6.2 Worker Health and Safety

100. The contractor has a medical room, first aid equipment, and a doctor available. Emergency cases will be taken to the hospital. The contractor has produced a complaints box to the main camp during the previous monitoring period where the employees can file complaints in case of any issues arise.

101. The contractor has stated that no health and safety issues have occurred during the project implementation. However, based on the lack of use of hearing protection, at least some level of hearing impairments has likely occurred during the project implementation.

102. There were no reports of COVID-19 cases being registered in the project by the end of June, 2020.

4.7 Training

103. Mr. Ahmadbekov, the safety engineer, has been conducting HSE trainings and the records with signatures of the participants are being kept. The photo below presents the HSE training being conducted from earlier monitoring period.

104. The contractor has been advised to keep also minutes on the future trainings, so that the content and adequacy of such trainings can be verified. The CSC prepared guidelines on the COVID-19 prevention and it will be verified during the next monitoring period, that the Contractor will follow these guidelines and implement them in their HSE trainings. The guidelines are included as an Annex to this report.

V. FUNCTIONING OF THE SEMP

5.1 SEMP Review

105. The SEMP was submitted by Contractor in 2017 and approved by PIURR before the commencement of civil works. Then it was improved as per recommendations of ADB RETA consultant in February 2018 and PIURR issued second approval on revised document.

106. The SEMP is comprehensive and has provisions for all of the construction activities that are being carried out in the project. The SEMP also provides site-specific provisions for how the safeguards should be applied. The ES of CSC has no proposals for changing the SEMP.

107. All SSEMPs were updated by November 2020 and included COVID-19 management measures (in ERP and HSE plans, respectively).

VI. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

108. There are currently no particularly good practices that would warrant a mention at this point. The SSEMP of the contractor is comprehensive and is in line with the best practices of environmental management, but it is not being implemented to its full extent.

6.2 Opportunities for Improvement

109. No opportunities to address issues that are outside of the formal NCN process have been identified so far by the ES.

VII. SUMMARY AND RECOMMENDATIONS

7.1 Summary

110. The total progress of the work is now at 85.02 %.

111. The construction activities that have been carried out during the monitoring period have included: (i) utility relocation; (ii) earthworks; (iii) pavement (capping/subbase/aggregate base/asphalt binder course) and Bridges and Culverts; (iv) laying pipes; (v) R.C.C Boxes; (vi) concreting abutments; (vii) girders and other structural works; and (viii) pre-casting.

112. There are currently several open environmental issues in the project. A total of 48 issues have emerged in the project so far. Currently there are 22 open issues. The main issues are related to: (i) improper storing of soil and old asphalt due to blocking of natural drainage patterns; (ii) improper waste management; (iii) lack of medical staff; (iv) oil spills from maintenance; (v) inadequate use of PPE; (vi) lack of watering and dust suppression; and (vii) lack of traffic warning signs.

7.2 Recommendations

113. A list of the recommendations and actions for future improvement is included in the table below.

114. No complaints were registered during reporting period, and the Contractor has a logbook for registering complaints in place. No needs for the functioning of the GRM are recommended at this point.

Table 17 – Corrective action plan for the January-June 2021

#	Issue	Action required	Due Date
ISSUES OUTSTANDING FROM THE PREVIOUS SAER(S)			
1	First aid kits are available at the vehicles working in the sites, but not at all of the roadside construction areas.	1. The contractor should provide first aid kits to the road site construction sites so that they are readily available in case they are needed.	31.03.2021
2	Many of the chemical containers did not have proper labelling or warning signs.	1. The contractor should ensure that all chemical containers are properly labelled and include the appropriate warning signs.	31.03.2021
3	The contractor does not have any planting stock available.	1. The contractor should carry out testing of the different plant species to ensure best alternative for revegetation. 2. The contractor should acquire seeds/seedlings in stock for revegetation activities.	31.03.2021
4	Topsoil is not being stored separately at all spoil dumps.	1. The contractor should store the top soil separately at the spoil dumps for revegetation activities.	Immediately
5	Operation of the asphalt plant.	1. The contractor should build an impermeable platform for the storage of bitumen, which will contain any potential leaks. 2. The contractor should ensure that any new bitumen is stored in containers meant for the	Partially fulfilled (Items 1, 2, are addressed)

