

Environmental Monitoring Report

Semi-Annual Environmental Monitoring Report
April 2021

Project Number: 48025-003
Loan Number: 3527-UZB

Uzbekistan: Central Asia Regional Economic Cooperation Corridor 2 (Pap-Namangan-Andijan) Railway Electrification

Prepared by JSC “O‘zbekiston Temir Yo‘llari” for the Republic of Uzbekistan and the Asian Development Bank.

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July - December 2020

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CONTENTS

1	INTRODUCTION	1
1.1	Preamble	1
1.2	Main information	1
2	PROJECT DESCRIPTION AND CURRENT ACTIVITIES ...ERROR! BOOKMARK NOT DEFINED.	
2.1.	Project description..... Error! Bookmark not defined.	
2.2.	Project Contracts and Project Management	4
2.3.	Project activities during the current reporting period	6
2.4.	Description of changes in Design solutions.....	15
2.5.	Description of changes in approved construction methods	15
3	ACTIVITIES ON ENVIRONMENTAL POLICIES	17
3.1.	General description of activities on environmental policies	17
3.2.	Monitoring (site inspection) of work.....	18
3.3.	Tracking of non-compliances (outstanding problems).....	29
3.4.	Tendency	32
3.5.	Unanticipated environmental impacts and risks	33
4	RESULTS OF ENVIRONMENTAL MONITORING	34
4.1.	Review of monitoring for the reporting period	34
4.2.	Trends	35
4.3.	Utilization of material resources	35
4.3.1	Current period.....	35
4.3.2	Combined use of resources.....	35
4.4.	Waste Management.....	36
4.4.1	Current period.....	36
4.4.2	Combined production of waste.....	36
4.5.	Health and safety.....	37
4.5.1	Public health and safety.....	37
4.5.2	Health and safety of workers.....	39
4.5.3	Training.....	40
5	GRIEVANCE REDRESS MECHANISM	42
6	SUMMARY OF MONITORING OUTCOMES	43

7	REVIEW OF SSEMP.....	64
8	GOOD PRACTICES AND OPPORTUNITIES FOR IMPROVEMENT.....	65
	8.1. Good Practice.....	65
	8.2. Opportunities for improvement.....	65
	8.3. ADVANCED METHODS	65
9	CONCLUSIONS AND RECOMMENDATIONS	69
	9.1. Conclusions.....	69
	9.2. Recommendations	69
10	APPENDICES.....	71
	Appendix 1. Reports from subcontractors.....	71
	Appendix 2. Laboratory protocols and Acts on CO, NO ₂ , SO ₂ , dust and noise monitoring presented in EXEL program	71
	Appendix 3. Minutes of JSC “Uzbekiston temir yollari” Board from 09.09.2020 on “Electrification, modernization and uncompleted construction and installation works”	71

Abbreviations

ADB	– Asian Development Bank
CAP	- Corrective action plan
CM	- Cabinet of Ministers
EHS	- Environmental, Health and Safety Guidelines
EIS	Environmental Impact Statement
EMP	– Environmental Management Plan
EMR	– Environmental monitoring report
GRM	– Grievance redress mechanism
HH	– Household
IEE	– Initial Environmental Examination
IFC	- International Finance Corporation
LARP	– Land Acquisition and Resettlement Plan
MAC	- Maximum permissible concentration
PIU	– Project Implementation Unit
PMC	Project Management Consultant
PPE	- Personal Protective Equipment
PPTA	– Project Preparation Technical Assistance
RUz	- Republic of Uzbekistan
SEC	- Statement on environmental consequences
SEE	- State Environmental Expertise
SES	– Sanitary and epidemiological service
SPS	- Safeguard Policy Statement
SSEMP	- Site Specific Environmental Management Plan
TA	– Technical assistance
UTY	- O'zbekiston Temir Yo'llari

1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi-Annual Environmental Monitoring Report (SAEMR) for the Central Asia Regional Economic Cooperation Corridor 2 (Pap-Namangan-Andijan) Railway Electrification Project (the project) for the second half of 2020. The project provides for electrification of the last remaining non-electrified 145.1 km of tracks linking the main cities of the densely populated Fergana Valley with Tashkent, which will provide direct and efficient freight and passenger rail services for the economic and social development of the Fergana Valley.

2. This report is the sixth semi-annual environmental monitoring report of the project. It is prepared by the environmental specialist of the Consulting Company ITALFERR - Odil Radjabov. This semi-annual environmental monitoring report contains information on the status of implementation of the EMP and CAP for the period of July-December 2020. The project has been implemented since November 30, 2017, and was expected to be substantially completed by December 2020. Due to the global COVID-19 pandemic, all consultants of Italferr and contractors' specialists on equipment installation were sent to stay in quarantine for a short period. In this regard, the contract of ITALFERR dated October 25, 2017 was extended until March 2021 based on the Additional Agreement No.2 dated May 11, 2020. Construction and installation works were partially suspended at the facilities. However, at this moment, construction and installation works are being carried out throughout the site, as well as the delivery of equipment for TSS Raustan and TSS Khakkulabad, for Signaling and Communication and SCADA system.

1.2 Main information

3. The project expects the following results:

4. **Output 1:** Modernization of railway infrastructure on the Pap-Namangan-Andijan line with a length of 145.1 km of single-track main railway with 27.5 kilovolt AC power supply (Including electrification of locomotive depot in Andijan and turn out to Uchkurgan), construction of 2 traction substations and control points, procurement of equipment and technical for maintenance, modernization of signalling and communication facilities, as well as construction of external power supply facilities for transmission of electricity from the main power system to traction substations. The project is accompanied by an initiative of the Government of RUz and UTY to change the route of the 6.7 km railway line to bypass the section of the line that currently crosses the territory of Kyrgyzstan. Construction of the bypass is not included in the ADB-funded project.

5. **Output 2:** Enhanced railway safety. After the completion of the project, the load of the Pap-Namangan-Andijan line is expected to increase. In addition, the presence of power transmission lines may pose additional risks of electric shock. To compensate for potential negative impacts, the project will support UTY in (i) assessing current and expected safety situations for the population, especially children; (ii) support for the development of practical countermeasures; And (iii) train staff in the planning and implementation of measures to further improve railway safety.

6. An Initial Environmental Examination (IEE) was completed for the project in February 2017, which includes a preliminary expertise of the electrified part of the railway

(145.1 km), as well as a due diligence of the rebuilt area of 6.7 km. On the basis of the results of the due diligence of the new 6.7 km site, a Corrective Action Plan (CAP) was developed for the purpose of carrying out environmental measures at the construction site.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project description

7. The Pap-Namangan-Andijan railway line passes two regions of the Fergana Valley of Uzbekistan: Namangan (Pap, Chust, Namangan, Chartak, Khakkulabad) and Andijan (Figure 1). About 112 km of railway passes through the territory of Namangan region, and about 33 km through Andijan region. The railway line runs through the territory of settlements and agricultural lands. Main settlements crossed by railway are: Pap, Namangan, Chartak, Uychi, Khakkulabad, Paytug, Kurgan-Yar and Andijan.

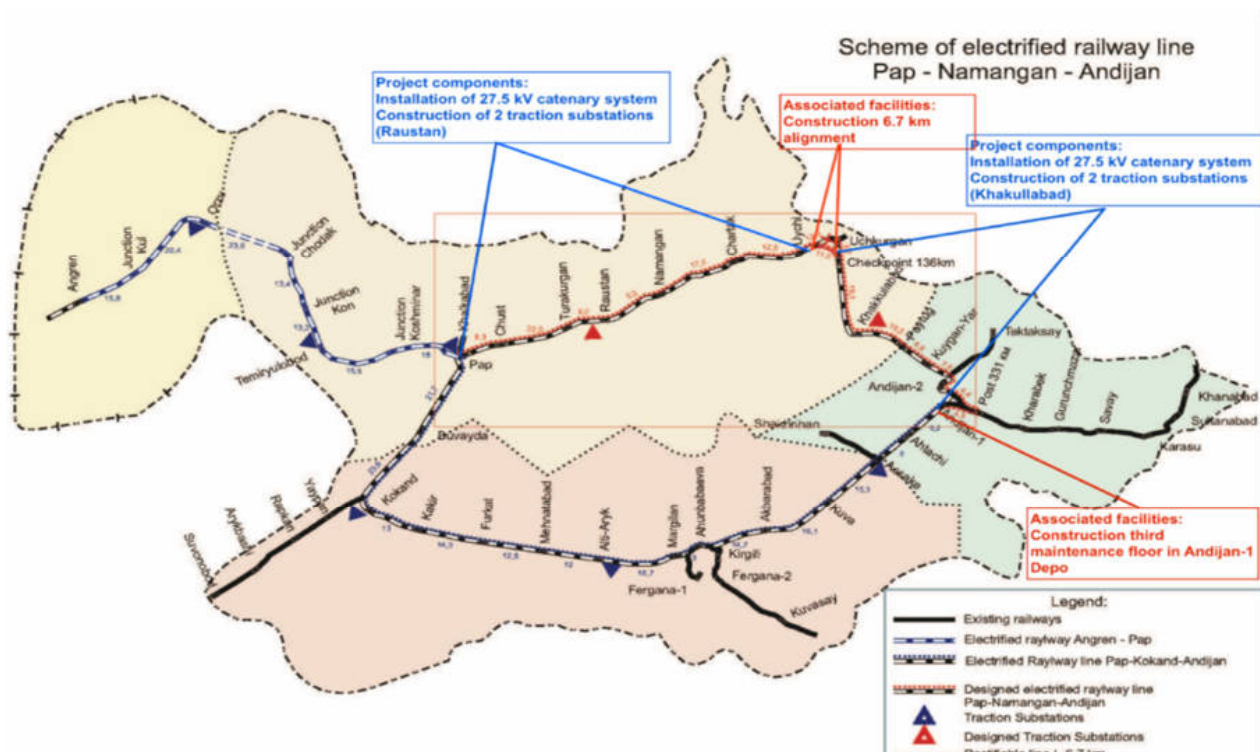


Figure 1. Scheme of the Pap-Namangan-Andijan railway line passing through the territory of Namangan and Andijan regions of Uzbekistan

8. The existing railway line is a single-track line, with an electrified section of 145.1 km. The railway line meets the requirements of Category III according to the railway regulations, with speeds up to 120 km/h, currently, the maximum speed of trains on the Pap-Namangan-Andijan section does not exceed 60 km/h.

9. A bypass of 6.7 km in length is a track currently being built by the government to bypass existing tracks passing through the territory of neighboring Kyrgyzstan. Construction of this bypass site is not included in the scope of the project and is carried out by the State and UTY regardless of the funding allocated by ADB for the electrification of the line. The Government and UTY confirm that the construction of the bypass site was initiated earlier when funding for the project was not yet anticipated by ADB. There is

another existing structure not included in the scope of the project - modernization and reconstruction of the Andijan depot building. Table 1 provides an overview of the project components and activities.

Table 1. Information on project components, associated and existing facilities

Classification	Supposed objects
Project components (Regardless of funding source)	<ul style="list-style-type: none"> • Contact system for existing tracks, 6.7 km bypass and inside Andijan depot • 2 traction substations • signaling, communication and SCADA systems • External power supply • Construction passing loop at 137 km
Associated facilities (Are not included in the project scope, but are needed for JSC UTY)	<ul style="list-style-type: none"> • New site with length 6.7 km – construction works • Andijan Depot: Construction of an additional floor
Existing facilities (Not included in project scope, already available in the field)	<ul style="list-style-type: none"> • Andijan depot: modernization and reconstruction of the building

Source: (IEE) for project electrification of PNA railway line, 2017.

2.2 Project Contracts and Project Management

10. The project of electrification of the railway Pap-Namangan-Andijan is implemented with the financing of ADB, the customer is JSC UTY, the main contractor is the Directorate of Capital Construction of JSC UTY.