		storage of hazardous substances and away from water courses. 3. The contractor should ensure that all used bitumen containers are managed as hazardous waste. 4. The contractor should clean up any polluted soil in the area and manage it as hazardous waste.	31.03.2021
6	Hazardous waste was being stored outside on open ground, where it is subjected to weather conditions.	1. The contractor should designate a spot that has an impermeable surface and is in a sealed room where weather conditions won't affect the waste, where the hazardous waste is collected. 2. The contractor should also keep notes on the management of the waste (e.g. who has picked up which waste, when, and what amount).	Immediately
7	Access road to the quarry around km5+000 and elsewhere along the project road were not watered during dry times.	1. The contractor must ensure that adequate level of dust suppression is upheld during dry times.	31.03.2021 and regularly
8	Bitumen leaks were observed at the asphalt plant and at the contractors main camp at km9+000.	1. The contractor must clean up bitumen spills and ensure that further spills are minimized and contained.	31.03.2021
9	Used batteries and metal scraps were left lying around.	1. The contractor needs to follow the waste management plan as described in the SSEMP and manage and store waste properly.	31.03.2021
10	Soil dumps have not been stabilized along the project road.	1. The contractor needs to stabilize the spoil dumps to ensure they will not collapse.	31.03.2021
11	Maintenance of vehicles is being done outside of the designated areas.	1. The contractor must refrain from maintaining the equipment on surfaces that are not impermeable.	Immediately
12	There is an absence of fencing at the quarry site at km5+000.	1. The contractor needs to provide fencing to the borrow area and ensure that children are not permitted to enter there.	Immediately
13	Spoil was dumped in natural drainage channels and unauthorized sites in several places between km13+000 and km32+000.	1. The Contractor must immediately remove this spoil and transfer it to a safer location for storage.	Immediately

115. PIURR jointly with the ADB RETA consultant will conduct field visit to check implementation of CAP in the beginning of 2021.

ANNEX 1 MONITORING RESULTS FOR AIR QUALITY

KM 4 + 000

№	Month / Parameters	Standard RT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/m³	12.2018 mgм³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	O,15	0.07	0,15	0,007
2	CO	3,0	1,6	2,9	1,1
3	NO_2	0,04	0,0007	0,009	0,006
4	SO_2	0,05	0,0008	0,007	0,005

KM 6 + 000

№	Month / Parameters	Standard PT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/м³	12.2018 mg/м³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	O,15	0,06	0,15	0,008
2	CO	3,0	1,1	2,8	2,0
3	NO_2	0,04	0,0005	0,03	0,002
4	SO_2	0,05	0,0006	0,02	0,001

KM 9 + 000

№	Month / Parameters	Standard PT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/м³	12.2018 mg/м³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	O,15	0,09	0,15	0,006
2	CO	3,0	2,1	2,9	1,3
3	NO_2	0,04	0,0002	0,02	0,002
4	SO_2	0,05	0.001	0,03	0,003

KM 19 + 000

№	Month / Parameters	Standard PT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/м³	12.2018 mg/м³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	O,15	0,008	0,11	0,004
2	CO	3,0	1,7	2,8	1,8
3	NO_2	0,04	0,001	0,01	0,001
4	SO_2	0,05	0.0004	0,02	0,002

KM 22 + 000

№	Month / Parameters	Standard PT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/м³	12.2018 mg/м³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	0,15	0,07	0.10	0.005
2	CO	3,0	2,1	1,6	1,4
3	NO_2	0,04	0,0004	0,005	0,002
4	SO_2	0,05	0.0006	0,006	0,001

KM 29 + 000

№	Month / Parameters	Standard PT	Baseline values	Next monitoring indicators	Next monitoring indicators
		(MAC) mg/м³	12.2018 mg/м³	09.2020 mg/м³	12.2020 mg/м³
1	TSP	0,15	0,03	0,10	0,003
2	CO	3,0	1,1	1,9	1,1
3	NO_2	0,04	0,0003	0,003	0,001
4	SO_2	0,05	0.0005	0,003	0,001

ANNEX 2 MONITORING RESULTS FOR WATER QUALITY

Kofarnigon River - KM 5+000

№	Month / Parameters	Standard RT mg/l		Baseline values 12/2018		Next monitoring 09/2020		Next monitoring 12/2020	
		РХН	ВП	500m High	500m below	500m high	500m below	500m high	500m below
1	Weighted substances, mg/l.	75	25	83,6	87,1	86.0	89,2	70.0	71,2
2	pH	6,5- 8,5	4,0	4,1	4,8	6,2	6,4	6,5	6,5
3	Dissolved oxygen mg/l	4-10	4-10	6,4	7,2	6,5	7,0	6,3	6,0
4	Oil and fats mg/l	0,05	0,3	0,00001	0,00001	0,00	0,00	0,00	0,00
5	Electrical conductivity, mg/l	1000	1000	200	204	65	67	65	66
6	Temperature	-	-	8	8	12	12	4	5
7	Lead, mg/l	0,01	0,03	0,000	0,000	N/A	N/A	N/A	N/A
8	BOD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	Turbidity	N/A	N/A	N/A	N/A	1,8	1,6	1,5	1,6
10	Coli Index	N/A	N/A	N/A	N/A	671	659	561	579

Obi Shivo KM 6 + 000

№	Month / Parameters	Standard PT мг/л		Baseline values 12/2018		Next monitoring 09/2020		Next monitoring 12/2020	
		РХН	ВП	500м High	500м Below	500м High	500м Below	500м High	500м Below
1	Weighted substances, mg/l.	75	25	264,0	278,2	99,5	102,9	105	112
2	pH	6,5- 8,5		7,8	7,9	8,2	7,1	7,3	7,3
3	Dissolved oxygen mg/l	4-10	4-10	9,2	9,6	5,7	5,9	5,9	6,8
4	Oil and fats mg/l	0,05	0,3	0,0003	0,0004	0,00	0,00	0,00	0,00
5	Electrical conductivity, mg/l	1000	1000	502	654	567,1	574,1	577,0	579,1
6	Temperature	-	-	7.8	7,8	11	11,7	6,0	6,0
7	Lead, mg/l	0,01	0,03	0,000	0,000	N/A	N/A	N/A	N/A
8	BOD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	Turbidity	N/A	N/A	N/A	N/A	3,1	3,2	3,0	3,1
10	Coli Index	N/A	N/A	N/A	N/A	1000	1000	1010	1013

Creek - KM 33 +000

№	Month / Parameters	Standard PT мг/л		Baseline values 12/2018	Next monitoring 09/2020	Next monitoring 12/2020
		РХН	ВП			
1	Weighted substances, mg/l.	75	25	315,1	189,0	199,5
2	pH	6,5- 8,5		6,9	8,2	8,2
3	Dissolved oxygen mg/l	4-10	4-10	0,9	8,6	8,6
4	Oil and fats mg/l	0,05	0,3	0,0000	0,00	0,00
5	Electrical conductivity, mg/l	1000	1000	354	564	641
6	Temperature	-	-	8	12	7
7	Lead, mg/l	0,01	0,03	0,000	N/A	N/A
8	BOD	N/A	N/A	N/A	N/A	N/A
9	Turbidity	N/A	N/A	N/A	3,0	3,0
10	Coli Index	N/A	N/A	N/A	1000	1000

ANNEX 3 MONITORING RESULTS FOR NOISE LEVELS

№	Location	Decibel noise standards (max)		Baseline values	Next monitoring indicators	Next monitoring indicators
		06.00 - 23.00	23.00 - 06.00	12.2018	09.2020	12.2020
1	Км 1 + 000	55	45	53,0	44.9	51.4
2	Км 4 + 000	55	45	50,5	49.2	50.3
3	Км 9 + 000	55	45	53,3	48.2	53.7
4	Км 19 + 000	55	45	53,7	45.7	51.2
5	Км 22 + 000	75	75	67,2	49.9	49.9
6	Км 33 + 000	75	75	66,4	49.6	52.1

ANNEX 4 SITE MONITORING PHOTOS, JULY-DECEMBER 2020

Photo 1. Spoil dumping and dust on the road in November, 2020.