11. Works are being executed through contractors directly engaged by UTY, as well as a Plant contract with three lots financed by ADB: LLP "Temirzhol Zhondeu" (Kazakhstan) under contract P01-2, «O'zelectroapparat-Electroshield» Joint-stock Company (Uzbekistan) under contract P01-1 and CNTIC (People's Republic of China) under contract P01-3. In these organizations, the first managers or authorized specialists are responsible for timely and high-quality implementation of the project.

12. The main organizations involved in the project, managers and key specialists in these organizations, who were instructed to monitor the implementation of protective precautions, are shown in Table 2 below.¹

¹ The ADB loan finances other contracts for supply of goods, but these are not included in the table.

Table 2. Information about main organizations, managers and key experts involved in the project

Type of project participant	Name of Agency/ Company	Name	E-mail or Phone
Implementing Agency	PIU-ET, O'zbekiston Temir Yo'llari	Alisher Djuraev Head, PIU-ET	utypiu@gmail.com
		Zulfiya Ibatova, Environmental Specialist Khojamyarova Guzal	zulfiya_99@mail.ru +998 98 124 01 40 guzal-@list.ru +998 99 877 22 10
Contractors	Bridge Department-2 Bridge plant UTY	Turgunov Doniyor, Director/HSE Manager	+998 90 930 65 81
	Power assembly Train (ЭП-1) UTY	Saparbekov Anvar, Director/HSE Manager	+998 93 329 02 25
	LLC "Omadfayz Qurilish Servis (object-TSS Raustan)	Mamatov Fayzulo, Director/HSE Manager	+998 93 501 68 78
	LLC «Taraqqiyot» (object – TSS Hakkulabad)	Turaev Maksud, Director/HSE Manager	+998 99 800 54 01
	PC "Kamalak Nur Sochar" (passing loop – crossing 137 km)	Xalimov Muzaffar, Director/HSE Manager	+998 99 800 54 01
	LLP « Temirzhol Zhondeu» (Kazakhstan) (objects signalling and telecommunication)	Alieva Luiza, Director/HSE Manager	+998 97 557 10 01
	"O'zelectroapparat-Electroshield" Joint-Stock Company. (objects - TSS Raustan, Hakkulabad)	Xoshimov Kudrat, Official representative	+998 93 380 99 60
	CNTIC (People's Republic of China) (objects SCADA)	Li JianXiang	+998 97 783 61 68
	Namangan Main Power Networks JSC «National Electric Networks of Uzbekistan» Construction of external power supply TSS Raustan – 220kv/27.5/10kv 4 TSS Khakkulabad	Inomboev Abdumannop (supervising foreman)	+998 99 404 75 75
PMC	Italferr	Odil Rajapov, HSE expert	+998 99 917 63 24 radjabov.db@gmail.com
		Soltan Dosmetov, Technical Expert	+998 90 359 35 66 sultan.dosmetov2015@yandex.ru

2.3 Project activities during the current reporting period

13. During the reporting period July - December 2020 Construction works on electrification of the Pap-Namangan-Andijan railway are under way at the following sites:

- Contact network for main tracks (installation of poles);
- New section of 6.7km bypass section (construction of railway bridges);
- Raustan traction substation (construction and installation works);
- Khakkulabad traction substation (construction and installation works are completed);
- Construction of passing loop at 137 km;
- Laying and installation of SCADA cables;
- Signaling and Communication, Telecommunication system cables.

14. Data on construction works of each section is presented below.

15. **Overhead wiring for operating lines** – installation works of the overhead wiring poles are performed by the Contractor – “Energomontajniy poezd” (ЭП-1) JSC UTY. Works on installation of overhead wiring elements started in 2017. Status as on June 01, 2020, works on installation of overhead wiring elements for existing tracks and 6,7 km of bypass of Uychi-Uchkurgan section as a whole are shown in **Table 3**.

Table 3. Information on construction and installation works of the overhead wiring performed during the reporting period

No.	Name of works	Units	By project	Completed	Excess
1	Excavation	pcs	3745	3745	0
2	Installation of reinforced concrete foundations	pcs	3367	3367	0
3	Installation of the anchor foundations	pcs	385	385	0
4	Installation of piers	pcs	3369	3369	0

16. **Raustan traction substation** - Construction of traction substation is carried out by the Contractor - LLC "Omad fayz Qurilish Servis". The construction works commenced in April 2018.

- The design is completed;
- Construction of cable channels is completed;
- The works on equipment and materials are completed;
- Traction transformers with capacity 2*40 MVA were delivered to the facility;

Sectioning posts:

- The design is completed;
- Equipment, cabinets and materials work is completed;

It is necessary to speed up the construction works.



Figure 2: Finishing works and installation of cell cabinets Indoor switchgear 27.5 kV and 10 kV in the building of TSS Raustan have been completed.



Figure 3: Laying of irrigation canals, preparation for improvement works on the territory and installation of equipment at TSS Raustan.



Figure 4. Installation of 2 transformers and construction of DPKS at TSS Raustan.

17. **Hakkulabad traction substation** - Construction of traction substation Khakkulabad is carried out by the Contractor – LLC "Taraqqiyot" and the installation of the equipment under the contracts P01-1, P02 are carried out by JSC "O'zelektroapparat-Electroshield". The construction work commenced in April 2018, the design is completed. The following works were accomplished during the reporting period:

- Equipment and materials works were completed;
- The construction of the grounding system and cable channels was completed;
- Traction transformers with a capacity of 2x25 MVA were installed.

- 110 kV, 27.5 kV and 10 kV portals were installed.
- Indoor switchgear-10 kV cabinets and control panels were installed.
- Indoor switchgear -27.5 kV cabinets and control panels were installed.



Figure 5. Foundations for transformers of Hakkulabad traction substation are completed.



Figure 6. Cable channels inside the building of Hakkulabad traction substation are completed.

18. Under the Contract P01-1, the Contractor JSC “Uzelektroapparat-Elektroshield” (Uzbekistan) during the reporting period July-December 2020 has performed the following activities: developed and submitted for approval the EMP, production and assembly of equipment for traction substations Raustan and Khakkulabad. Installation of traction transformers and reinforced concrete supports for the portal of external power supply.



Figure 7. Finishing works and installation of indoor switchgear cell cabinets 27.5 kV and 10 kV in the TSS building are completed.



Figure 8. The equipment received was unpacked and used during equipment installation works at TSS Khakkulabad.

19. **New bypass site 6,7 km** - Construction works are carried out by Contractors - Bridge Department -2 Bridge Plant of JSC UTY and Specialized Track Machine Station (СПМС) of JSC UTY. Construction work began in April 2018. This object consists of 6 sections: Tunnel PK 1270, Bridge PK 1272, Section PK 1273, Section PK 1277, Section PK 1295, Section PK 1311. As of the period July-December 2020, construction and installation works are not carried out. Works on the tunnel have been completed; viewpoints of tunnel faces with fences have been completed. The base of the road has been filled over the tunnel, the traffic of cars and pedestrians has been restored, safe conditions have been created for the movement of the local population, and work is under way on the construction of the foundations of the bridge over the Norin River. **(Figures 9-12).** Asphaltting of roads along the entire section will begin by local Khokimiyat of Uychi and Uchkurgan, upon completion of laying of signaling and communication cables, which means installing crossings, closing object devices, traffic lights, etc. along the section.



Figure 9. Restored roads and trays on top of tunnel with viewpoint.



Figure 10. Construction of the bridge over the Norin River is completed at PK1277.



Figure 11. Construction of the bridge over the Norin River is completed.



Figure 12. Village "Yoshlik". The road will be also paved upon the completion of cable laying and signaling works.

20. **Passing loop at 137 km** - Construction works are carried out by the Contractor - PC "Kamalak Nur Sochar". The construction works were completed during the period of July – December 2020, the site was partially improved, and the object was handed over to the Employer. According to the Contract terms, the construction company dismantled a temporary canteen, toilets and waste collectors for solid household and hazardous waste. The main construction and installation work on the building have been completed,

installation of utility networks and improvement of the territory have been carried out (**Figure 13**).



Figure 13. Completion of finishing facade of the Passing loop-137km building.

21. Under the contract P01-2, the Contractor “Temirzhol Zhondeu” LLP (Kazakhstan) during the reporting period July-December 2020 has developed a detailed draft of signaling and communications on the basis of the initial data submitted by the PIU-ET of JSC UTY. Supports CK22 are installed at Chust, Turakurgan, Raustan, Namangan stations. The installation of air conditioners, laying of signaling cables at Pap-Namangan site is carried out by a cable-laying machine from the side of the subcontractor SMP-406 JSC UTY.

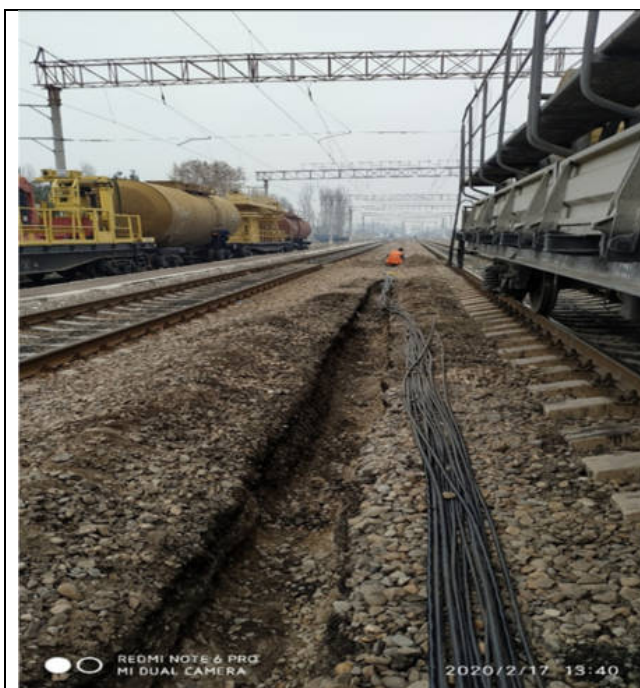


Figure 14. Digging of trenches for Signalling and Communication cables at the station Chust.



Figure 15. Cable laying manually, at stations in hard-to-reach places.



Figure.16 Laying of signalling and communication cables at Pap-Namangan section by cable-laying machine.



Figure.17. The cable-laying machine cuts through the ground and immediately lays the signalling and communication cable.

22. The Contractor “Temirzhol Zhondeu” (Kazakhstan), Contract P01-2. During the reporting period of July- December 2020 the incoming delivery of the Signalling equipment was commenced and it was placed in the warehouse. All the equipment was packed into large plywood and cardboard boxes.



Figure 18. The received equipment is in boxes made of plywood and wooden beams.

23. **Contract P01-3.** The Contractor CNTIC (People's Republic of China). During the reporting period of July - December 2020 the Contractor developed and agreed the detailed SCADA project, conducted FAT, cable shipment, laying of cables and installation of signaling equipment.

24. During the work the Contractor organized the following activities:

- processing of packaging materials (cardboard, paper): transportation to specialized waste paper receiving points;
- processing of remnants of products made of simple metals (fittings, damaged parts of metal products): transportation to specialized metal receiving points;
- processing of plastic products (PE bottles, disposable PE dishes): transportation to specialized receiving points for plastic;
- removal of recycled wood (wooden pallets and boxes) by local residents for domestic use;
- waste disposal: placing in specially designated areas.

25. General data on the volume of construction and installation works performed during July - December 2020 at the electrification facilities of the Pap-Namangan-Andijan railway are given in **Table 4**.

Table 4. Information on the volume of construction and installation works at the electrification facilities of the Pap-Namangan-Andijan railway

No	Name of works	Units	By project	Completed	Excess	Note
1	Excavation	thous. m ³	565,49	565,49	0,0	Works are completed
2	Construction of PBT/PJBT/ drain tunnel	Pc	3/19/2	3/19/2	0/0/0	Works are completed
3	Construction of DPKS and TSS on Hakkulabad station	object / %	2/100	2/100	2/0	Works have been carried out
4	Construction of DPKS and TSS on Raustan station	object / %	2/100	2/100	2/0	Works have been carried out
5	Installation of equipment for DPKS and TSS Raustan	object / %	100	80,0	20,0	Works have been carried out
6	Installation of equipment for DPKS and TSS Khakkulabad	object / %	100	100,0	0,0	Works are completed

26. **Sectioning Posts (SP)** at Chust – Turakurgan and Chartak – Uychi open-lines, the construction work was not commenced by the Employer (see figure 19).



Figure19. Territory for the construction of Sectioning Posts (SP) on the Chust-Turakurgan and Chartak-Uychi open-line. The construction work was not commenced.

27. **Namangan city.** According to the proposed recommendations from ADB and PIU-ET, at the request of Khokimiyat of Namangan city, makhallya meetings of nearby residential areas along the railway, in accordance with regulatory documents on safety in operation of electrified railways, the management of JSC UTY drew up a protocol of Board members dated 9 September 2020 on making decision. At Namangan-Chartak open-line metal gratings with a length of 4.5 km were installed for the safety of nearby settlements (see Fig. 20).



Figure 20. At Namangan-Chartak open line from PK-915 to PK-960 metal gratings with a length of 4.5 km were installed on both sides for the security of nearby settlements.

2.4. Description of changes in Design solutions

28. According to the protocol decision of the JSC “UTY”, on some densely populated areas near Namangan station with close accommodation to railway tracks, additional vertical inserts are provided in the TWR beyond the piers of the overhead wiring to increase the buffer zone.

29. Moreover, by the decision of JSC “UTY”, the project for installation of metal gratings along the railway line Namangan-Chartak open-line with a length of 4.5 km was developed.

2.5. Description of changes in approved construction methods

30. On the electrification facilities of the Pap-Namangan-Andijan railway line, there are changes in the approved construction methods.

31. In densely populated areas near the station additional vertical inserts are provided in the DPR (two wire rail) beyond the poles of the overhead wiring. On the basis of the decision of the Scientific and Technical Council of the JSC O'zbekiston Temir Yo'llari of 11 March 2019, Minutes No 14, within the framework of the Project “Electrification of Railway line Pap-Namangan-Andijan”, the Design Institute Boshtransloyikha developed the design and cost estimate documentation for construction of TWR-27.5kV line on the open line section station Namangan-station Chartak for the contact system masts on cantilevers of the type 03-5 (KOK-s), with replacement of the installed contact system

masts of the type CC108.7 with the higher contact system masts of the type CC136,7 in foundations, for the purpose of compliance with the required clearance from the DPR 27.5kV line to the structures in populated areas.

32. As per the developed design replacement of the installed masts with the higher masts is envisaged without change of location, in connection with this fact, no additional impact will be made on the near located buildings, social structure and land plots.

33. PIU-ET has informed team members about this change through official letter sent on March 2019. Installation of new type of masts was done to make sure compliance with requirements for buffer zone for electromagnetic fields – 5 meters from the most distant wire.

34. JSC O'zbekiston Temir Yo'llari made a change in the design decisions on adoption of installation of metal grid fences along the densely populated section on both sides of the railway located in Namangan with a length of 4.5 km in order to ensure the safety of the population and schoolchildren (see Figure: 20).

3 ACTIVITIES ON ENVIRONMENTAL POLICIES

3.1 General description of activities on environmental policies

35. Actions on environmental safeguards and occupational health and safety have been implemented on several levels: by NOKS, Contractors, PMC and PIU-ET. Italferr environmental supervision specialists organized visits to the facilities, as a result of which the Contractors indicated the defects in the implementation of the Measures on Environmental Protective Measures at specific sites, as well as the time frame for the elimination of comments.

36. The repeated site visits were intended to verify the actual elimination of the previously mentioned non-conformances, as well as to provide methodological assistance in case of possible difficulties on the part of the Contractors in eliminating the comments. At this stage of construction of TSS Raustan, TSS Hakkulabad, and Passing loop 137km. sections, the Contractors performing construction and installation works (CMP) have no specialists in ecology and this problem has been going on for 2 years. The environmental functions are being performed by the contractors managers. In addition to Italferr environmental supervisors, the sites were reviewed by PIU environmental staff and ADB expert missions.

37. As per Environmental Monitoring Plan, measurements of noise and dust level have been conducted by PMC with involvement of RRJ-Kokand's Sanitarian and Epidemiological Station of Namangan city during the period of September and December 2020. (please see appendices 2) and comparative table The results of monitoring will be presented in the Report for the period of July – December 2020 (see. Appendix 2). In connection with the quarantine, all employees were sent to the quarantine zone, including the Chief physician of LSES Kokand till August 2020.

Table 4a. Comparison table of the analysis results made during the I-II half-year od 2020

Sections		Indicators	Determined concentration Over a period 2020 January June	Determined concentration Over a period 2020 year July - December	Upper limit of permissible concentration	Normative document
№	1	2	3	4	5	6
1	Raustan	Nitrogen oxide (NO)	4,1 mg/m³	4.1 mg/m³	5 mg/m³	GOST 12.1.005-88. Determination of harmful substances Morflot
		Sulphur dioxide (SO2)	3,1 mg/m³	3.1 mg/m³	10 mg/m³	
		Carbon monoxide (CO)	4,8 mg/m³	4.8 mg/m³	20 mg/m³	
		Dust	0,14 mg/m³	0.14 mg/m³	4 mg/m³	
2	Hakulabad	Nitrogen oxide (NO)	3,6 mg/m³	3,6 mg/m³	5 mg/m³	
		Sulphur dioxide (SO2)	3,7 mg/m³	3,7 mg/m³	10 mg/m³	
		Carbon monoxide (CO)	4,3 mg/m³	4,3 mg/m³	20 mg/m³	
		Dust	0,22 mg/m³	0,22 mg/m³	4 mg/m³	
3	Uchkurgan	Nitrogen oxide (NO)	3,2 mg/m³	3,2 mg/m³	5 mg/m³	
		Sulphur dioxide (SO2)	3,2 mg/m³	3,2 mg/m³	10 mg/m³	
		Carbon monoxide (CO)	4,3 mg/m³	4 mg/m³	4,3 mg/m³	
		Dust	0,32 mg/m³	0,32 mg/m³	4 mg/m³	
Results of analysis of Noise and Vibration						
№	Sections	Measured value (average) dB	Measured value (max) dB	Republican standards		
1.	Raustan	41	58	55 From 7.00 to 23.00		
		62	72	72 dB		
2.	Hakulabad	40	56	55 From 7.00 to 23.00		
		62	72	72dB		
3.	Uchkurgan	42	61	55 from 7.00 to 23.00		
		62	72	72dB		

38. In October 2019 training on EMP implementation was conducted by RETA International Environmental Consultant – K. Dgebuadze and TA Consultant – M. Khalmirzaeva. More detailed information on training is presented in Chapter 5.

3.2 Monitoring (site inspection) of work

39. For the reporting period July – December 2020 several official environmental site monitoring have been carried out, as shown in the **Table 5**.

40. In connection with the introduction of quarantine measures around the world, such measures were also introduced in the Republic of Uzbekistan from March to August 2020. After the mitigation of quarantine measures in the Republic of Uzbekistan by the consultants of ADB, PIU and Italferr, site monitoring was officially carried out during the period of September - December 2020 (see Table 5).

Table 5. Information on monitoring of sites for HSE at the electrification facilities of the Pap-Namangan-Andijan railway line

No.	Organization	Expert name	Date of visit	Purpose of audit
1	Italferr	Odil Radjabov, Sultan Dosmetov	17-18.09.2020, 26-28.10.2020, 09.11.2020, 14-15.12.2020	Compliance with the environmental and safety requirements
2	PIU	Zulfiya Ibatova (PIU)	21-23.09.2020 14-15.12.2020	Compliance with the environmental requirements

41. Information on conclusions from inspections and field monitoring on work sites includes data on any identified circumstances and identified issues. Below is a summary of the findings and works carried out for the identified problematic issues on the electrification facilities of the Pap-Namangan-Andijan railway line.

42. **Bypass site 6,7 km (Kizil-Ravat Village)** - All construction works were completed by Mostootryad in November 2020. During a visual inspection of the site by PMC and PIU, the entire site was completely handed over to NOKS-Employer in compliance with all SanPiN and EMP requirements at the construction site. The following corrective actions were undertaken by the Contractor after environmental audits which were conducted by the PMC:

43. It is necessary to carry out the supply of reinforced concrete products and materials at the expense of the Employer - NOKS.

44. To date, the design institute of "Sredazenergosetproekt" JSC has issued all projects to the Employer.

- The base of the road has been filled over the tunnel, the traffic of cars and pedestrians has been restored, safe conditions have been created for the movement of the local population;
- The asphalt road restoration over the tunnel will be carried out by Uychi district Khokimiyat (Fig. 20). **(Figure 20)**;



Figure 21. The foundation of road was filled out for the movement of population and irrigation trays were restored in the village Kizil Ravat.

45. In the result of a visual inspection conducted by PIU-ET specialist in the village Kizil Ravat it was revealed that no metal fences were installed by NOKS along the two tunnels for the safety of population in the village Kizil Ravat (see Fig. 21). In order to ensure safety, prior to the completion of the electrification of Pap-Namangan-Andijan section, the management of the PIU-ET has begun discussions on resolving these issues with the management of NOKS.

46. As a result of negotiations with NOKS and the design institute “Boshtransloyikha” in March the project of metal fencing over the tunnel was completed (see Fig.21a).