Photo 2. Earthworks and slopes in October, 2020.

Photo 3. Environmental monitoring at the main camp at km 9+000 in July, 2020 – waste management.

Photo 4. Environmental monitoring in December, 2020 near the contractor's main camp at km 9+000 as well as the dumping site for used asphalt at km17+900 .

Photo 5. Contractor doing water quality monitoring in September with support of licensed analytical laboratory, 2020.

ANNEX 5 PROPOSED COVID - 19 MEASURES

1. How to protect from the virus?

- Stay home if you have respiratory symptoms (coughing, sneezing, shortness of breath) and/or a temperature above 37.0 C.
- Leave work if you develop these symptoms while at the workplace.
- Wash hands often with soap and water for at least 20 seconds or use an alcohol-based hand sanitizer.
- Shield coughs and sneezes with a tissue, elbow, or shoulder (not the bare hands).
- It's sensible to avoid shaking hands entirely to reduce the risk of spreading infection. Though that might be awkward at times, it's an increasingly common practice in hospitals and clinics.
- If you have a meeting, provide room to allow attendees to sit or stand at least six feet away from others.

2. When to exclude workers or visitors from the work space?

- Public health organizations recommend that companies bar employees or visitors from coming to the workplace for a period 14 days after a "medium" or "high-risk" exposure to the virus — generally meaning having been in close contact with someone who is known to be infected, or having traveled from a high-risk region.
- Dedicated staff often resist taking sick days, instead dragging themselves into work where they may infect others. Given the threat this epidemic presents, managers shouldn't hesitate to send employees who present with Covid-19 symptoms home.

3. Revising benefits policies in cases where employees are barred from the work site or it is closed?

- The likelihood that increasing numbers of employees will be unable to work either because they are sick or must care for others means that companies should review their paid time off and sick leave policies now. Policies that give employees confidence that they will not be penalized and can afford to take sick leave are an important tool in encouraging self-reporting and reducing potential exposure.
- Companies should promulgate clear policies on this now and communicate about these with employees.

4. Have we maximized employees' ability to work remotely?

- While many jobs (construction, manufacturing, health care) require people to be physically present, work, including meetings, that can be done remotely should be encouraged if coming to work or traveling risks exposure to the virus. Videoconferencing, for instance, is a good alternative to risky face-to-face meetings.

5. Do we have reliable systems for real-time public health communication with employees?

- Dangerous rumors and worker fears can spread as quickly as a virus. It is imperative for companies to be able to reach all workers, including those not at the worksite, with regular, internally coordinated, factual updates about infection control, symptoms, and company policy regarding remote work and circumstances in which employees might be excluded from or allowed to return to the workplace.
- These communications should come from or be vetted by the emergency response team, and they should be carefully coordinated to avoid inconsistent policies being communicated by different managers or functions.

6. Should we revise our policies around international and domestic business travel?

- It is prudent to limit employee business travel from areas where Covid-19 is most prevalent — both to prevent illness and to prevent loss of productivity due to quarantine or employee exclusion from the workplace after travel.
- Employees should be especially careful not to travel if they feel unwell, as they might face quarantine on return if they have a fever even without significant risk of coronavirus infection.

7. Should we postpone or cancel scheduled conferences or meetings?

- Yes. There is mounting evidence that social distancing can delay the epidemic and potentially save lives, so most meetings and conferences should be converted from in-person to virtual.
- If you have a meeting, discourage hand-shaking and assure that proper handwashing facilities (and/or hand sanitizers) are easily available.