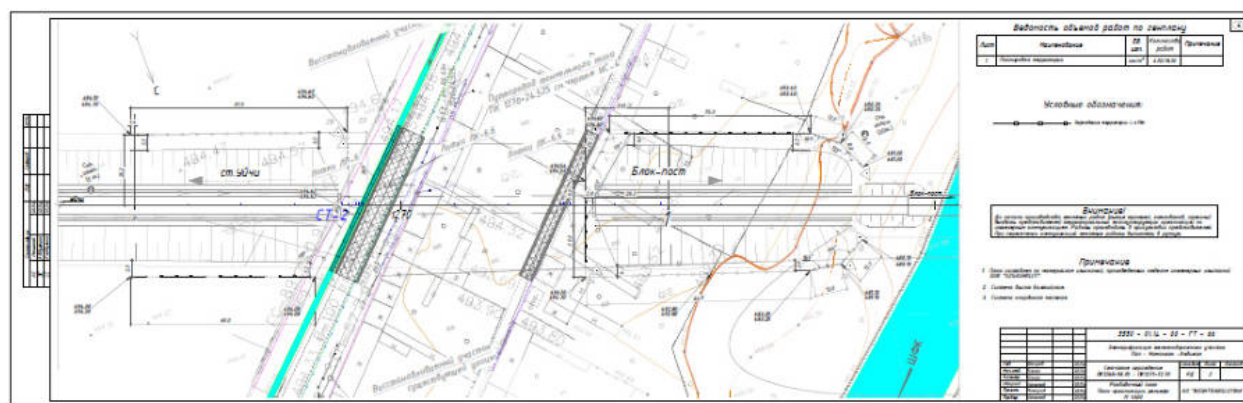
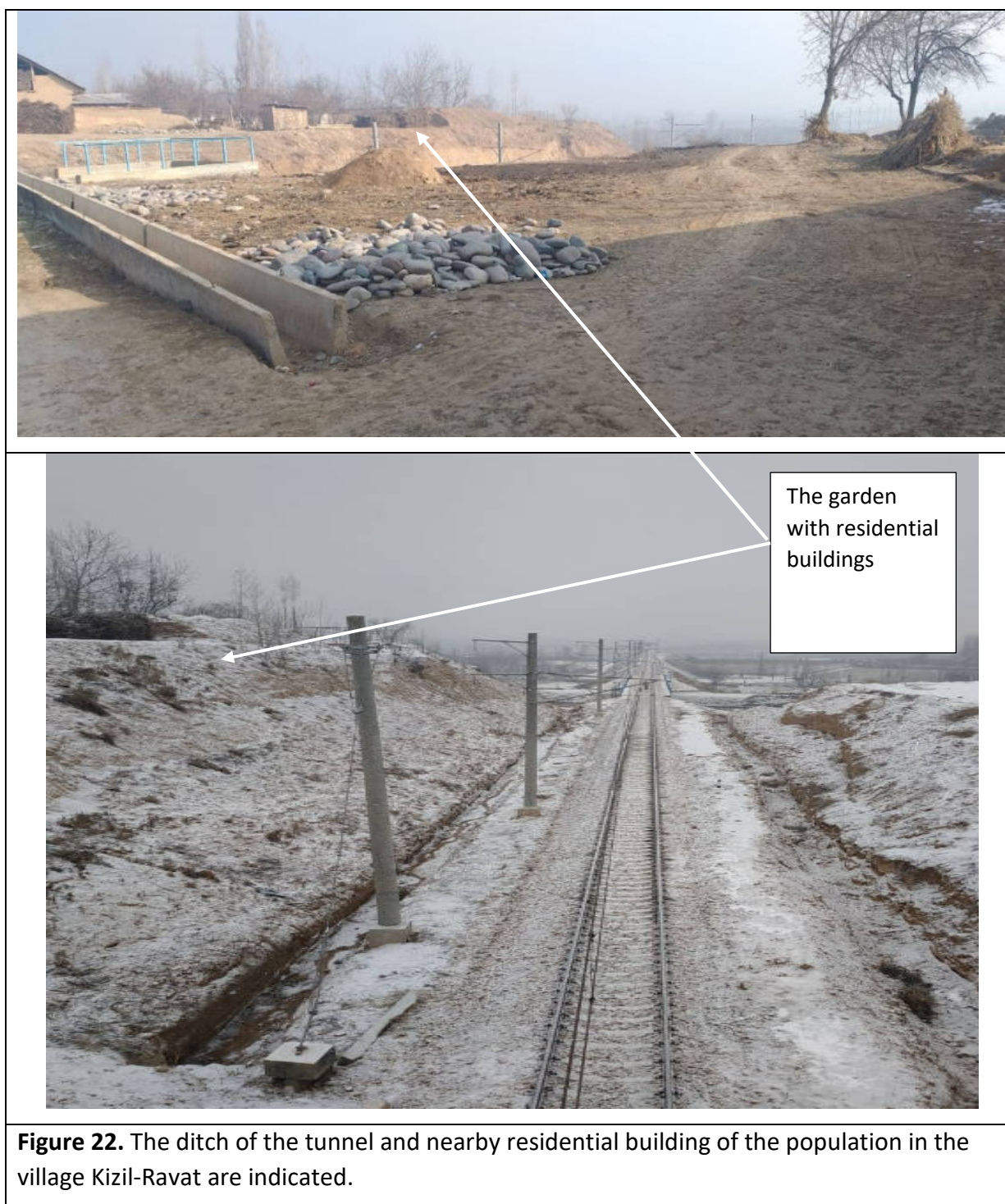


Figure 21a. General Layout of metal fencing over the tunnel in the village Kizil-Ravat.



47. **Bypass site 6,7km (Yoshlik village)** – Railway track was laid on June 10, 2019. Besides, in the village “Yoshlik” (section 6.7 km) during the construction of the roadbed, the passing rural road was cut off and in this regard, and a new road for residents was laid and filled with gravel and crashed stone preparation for asphalt by NOKS. Asphalt paving and improvement of these roads in the village “Yoshlik” will be carried out after the laying of signaling supports for automatic cable locking and the installation of crossings will be carried out by Khokimiyat. **(Figure 21a-21b).**



Figure 23a. In the village “Yoshlik” (bypass 6,7 km) during the construction of the roadbed, the passing rural road was cut off and in this regard, a new road for residents was laid by NOKS.



Figure 23b. Completion of the temporary crossing arrangement for pedestrians and motor vehicles in Yoshlik village (6.7 km section).

48. At this construction site, a number of comments on reducing the level of dust, noise and vibration resulting from the operation of construction machines and mechanisms were given to the managers of SPMS (Contractor). Because the noise pollution refers to the environmental pollution. Besides, a number of comments on drawing-up of training journals on occupational health and safety were given as well. The observations were, as a rule, noted and corrected within a short period during the verification process.

49. **Khakkulabad traction substation** - Construction of traction substation is carried out by the Contractor - LLC "Taraqqiyot" and “Ozelektroapparat- Elektroshield” Joint Stock Company. During the period of July – December 2020 the following works were carried out at the facility: concreting of cable trenches on the territory and inside the buildings; finishing works of buildings; construction of DPKS; installation of 2 transformers; installation of cells, control panels inside the building; installation of metal supports; improvement of the territory; concreting of reinforced-concrete sideways, and installation of supports for the portal of external power supply.

50. The Contractor has revealed violations related to the organization of proper living conditions for workers, food and recreation conditions, provision of PPE (personal protective equipment), installation of a fence of the construction site, provision of night security lighting of the territory, organization of places for storage of roll materials, fittings,

bitumen, oil, construction, and household waste packages, installation of a tank for oils, improvement of the condition of places for storage of food products and boiler room. In addition to the overall implementation of the requirements of the EMP, the Contractor has established procedures in the territory and at the food reception sites, as noted by the consultants.

51. During a visual inspection of TSS Khakkulabad site by the Contractor "O'zelectroapparat-Electroshield" JSC, metal containers were installed for rest and eating for the workers. On the site, the Contractor complies with all the requirements of SanPiN, the requirements for combating COVID-19 and safety standards. In addition, there is a first-aid-kit with the necessary medicines, antiseptics on the site. In the shower room, the room for food storage and canteen, the workers use bottled drinking water and artesian water for shower use, cleaning floors with disinfectant liquids. The empty bottles and containers for water are washed and disinfected once a week.

52. The works on installation of equipment and cable are being carried out on the site. Two specialists of JSC «O'zelectroapparat-Electroshield» are carrying out the works. The workers and the driver stay in the hotel after work. Solid household waste is stored in separate boxes and removed to the destination, food waste is removed once a week by Makhstrans on the basis of a verbal agreement.



Figure 24. Installation of cells and control panels.



Figure 25. Installation of transformers and cables.



Figure 26. Water-tanks are placed near containers.



Figure 27. Room for eating and discussing of project solutions.



Figure 28. Household waste bin.



Figure 29. Shower room with hot water and washing machine.



Figure 30. Materials for cells.



Figure 31. Electrical equipment is used for cooking.

53. **Raustan traction substation** – Construction and installation works on the facility are carried out by LLC "Omad fayz Qurilish servis" and the installation works are carried out by the Contractors. For the period of July - December 2020 the following works were carried out on the facility: concreting of cable trenches on the territory and inside buildings, finishing works of buildings, construction of DPKS, installation of transformers, excavation works on the territory was completed and the supports for the portal of external power supply were installed.

54. By "O'zelectroapparat-Electroshield" Joint-Stock Company the metal containers for the office of the site manager, a dining-room, accommodation (sleeping) room for the workers were organized. On the site, the Contractor complies with all the requirements of SanPiN, the requirements for combating COVID-19 and safety standards. A stand of instructions on safety and prevention of COVID-19 was installed in the foreman's office, where meetings are carried out with workers.



Figure 32. Transformers foundation and storage of equipment.



Figure 33. Installation of cells.



Figure 34. Unpacking equipment. The equipment was packed in plywood boxes, boards, and wrapped with foil paper.



Figure 35. Plywood box for metal waste.



Figure 36. Household waste storage. The waste is removed once a week by "Makhsustrans" on the basis of verbal agreement.

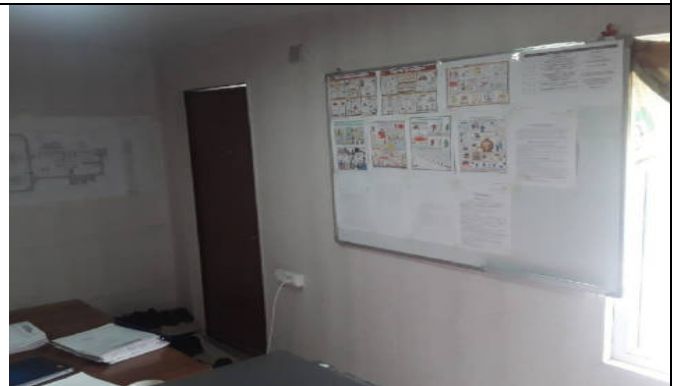


Figure 37. Stand of safety and installed on the wall on foreman's room, where meetings on planning are hold with workers.

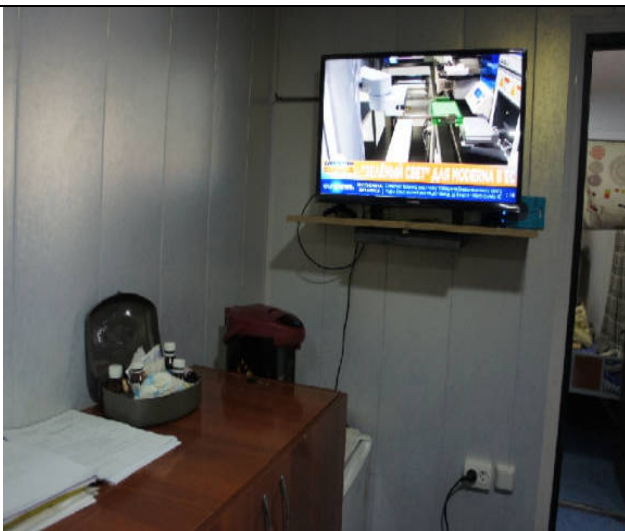


Figure 38. First-aid kit for workers, protective equipment and sanitizers for prevention of COVID-19.

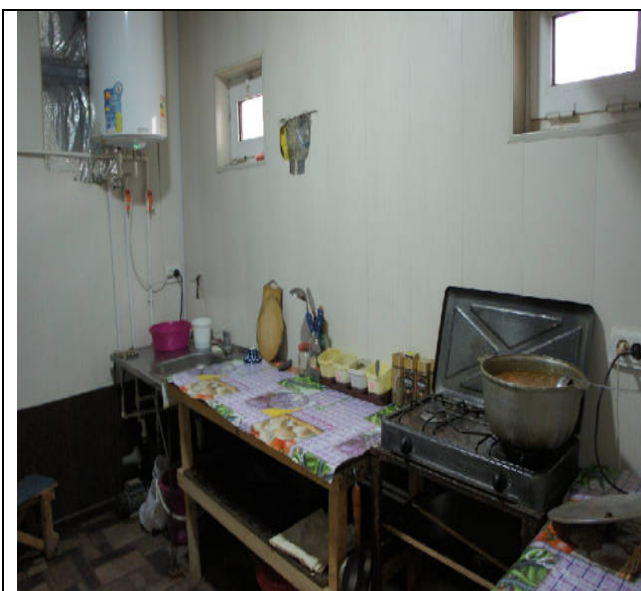


Figure 39. Kitchen and dining-room.



Figure 40. Accommodation (Sleeping) room.





Figure 41. Store-room.

	
<p>Figure 42. Washroom.</p>	<p>Figure 43. Construction camp is covered with crushed stone and is kept clean.</p>

55. **Construction of "Passing-loop - 137 km"**- Construction and installation works on the site are carried out and handed over the installation of signaling and SCADA equipment which will be carried out by the Contractors LLP TEMIRZHOL ZHONDEU and CNTIC.

For the period July - December 2020 the following works were performed:

- handover of the object to the Employer;
- cleanup of the territory (Figure 22a);
- dismantling of the existing WC and temporary canteen.
- construction of the second railway line

	
<p>Figure 44. Cleanup the territory of passing loop-137km.</p>	<p>Figure 45. Main building and new WC.</p>

56. Based on the results of the monitoring (audit) of the construction sites by ITALFERR specialists – Environmental specialist - Odil Radjabov and PIU-ET

Environment specialist – Khojamyarova Guzal, a summary of non-compliances (problematic issues), corrective actions to solve these problematic issues, indicating the responsible parties for implementation of decisions, deadlines and status of implementation was prepared. This information has been prepared for tracking non-compliances (problematic issues) (see Section 3.3).

57. **Construction of external power supply for TSS Raustan -220 / 27.5 / 10 kV and TSS Khakulabad - 110 / 27.5 / 10 kV.** Currently, construction and installation works are not being carried out at this facility. The EMP is being developed by the Contractor Namangan MES and will be submitted for consideration to PIU-ET and the Consultants by March 25, 2020. The Contractor also submitted EIS and Environmental Impact Assessment Report (see Appendix 4).

3.3 Tracking of non-compliances (outstanding problems)

58. Following notifications of non-compliance based on the results of monitoring on environmental protective actions, we provide information and description of problematic issues, which were monitored during the reporting period July - December 2020.

59. According to the data of monitoring (inspection) of works on sites by Italferr specialists - ecologist Odil Radjabov and specialist on general construction works - Sultan Dosmetov compiled a summary information on non-compliances, corresponding to the implementation of corrective actions to solve these problems, with the indication of those responsible for implementation of decisions, terms of execution and status of implementation. This information remains without changes - for the reporting period it has been prepared to track issues and is presented in **Table 6**.

Table 6. Information on issues and corrective actions

No.	Problematic issue	Remedial action	Implementing by	Period	Process of realization
1	Lack and improper registration of acts of hidden works at all facilities	Correct, regular and proper registration of acts on all hidden construction works	CCD monitors execution by Contractors of acts of hidden works at all facilities, and Consultant and PIU perform monitoring	Constant control once a month	After monitoring and completion of construction and installation works on the sites, the certificates were issued and the issue was resolved.
2	Absence of entries in the site journals on quality of construction and installation works and their compliance with design and cost estimate documentation (ПСД)	Establishment of control over the completeness, quality and compliance of design and cost estimate documentation (ПСД) of all construction and installation works	CCD controls, Contractors preparing journals, and Consultant and PIU perform monitoring	Constant control - once a month	From the part of technical supervision CCD, a record on quality of construction and installation works is kept and this issue was

No.	Problematic issue	Remedial action	Implementing by	Period	Process of realization
		(CMP) with objects			also resolved.
3	Exposure of most of the facilities and sites for access by unauthorized persons and children	Ensuring protection of sites from unauthorized access of outsiders and children	CCD controls, Contractors fencing site, Consultants and PIU perform monitoring	Constant control	The territories are fenced. The equipment installation work is being carried out at TSS Raustan and Khakkulabad. After monitoring, this issue was also resolved
4	Absence of pavement at roads located near construction sites and inside construction sites, entailing difficulties in traffic and high level of dust for neighboring territories	Ensuring crushed-stone pavement at roads located near construction sites and inside construction sites	CCD controls, Contractors provide covering of road, Consultant and PIU monitored by LSES Kokand	October 1 2020.	Partially executed. After completion of all construction and improvement works, the roads will be asphalted.
5	Inappropriate placement and equipment of special storage facilities for first aid, chemical preparations for control of harmful insects and rodents	Organization of special places for storage of first aid funds. Organization of storage of chemical preparations for control of harmful insects and rodents	CCD controls, Contractors provides special places for storage of first aid and places for storage chemical preparations, Consultant and PIU monitoring	October 20 2020.	Resolved
6	Improper completeness and storage of design and estimate documentation, lack of register of laboratory samples produced at the construction site concrete and solutions	Organization of special places for storage of design and estimate documentation and establishment of a register of laboratory samples of concrete and solutions	CCD controls, Contractors organize the special places for storage of design and estimate documentation and establishment of a register of laboratory samples, Consultant and PIU monitoring	Constant control	In process, since cable trays are being made on the site, the question remains open, but laboratory samples are available on the sites. (On-going)
7	Lack of control of observance of rules	Establishing control of the	CCD controls, Contractors	Constant control	Fire-fighting

No.	Problematic issue	Remedial action	Implementing by	Period	Process of realization
	of fire and electric safety, rules of work on high-rise constructions, rules of work with the electric tool, means of small-scale mechanization, the electro-and gas-welding tool	compliance of rules of fire and electric safety, rules of work on high-rise constructions, rules of work with the electric tool	providing control of the compliance of rule, Consultant and PIU monitoring		shields and safety materials for workers in the field have been installed at all sites. This issue is resolved

60. Based on ongoing monitoring and tracking of issues for the current period,

Table 7 shows the number, status and percentage of issues for the project.

Table 7. Summary of monitoring of tracking issues of concern for the current period

Total number of project issues	During the reporting period
Total number of observed issues	7
Number of unresolved (on-going) issues	2
Percentage of resolved issues	71%

61. Mostly non-conformances were referred to: waste management, PPE and fire protection. But for reporting period only 70% the inconsistencies were resolved within one month. Example of fixed non-compliances is presented in **Figures 23a** and **23b**.

62. Due to the new COVID-19 virus, the instruction on prevention and combating COVID-19 infection developed by the Contractors “O’zelectroapparat-Electroshield” Joint-Stock, LLP “TEMIRZHHOL ZHONDEU” and CNTIC is in force at the sites. Based on the developed instruction a “Special Security Plan during the New Corona Virus” was submitted to PIU-ET in May 2020. These plans describe an effective action plan for the prevention and control of an outbreak of pneumonia caused by this virus in accordance with the requirements of the SanPiN of the Republic of Uzbekistan. Instructions are posted at all facilities; the disinfectants, masks and gloves are available at the facilities.



Figure 46. Firefighting accessories panel as of 17.06.2020.

Figure 47. Antiseptics and first aid kits.

63. Non-compliances observed during previous period were related to maintenance of complaints and training logbooks on each construction site, PPE usage by workers and fencing hazardous areas on the construction site.

64. Most of listed above non-compliances were fixed and have been checked; in some cases the workers did not wear PPE especially during the hot season.

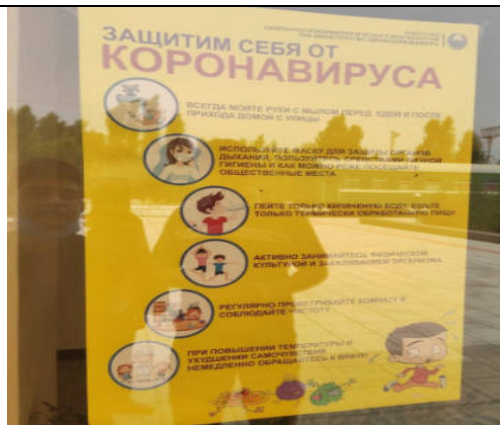
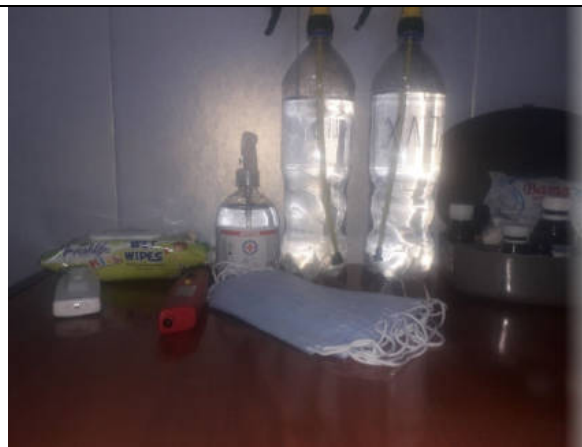


Figure 48. All facilities are equipped with the instructions and disinfectants, masks and gloves.

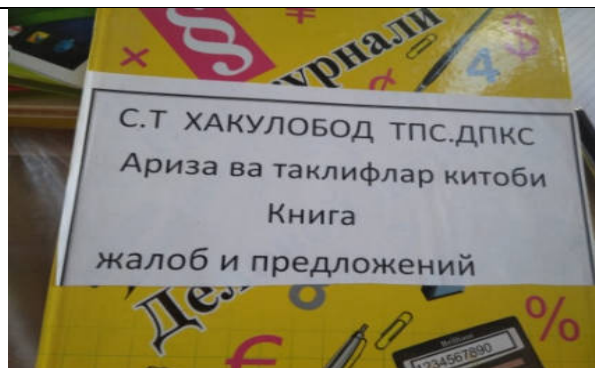


Figure 49. Logs for various trainings, complaints from workers and the public.

3.4 Tendency

65. Trends in problematic issues are determined based on notifications from inspections of non-compliance with environmental safeguards. Identification type of issue was based on the complexity of the problematic issues. Problematic issues are conditionally divided into light, complex, long-term (solved, for example, with the State Committee on Ecology and Environment Protection, Khokimiyat, Cadastral Organizations, etc.), closed and open.

66. Analysis of problematic trends shows the following features. Problematic issues related to higher authorities (State Committee for Natural Resources, Khokimiyat, Cadastral Organizations, etc.) relate to long-term issues requiring numerous approvals and considerable time. We do not have long-term problematic issues related to the State Committee for Natural Resources and Khokimiyat.

67. Complex issues are related to the adjustment of design solutions, conducting of interviews and awareness-raising and coordination with the population and rural settlements of citizens, as well as the involvement of local subcontractors (for example, the construction of temporary crushed roads by local organizations or using local existing quarries of inert materials). We also do not have such complex problematic issues during this reporting period.

68. Easy problem issues can be solved by the contractors themselves, such issues we have in the amount of 2 or 29%. For these matters, there are sufficient verbal claims or written non-compliance notifications (NCN), with mandatory indication of responsible performers and terms of execution. Examples include rapid solutions to issues related to the development of SSEMP, provision of clothing and PPE to workers, rapid solutions to the organization of special places for food, storage of materials and waste, registration of magazines at facilities, as well as compliance with sanitary standards and requirements in places of food and recreation of workers.

69. As shown in the Table 7, total number of unresolved non-compliances in July – December 2020 periods has decreased in comparison with the previous period. Number of environmental non-compliances slightly decreased.

3.5 Unanticipated environmental impacts and risks

70. On the project of electrification of the railway line Pap-Namangan-Andijan for the reporting period July – December 2020 no unforeseen environmental impacts and risks that were not previously identified in the environmental impact assessment process have been identified.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Review of monitoring for the reporting period

71. On the project of electrification of the railway line Pap-Namangan-Andijan for the reporting period March - August 2020 at the facilities the works were suspended due to temporary constraints on government funding allocations. And from March to April 2020, due to the spread of the COVID-19 pandemic, strict quarantine was declared at the facilities. In this regard, the consultants of Italferr and the employees of PIU-ET carried out their work in a remote mode without visiting the Pap-Namangan-Andijan section.

72. The construction works were conducted mainly on TSS Raustan and TSS Hakkulabad site, signaling and communication cable laying was conducted on the line, and the environmental monitoring was carried out at all these sites and also on Passing loop-137km site. The measurements of noise level and air quality were carried out by Kokand branch of Sanitarian Epidemiological Station's (SES) laboratory. Full list of measurements and results are presented in Appendix 2.

73. Results of measurements showed that air quality did not exceed the Maximum Allowed Concentration (MAC) indicated in standards². Noise level also complied with national standards for admissible noise level³ and international standards² (see **Table 8**). The results of air quality, noise and vibration measurements are confirmed by official protocol submitted by SES (**Appendix 8**). The **Table 9** showing the IFC's ambient air quality values is presented below.

Table 8: Comparison table of the results of air quality and noise level measurement

No	Parameter	Actual concentration January -June 2020	National Standard ²
1	CO, mg/m ³ (15 min)	4.1	5
4	Dust, mg/m ³ (PM10) (15 min)	0,31	0.5
5	Noise level, dB (30 min)	32-33	55
6	Vibration level, dB (15 min)	0	67

Table 9. IFC's ambient air quality values

Air quality parameter	Period	Guideline value µg/m ³
SO ₂	24 hours 10 minutes	20/500
NO ₂	1 year 1 hour	40/200
PM ₁₀	1 hour 24 hours	50/20
PM _{2.5}	1 hour 24 hours	25/10
Ozone	8-hour daily maximum	100

² SanR&N RUz No.0179-04 Hygienic norms. List of Maximum Allowable Concentrations (MACs) of pollutants in ambient air of communities in the Republic of Uzbekistan including Annex 1.

³ SanR&N RUz No. 0267-09 Admissible noise level into the living area, both inside and outside the buildings.

4.2 Trends

74. Based on the initial analysis of work results, visual inspection of required measures for the period July - December 2020, it could be concluded that there are no dangerous or suspicious trends in noise, vibration, air and water quality at the electrification facilities of the Pap-Namangan-Andijan railway line (Table 8). This result needs constant monitoring, even during the operation of the facility.

75. Based on the results of the environmental measurements of noise, vibration, air quality and water, we recommend carrying out additional monitoring (measurements) before starting the temporary operation of the Pap-Namangan-Andijan railway line during the test runs. This needs to be done due to possible changes in noise, vibration, air and water quality during temporary operation and then during real and full operation of the site.

4.3 Utilization of material resources

4.3.1 Current period

76. Data for the current reporting period on the use of electricity, water and other materials are recorded in the financial statements of Contractors working at the facilities, on site meters and measuring instruments.

4.3.2 Combined use of resources

77. Available data for the current reporting period July - December 2020, regarding the use of electricity, water and other materials for accounting, object meters and checking instruments are given in Table 9. Undesirable trends or significant changes in consumption of water, electricity and other materials have not been detected. This withdrawal needs constant monitoring, even during the operation of the facility. When preparing the next report (for example, the next semi-annual report for January to June 2021), it is necessary to compare the results of consumption of water, electricity and other materials to determine exactly whether there are undesirable trends or significant changes in this issue.

Table 10. Data on the use of electricity, water and other materials in construction sites

No.	Construction site	Use of material resources		
		Water, m ³	Electrical power, kW	Gas, m ³
1	Raustan TSS	2,1	1284	-
2	Hakkulabad TSS	1,9	1142	-
3	Bypass track 6,7 км	-	-	-

4.4 Waste Management

4.4.1 Current period

78. Waste management activities during the reporting period July – December 2020 was performed by the contractors at each site, taking into account the inspection observations. Types, classes of hazard, procedure of waste collection, storage and disposal at work sites are defined, as well as places and routes of waste transportation, for example, for construction waste the routes are defined. Since the construction work at the facility is almost completed, and the equipment is being installed, all packaging materials are sorted and transported to the destination for disposal of all waste, household waste is removed by Makhsustrans at the request of the site foreman.

4.4.2 Combined production of waste

79. At the electrification facilities of the Pap-Namangan-Andijan railway line, various wastes of construction products are generated. Waste is known to have 5 different hazard classes, including all types of waste from construction production. Each type of waste has its degree of impact and influence on the environment. Class 1 waste electrification facilities containing mercury are not available. Class 2 high-hazard waste (batteries containing lead and sulfuric acid solution) also not detected. Moderately hazardous wastes of class 3 - wastes of petroleum products, as well as materials contaminated with them, such as used oils, used automobile oil filters, construction bitumen and the like may occur. Based on the audit (inspection) of sections of the Pap-Namangan-Andijan railway line, such waste was found in the territory of Raustan TSS.

80. Oils spills from construction machinery, as well as construction bitumen, fall into the ground may cause irreversible damage to the environment, fauna and green plantations. As per notifications of PMC, the Contractor organized a special place and barrel for used motor oils. The barrel was labeled with a sticker containing the name of the wastes. The site held an explanatory conversation on the rules of handling spent motor oils and the rules of their disposal. Construction bitumen, due to small quantity, is stored in specially allocated places under awnings on the objects themselves on the crushed stone layer, protected from direct rays of the sun and overheating. Moreover, as per PMC request a situation with fire protection equipment and PPE usage by workers were improved.



Figure 50. Fire protection equipment on Hakkulabad TSS



Figure 51. Construction works on TSS

81. Waste of Class 4 – less-hazardous waste, which includes oil-containing waste, was not found at the electrification facilities. Non-hazardous wastes of Class 5, also partially containing petroleum products, but not harmful to wastewater or soil (rubber, plastic, etc.), as well as metal, waste paper, and glass may potentially appear at electrification facilities. Places have been allocated for such wastes at all facilities and specially marked containers have been installed. According to national regulation it is permitted to dispose these products in public landfills allocated by local Hokimiyat. Wood wastes from disassembled and unfit for reuse wooden formwork is used in boiler stations. Household waste is also collected and finally disposed in specially designated places on the territory of the facility; food waste is used by the local population for cattle and chicken feed.

82. Approximately 1.2 m³ of wood waste, if converted to kg it will be 552 kg (at a density of 460 m³/kg) and 0.83 m³ (according to the accepted internal requirement, the amount of waste is measured in m³) of food waste was generated during the reporting period at the Hakkulabad TSS. Scales for large loads and waste are not always available on construction sites. Therefore, all measurements for bulk non-metallic materials, construction materials, and solid waste are measured and transported in m³ according to the regulatory and financial documents of the Republic of Uzbekistan.

4.5 Health and safety

4.5.1 Public health and safety

83. In connection with the global pandemic, CNTIC and Temirzhol Zhondeu have developed a "Special plan for ensuring safety during the new corona virus" and O'zelectroapparat-Electroshield introduced measures to combat the corona virus in the EMP (item 10) and has submitted it to PIU-ET in May 2020. These plans describe an effective action plan to prevent and control an outbreak of pneumonia caused by this virus in accordance with the requirements of WHO and SanPiN RUz. (see Annex 1).

Basic precautions to protect against new coronavirus infection

- Stay tuned for the latest information on the COVID-19 outbreak on the Koronavirus Info / Uyda Qoling website and also from your country's and local public health authorities. In most cases, the disease is characterized by a mild course and ends with recovery, although there are complications. You can protect your health and the health of others by observing the following rules:
- Regularly clean your hands with alcohol or soap and water.
- Keep your distance in public places. Stay at least 2 meters away from people, especially if they have a cough, runny nose, and fever.
- If possible, do not touch your eyes, nose and mouth with your hands.
- Follow the rules of respiratory hygiene. When coughing and sneezing, cover your mouth and nose with a napkin or the crook of your elbow; immediately throw the napkin into a trash container with a lid and treat your hands with an alcohol-containing antiseptic or wash them with soap and water.

- If you have a fever, cough, and difficulty breathing, seek medical attention as soon as possible. Why is this needed? Fever, coughing, and breathing difficulties require immediate medical attention, as they might be caused by a respiratory infection or other serious illness. Respiratory symptoms combined with fever can have a variety of causes, including 2019-nCoV, depending on the patient's travels and contacts.
- Follow the latest information and follow the recommendations of medical professionals.

84. In order to ensure readiness for disease outbreaks and control of COVID-19 at the sites, a working group was created consisting of employees of the contractor organizations who will be responsible for the prevention and safety of working personnel located at the sites and in the offices.

85. The Team leader manages and controls the entire operation to comply with the developed instructions on the site. This means to purchase of disinfectants, sanitizers and distribute other personal protective equipment in time. Be responsible for epidemic prevention work in the Design Department. Fully manage work as part of the overall work on epidemic prevention, daily health statistics, body temperature monitoring, ventilation and disinfection of employees on site. Promote information about the epidemic situation and train employees on epidemic prevention.

86. Due to the quarantine in the country and a ban on the entry and exit of vehicles, trains and air services to all regions of the Republic and Tashkent, except for movement inside the capital, it was very difficult for employees of PIU-ET, Italferr consultants to visit the sites and meet with representatives of the contracting organization. It was forbidden to drive one's own car without a valid sticker, but only official cars were allowed to receive this sticker. On the street, it is prescribed to maintain a social distance of at least two meters, not to gather in groups of more than three people.

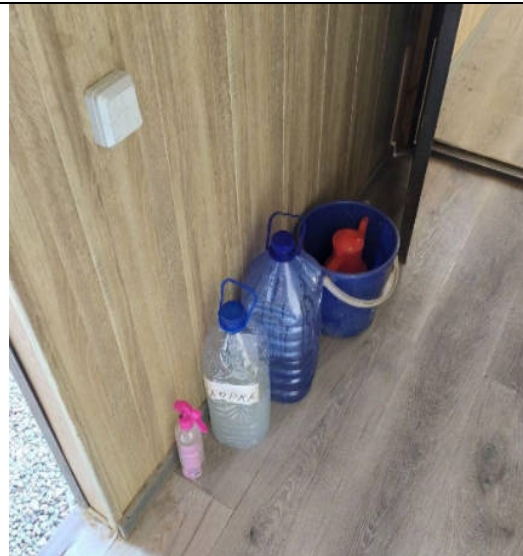


Figure 52. Disinfectants at the facility



Figure.53 Disinfectant spray on the cable-laying machine.



Figure.54. All objects have labels about quarantine and frequent hand washing.



Figure.55 TSS Khakkulabad. The installer during the working process is using protective equipment and special uniform at the facility.

87. At the electrification facilities of the Pap-Namangan-Andijan railway line for the period July-December 2020 there were no problems related to the health and safety of the local population, including road traffic accidents caused by builders. Temporary interruptions in the provision of drinking water, dust content of bottoms during earthworks, issues of irrigation water shortage have been eliminated by contractors and are under the control of Consultants and PIU.

4.5.2 Health and safety of workers

88. At the electrification facilities of the Pap-Namangan-Andijan railway line for the period July-December 2020 there were no health and safety problems for workers, including road accidents. All types of health and safety training are regularly conducted at all facilities, and all facilities are provided with first aid. The contractor made a contract with the local polyclinic to provide medical services in the construction site. No accident prerequisites were found at the facilities. To work daily with the personnel, workers and local population, to conduct all types of health and safety training at each worksite, the Contractors assigned responsible persons (Table 10), who carry out daily work with the personnel, population and have accident logs at the site.

89. Besides, the construction personnel at all sites does not use to drink the cold raw water from reservoirs. Due to the local mentality, representatives of the local population, including children, do not invade construction sites.

90. In connection with the spread of the global pandemic COVID-19, recommendations from UTY JSC were communicated to all employees and the Contractors to comply with all measures to combat the new virus in order to ensure the safety during the spread of this infection.

Table 11. Data on responsible persons appointed for all types of health and safety training at construction sites

№	Construction site	Full name of competent person		
1	Raustan TSS	LLC "Omad fayz Qurilish servis", «O'zelectroapparat-Electroshield» Joint-Stock	works foreman	Abdullaev S.I
2	Hakkulabad TSS	LLC "Taraqqiyot", «O'zelectroapparat-Electroshield» Joint-Stock	works foreman	Jabborov S
3	Laying of Signalling cable	LLC "TEMIRZHOL ZHONDEU"	Manager on site	Atavulaev Kh.M.
4	Station Passing loop-137km	LLC "TEMIRZHOL ZHONDEU"	Manager on site	Atavulaev Kh.M.

91. For citizens coming from countries that are affected by coronavirus infection, it is necessary to:

- Upon arrival, stay in quarantine mode for 14 days (even in the absence of any symptoms), that is, do not leave your home, do not attend work and study, and do not invite guests to your place;
- Communicate about your arrival to the hotline or hotline of the headquarters of your region, inform about your arrival and leave your contacts: full name, year of birth, to which medical institution you are assigned and the policy number of the local public authority (LPA).
- Answer the questionnaire.
- Observe the basic hygiene requirements - use a mask, individual dishes, often wash your hands and use skin antiseptics, regularly ventilate the premises. If the body temperature exceeds 37.5 C and is accompanied by cough and weakness, then a PCR test should be taken immediately. This will help reduce the risk of infection staff members or cohabitants.

4.5.3 Training

92. At all electrification facilities of the Pap-Namangan-Andijan railway line for the period July-December 2020 all health and safety training sessions are conducted regularly, including trainings on COVID-19 sanitation requirements, electrical safety, fire safety and hygiene measures to protect against insect bites and solar shocks.

93. For all workers participating at the construction of Pap-Namangan-Andijan railway line additional trainings were conducted on constant wearing of uniform and use PPE, including shoes, sleeves, and helmets, as well as of safety belts during work at height. ADB/RETA International Environmental Consultant - Ketil Dgebuadze together with TA Consultant -Madina Khalmirzaeva conducted training for PIU specialists, ecologists of the PMC and management specialists of contractors in October 2019. During the training ADB safeguards requirements as well as content of SEMP, sanitation requirements,

electrical safety, fire safety and hygiene measures to protect against insect bites and solar shocks where presented.

94. The training also included outdoor exercise with going to the project site and conduction environmental monitoring on construction site. List of participants is presented in Appendix 1.

95. Additional training was provided to those involved in the electrification of the Pap-Namangan-Andijan railway line on the constant wearing of special clothing and PPE by workers, including shoes, sleeves, and helmets, as well as the wearing of safety belts during work at height.

5 GRIEVANCE REDRESS MECHANISM

96. Grievance Redress Mechanism was established during stage of IEE preparation and now is being implemented by Contractors and PIU-ET. There are log books placed in each station along alignment of PNA. Besides, the logbooks were placed in both TSSs and construction site passing loop at 137 km.

97. During reporting period no complaints were received from population. Only one request from population of Yoshlik settlement (6,7 km alignment) on construction a temporary crossing way through railway was received. After completion of construction works regulated crossing pass will be built in that point. (Figure 12).

6 SUMMARY OF MONITORING OUTCOMES

98. Status of compliance with environmental safeguards related covenants in the Project's Loan Agreement signed between the Republic of Uzbekistan and ADB dated November 8, 2017 is summarized in **Table 12**.

Table 12. Loan Agreement Compliance Status

Schedule	Paragraph	Covenant	Compliance Status
4	6	<p><u>Terms of Contract award.</u></p> <p>The Borrower shall not award a works contract that involves involuntary resettlement impacts until the Borrower prepares and submits to ADB a final Resettlement Plan based on the detailed design of the Project and receives ADB's approval for such Resettlement Plan.</p>	<p><u>Complied</u></p> <p>The affected households and farming enterprises that were the subject to involuntary resettlement, received all compensation payments from the Borrower in accordance with LARP1, 2, 3 LARP2-1, 2- 2, SDDR And the approved Resettlement Plan before start of any construction works. Resettlement Plan was approved by ADB.</p>
5	9	<p><u>Environment</u></p> <p>The Borrower shall ensure, or cause UTY to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the IEE (including, without limitation, the corrective action plans for the Associated Facilities and Existing Facilities) and the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.</p>	<p><u>Complied</u></p> <p>In accordance with national regulations, a project cannot start if the feasibility study is not approved by all government bodies associated with the project, including the Ministry of Justice, the Ministry of Construction, the Ministry of Health, the Ministry of Employment and Labor Relations, and the State Committee for the Environment Protection, etc. All these bodies check the compliance of the project with all relevant regulations and approve the feasibility study or issue their comments / notes prior to the issuance of the Presidential Decree on the implementation of the project. All measures and requirements outlined in the IEE and EMP, as well as all corrective or preventive</p>

			actions are presented in semi-annual environmental monitoring reports.
5	14	<p><u>Human and Financial Resources to Implement Safeguards Requirements.</u></p> <p>The Borrower shall make available, or cause UTY to make available, the necessary monetary and human resources to fully implement the EMP; the Social Due Diligence Report, including the corrective actions set out in such report.</p>	<p><u>Complied</u></p> <p>PIU has recruited one environmental and social specialist from UTY. The environmental specialist is responsible for part of the EMP of all UTY implementing ADB-financed projects. The Supervision Consultant that was hired by PIU includes a national environmental specialist responsible for health and safety compliance.</p>
5	15	<p><u>Safeguards – Related Provisions in Bidding Documents and Works Contracts.</u></p> <p>The Borrower shall ensure, or cause UTY to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) comply with the measures relevant to the contractor set forth in the IEE, the EMP and the Social Due Diligence Report (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report;</p> <p>(b) make available a budget for all such environmental and social measures;</p> <p>(c) provide the Borrower with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project or the Associated Facilities or Existing Facilities that were not considered in the IEE, the EMP, and the Social Due Diligence Report;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) upon the completion of construction, reinstate pathways and other local infrastructure to at least their pre-project condition, and recultivate agricultural land.</p>	<p><u>Complied</u></p> <p>(a) The IEE and EMP are integral parts of all bidding documents and work contracts and are included as annexes to the contracts. Accordingly, contractors must comply with the IEE and EMP requirements unconditionally. All corrective or preventive actions are presented in semi-annual environmental monitoring reports.</p> <p>(b) Contractors' budgets partially include necessary IEE and preventive actions. Regardless, contractors must comply with the requirements in accordance with national regulations.</p> <p>(c) The borrower will be informed in the event of any unforeseen impacts. Since the continuation of the project is impossible without the Borrower's decision</p>

			<p>(d) Before starting work, the Contractor obtains permits from the State Committee for Highways under the Ministry of Transport with a preliminary selection of road inspectors. Regarding agricultural land and other infrastructure, the district / city governors issue a decision with the permission of land users or landowners.</p> <p>(e) All permits are issued only on condition of restoration after completion of work.</p>
5	15	<p><u>Safeguards Monitoring and Reporting.</u></p> <p>The Borrower shall do the following, or cause UTY to do the following: (a) submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission; (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project, the Associated Facilities or the Existing Facilities that were not considered in the IEE, the EMP and the Social Due Diligence Report, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and (c) report any actual or potential breach of compliance with the measures and requirements set forth in the IEE; EMP; the Social Due Diligence Report, including the corrective actions set out in such report, promptly after becoming aware of the breach.</p>	<p>Complied</p> <p>The Loan Agreement requires to submit Safeguards Monitoring Reports, as per IEE, the PIU submits the semi-annual reports, as it was also agreed upon during the Missions of ADB on Safeguard Issues. Starting from the beginning of the Project all Semi-annual Monitoring Reports have been submitted to ADB.</p> <p>a) After publication of EMR at ADB web-site we translate reports into Russian and then publish them on web-site of the Executing Agency. By the end of 2020 we published our reports at UTY web-site.</p> <p>Complied –</p> <p>б) unanticipated environmental and/or social risks and impacts were not revealed.</p> <p>During this period of time from July to December 2020 in construction of associated and existing facilities no violations or</p>

			<p>impacts occurred as per the requirements of IEE and EMP.</p> <p>c) Complied – all actual or potential breach of compliance with the measures and requirements set forth in the IEE; EMP are immediately reported; the Social Due Diligence Report, including the corrective actions set out in such report, promptly after becoming aware of the breach.</p>
5	17	<p><u>Prohibited List of Investments.</u> The Borrower shall ensure, and cause UTY to ensure, that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS</p>	<p><u>Complied - The Loan proceeds</u> are not used to finance any activities included in the list of the prohibited investment activities, as per the Attachment 5, SPS.</p>
5	18	<p><u>Labor Standards, Health and Safety.</u> The Borrower shall ensure, and cause UTY to ensure, that the core labor standards and the Borrower's applicable laws and regulations are complied with during Project implementation. The Borrower shall cause UTY to include specific provisions in the bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.</p>	<p><u>Complied</u></p> <p>The Project is being implemented in accordance with the main labor standards and the applicable laws and normative acts. The respective provisions are included in the bidding documents and the works contracts.</p>

99. Implementation Status of EMP during the pre-construction period and construction period is summarized in Table 13 and 14 respectively. The non-compliances revealed during this reporting period will be strongly monitored by the PMC (Engineer) and PCU and results described in the next SAEMR due in July 2021.

Table 13. Implementation Status of EMP during the pre-construction period (Packages TP-CW-01 and TP-CW-02)

<i>Subject</i>	<i>EMP Requirement</i>	<i>Compliance Attained</i>		<i>Comment on Reasons for Partial or Non-Compliance</i>	<i>Required Action and Target Dates to Achieve Compliance</i>
		<i>TP-CW-01</i>	<i>TP-CW-02</i>		
Project design	<ul style="list-style-type: none"> During detail design stage layout drainage system, route of main trunk and water distribution networks will be updated with consideration of minimization of impact on environment and population during construction and operation phases; 	yes	yes	The project complied with all standards and requirements specified in KMK 2.04.02-97 "Water supply. External networks and production facilities"	<p>At TPS facilities and stations with a centralized water supply and sewerage system, pre-treated industrial storm water, together with domestic wastewater, are discharged into the existing sewerage network. At stations where there are no sewerage devices, cesspools and cesspools with waterproof containers with concrete walls with 2-layer insulation of bitumen mastic are provided.</p> <p>In order to preserve the operating mode of the irrigation systems, at places of crossing of the railway line with drainage collectors and irrigators, new PZhBT are being built and new metal pipes are being laid for the passage of drainage and irrigation water.</p> <p>Measures for the rational use of water and protection of surface and ground waters from pollution are ensured by using standard solutions tested in practice.</p>
	<ul style="list-style-type: none"> Ensure that first sanitarian zone (within 30 meters from the longest well) for ground water intakes is in compliance with national standards KMK 2.04.02-97 "Water supply. 	yes	yes	The project complied with all standards and requirements specified in KMK 2.04.02-97 "Water supply. External networks and production facilities "	The site belongs to the area of groundwater accumulation. The main source of groundwater supply is surface irrigation water. From a

Subject	EMP Requirement	Compliance Attained		Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		TP-CW-01	TP-CW-02		
	External networks and facilities" (1997) and the territory is properly fenced;				hydrological point of view, in the study area, there is a low-plain part, extremely poor in surface waters, Including zones of runoff formation and its dispersion.
Lack of proper Environmental requirements	• Ensure that EMP is included in bidding documents.	yes	yes	Included	Included
	• Ensure that environmental covenants, tools for resolving issues with Contractors non-compliance with established requirements are included in the bidding documents (such as penalties for violence environmental requirements and etc.) and further in contracts.	yes	yes	The environmental requirements were complied, there was no violation of any item of the requirements.	In case of non-compliance by the Contractor the established requirements of the EMP at construction sites, the Employer has the right to impose penalties.
	• Include list of required national approval and licenses (indicated in chapter 2, Table 1a) are included in the bidding documents and responsible for receiving such permission are identified.	partial	partial	<p>- Environmental Clearance (Positive Conclusion of Environmental Expertise) – received;</p> <p>- Permission/license for using existing borrow pits or opening new ones – not required, since the contractors do not use the borrow pits, they have sub-contract with licensed firms;</p> <p>- Permission on cutting trees and bushes – not received yet;</p> <p>- Statement on Environmental Consequences (Permission on waste water, emissions discharge, disposal wastes) – not yet due (it is</p>	<p>- This is "OPEN" issue in the issues track list. PMC requested the Contractor take urgent measures to receive the permission. Expecting to receive the permission in January 2021.</p> <p>At stage of feasibility study the preliminary hydrogeological conclusion for water use was issued by the State Committee</p>

Subject	EMP Requirement	Compliance Attained		Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		TP-CW-01	TP-CW-02		
				required prior commencement of operation); - Permission on special water use for ground water on VU-1 – received .	of geology and mineral resources in 2018.
Improper assessment of bidders' environmental capacity	<ul style="list-style-type: none"> IA with assisting Project Management Consultant's (PMC) environmental specialist will ensure inclusion of environmental provision along with EMP in the bidding documents and in contracts for Contractors; 	yes	yes	All requirements specified in the EMP are included in the tender documents of the Contractors	All requirements specified in the EMP are included in the tender documents of the Contractors. All measures included in the IEE are included in the bidding documents and in the EMP and are being implemented at this stage.
	<ul style="list-style-type: none"> Bids evaluation needs to be done with consideration of: capacity of bidders to meet EMPs requirements, proposing adequate budget efficient for implementation EMP, existence of good practice in environmental performance within other similar projects; 	yes	yes	New technologies included	In connection with the electrification of the railway, cable-laying machines are used, controlled by the operator from the driver's cab, which allow saving efforts and costs for restoring vegetative soil, and quickly restoring the working site. As far as the use of the cable layer is concerned, its vibrating mechanism rocks its blade at a frequency of 1500 times per minute. This action neatly divides the soil in front of the blade and allows for quick and efficient laying of underground utilities.
Non-compliance with national environmental legislation in term	<ul style="list-style-type: none"> Prepare EIS and submit it to Provincial Committee for Ecology and Environmental protection (Goskompriroda) for revision and approval. 	yes	yes	Prior to the commencement of design-and-estimate documentation, the approval for EIS from Goskompriroda was received.	The approval for EIS was received.

Subject	EMP Requirement	Compliance Attained		Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		TP-CW-01	TP-CW-02		
of conduction environmental impact assessment and required permission	<ul style="list-style-type: none"> • Include the requirements indicated in EA into the final EMP. 	not yet due	not yet due	All requirements specified in the PEE are included in EMP. The date is not yet due.	All requirements from the part of the Contractor are followed and fulfilled.
Generation of different potential environmental impacts due to changes in design, layout	<ul style="list-style-type: none"> • If any changes in the project design will take place, the IEE has to be updated accordingly. 	not yet due	not yet due	There was no any changes in the project design by the Employer and the Contractor.	If any change will be done regarding the project solutions, all the documents concerning IEE should be updated.
Non-compliance with national and international requirements during conduction bidding for purchase machinery and mechanisms	<ul style="list-style-type: none"> • Goods procured for project implementation will be done in compliance with ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009); 	yes	yes	Goods procured for project implementation comply with ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009);	The Borrower ensures, UTY warrants that no loan proceeds will be used to finance any activity included in the prohibited investment list provided in Appendix 5 of the Safeguard Policy Statement.
	<ul style="list-style-type: none"> • Environmental specifications have to be included in bidding packages for purchase machinery within the project. Particularly, toxic level of machinery must meet "Euro 3" environmental requirements as defined by national regulations; 	yes	yes	According to the Contract P03, P05-2, machinery purchased meet Euro3 diesel fuel.	All machinery are purchased complies the standard Euro3, and included in tender bidding packages.
Improper SEMP and SSEMP development	<ul style="list-style-type: none"> • Within 30 days after contract award and prior to commencing any physical works, Site-specific Environmental Management plans (SSEMPs) will be developed by the Contractors under the guidance of the PMC, and be endorsed by PMC before submission to PCU for approval; 	partially	partially	The Contractors prepared the draft SSEMPs with delays, PMC reviewed, commented and revised, and now the SSEMPs are under PCU review.	Expected approval – February 2021
	<ul style="list-style-type: none"> • In addition to SSEMPs, Topic Specific SEMP need to be prepared by Contractors, endorsed by PMC and approved by PCU for the following activities: Traffic Management 	partially	partially	The Contractors prepared the draft Topic EMPs with delays, PMC reviewed, commented and revised,	Expected approval – February 2021

Subject	EMP Requirement	Compliance Attained		Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
		TP-CW-01	TP-CW-02		
	Plan for construction of distribution network within settlements, Waste management Plan for sites with demolishing works, Hazardous Wastes Management Plans as described in the next sub-sections, Construction Camps Management Plan and Occupational Health and Safety Plan (OHS Plan);			and now the Topic EMPs are under PCU review.	

Table 14. Implementation Status of EMP during the construction period (Packages TP-CW-01)

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Air pollution	• apply watering of construction sites and roads inside settlements during dry season;	yes	Watering in dry season	There are water towers with wells for watering plants and for technical needs.
	• cover transported bulk materials	yes	When transporting by road without covering non-metallic bulk materials, according to the internal situation of the country, fines are imposed on car owners from the internal affairs - State Automobile Inspectorate	All construction organizations during transportation are provided with a tarpaulin covering of transported non-metallic bulk materials.
	• control speed limitation for vehicles during movement inside of settlements - no more than 40 km/h;	yes	complied	A schedule is drawn up for the movement of vehicles when moving in settlements with a limited speed of no more than 40 km / hour
	• all vehicles and techniques must comply with technical requirements and have to pass regular inspection as indicated into the national standards;	yes	complied	All vehicles and equipment of the Contractors undergo technical inspection 2 times a year;
	• prohibit open burning of solid wastes generated particularly from labour camps and construction activities;	yes	Not detected	All construction and solid household waste at construction sites is removed by machines of "Makhsustrans"
	• Clean wheels and under carriage of haul trucks prior to leaving construction site;	yes	They are cleaned off with technical running water.	All objects are covered with crushed stone pebble for the movement of vehicles

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	<ul style="list-style-type: none"> Conduct monitoring of dust level in front of settlements located close to constructed or reconstructed railway bridges and subgrade of 6.7 km Uichi-Uchkurgan. In case of exceeding standards for dust level for this area (0.15 mg/m³) additional mitigation measures for dust control need to be undertaken – more often watering or installation of dust screen. 	yes		Construction sites are located far from settlements
Noise and vibration	<ul style="list-style-type: none"> As for construction of TSS, acoustic screens have to be used if construction activities will be implemented closer than 110 m; 	n/a	Residential buildings are located 150 meters from the border of the TSS Raustan and Khakulabad.	Residential buildings are located 150 meters from the border of the TSS Raustan and Khakulabad.
	<ul style="list-style-type: none"> During construction period establish limits on speed for vehicles inside of settlements (40 km/h); 	yes		A schedule is drawn up for the movement of vehicles when moving in settlements with a limited speed of no more than 40 km / hour
	<ul style="list-style-type: none"> operation of heavy equipment shall be conducted between 7 am and 7 pm only, limitation on speed for vehicles; 	yes	Observed by the foreman at the site.	Working hours for heavy equipment are set from 8-00 to 16-00.
	<ul style="list-style-type: none"> In case of receiving any complaints from population, noise measurements need to be conducted and in case of exceeding established standards, additional mitigation actions for decreasing noise level need to be undertaken (establishing temporary sound absorbing barriers and others); 	yes	Not detected. A project is being developed to reduce the impact of noise and vibration. Not received yet	There is a complaint log at the facilities. When monitoring No complaints from the population were identified.

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	<ul style="list-style-type: none"> • Use of Personal Protective Equipment (PPE) by workers involving in demolishing and construction works in conditions of increased noise level (more than 80dB) is mandatory; 	yes	All work was carried out in accordance with the requirements of SanPiN, KMK standards and environmental protection.	The workers of the district khokimiyats and the residents themselves who fell under the demolition, but at the same time everyone, the workers participating in the demolition, demolished all buildings and structures. used personal protective equipment (PPE),
	<ul style="list-style-type: none"> • Inform population about anticipated works. 	yes	Accordingly, based on the prepared LARP-1, 2, 3 and based on the laws of the Republic of Uzbekistan.	To the residents of the demolished buildings and structures the official notification of the start of the demolition was sent by the district khokimiyats 6 months before the start of the demolition.
Pollution of surface and ground water	<ul style="list-style-type: none"> • Construction and labor camps, including storage places for lubricant, fuel and other oils will be located 100 m away from water bodies; 	yes	According to the requirements of fire safety, safety engineering, as well as environmental protection.	Construction and work camps, as well as places for the storage of lubricants, fuel and other oils, will be located inside the designated facility in special designated storage places intended in the project.
	<ul style="list-style-type: none"> • Conduction of refueling, oil replacement or repairing works will be banded at the area within 50 m from water streams; 	yes	Complies with technical requirements	Refueling, oil changes or repairs will be carried out at the construction site of vehicles brought in special vehicles for the transportation of fuel and lubricants, 50 m from water streams;
	<ul style="list-style-type: none"> • Sanitary water and solid wastes will not be released directly into water streams; 	yes	The conclusion of the contract is pending.	Household water is discharged into a water intake

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
				bunker and solid waste will also be removed directly in special vehicles according to the Contract;
	<ul style="list-style-type: none"> • Topsoil stripped material shall not be stored where natural drainage will be disrupted; 	yes	All natural drainage has been included in the design work.	The material with top layer of soil removed is not located where the natural drainage is;
	<ul style="list-style-type: none"> • Water samples will be taken and compared with the baseline monitoring results obtained in the preconstruction stage. Location of monitoring points, frequency and monitoring substances are presented in Environmental Monitoring Plan; 	yes	Sampling is included in the consultants' work plan.	Water samples were taken for comparison with the baseline monitoring results obtained during the pre-construction phase. Location of monitoring points, frequency and controlled substances are specified in the Environmental Monitoring Plan;
	<ul style="list-style-type: none"> • all works related to digging on the depth more than 2 meters need to be conducted during non-irrigation season. The irrigation season in that region is May-August; 	yes	All designated areas for construction were selected taking into account all geological monitoring parameters.	All excavation that comprising digging more than 2 meters of soil must be carried out during the dry season.
	<ul style="list-style-type: none"> • If this period could not be avoided, use standards technology for construction in areas with high water logging: pumping water into the nearest drainage canal; 	yes	Such kind of area is not available for the sites under construction	All excavation that comprising digging more than 2 meters of soil must be carried out during the dry season.
	<ul style="list-style-type: none"> • Conduct monitoring of water quality in the hand pumps houses located close to the rehabilitating or constructing new WDCs needs to be undertaken by Contractor on the monthly base (Chapter 8.2, EMP). In case of exceeding standards, ground water pollution source(s) need to be identified and repaired. 	no	This is "OPEN" issue in the issues track list. PMC requested the Contractor to take water analyzing in each reconstructed / constructed wells and hand pump of houses and to inform in monthly environmental monitoring reports	The taken measures will be monitored starting from January 2021.

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Soil contamination	<ul style="list-style-type: none"> The top soil of about 30 cm depth shall be removed and stored separately during excavation work, and after the construction of the main trunk the same soil shall be replaced on the top, in unpaved areas; 	yes	All KMK requirements are met.	The top layer of soil 30 cm deep should be removed and transported to the Park Molodyoji of Namangan TSS Raustan, Khakulabad.
	<ul style="list-style-type: none"> To minimize soil compaction, movement of all type techniques will be allowed only through identified access roads; 	yes	Official access roads were built.	To minimize soil compaction, the movement of all types of equipment was taken into account in the project documents and an access road to the facilities was developed and will be diverted by the cadastral services.
	<ul style="list-style-type: none"> Contractors will be required to use only authorized carriers with getting all necessary permissions per respective national legislation. 	yes	Required approvals in accordance with national legislation.- were received.	The used technics of the Contractor has its own official machinery with all necessary approvals in accordance with national legislation.
Hazardous materials	<ul style="list-style-type: none"> Used oil from demolishing transformers produced before 1994 have to be analyzed on content of PCBs. This analysis has to be conducted by the designated specialist from Uzbekenergo – national electrical company authorized on handling used transformers. Or these analyses could be undertaken by Environmental Specialist of PSC on equipment which will be purchased within this project for PCBs testing. If PCBs be found in the transformers' oil all transformers have to be carefully handled and disposed without pouring oil and avoiding oil leakage. Transformers contained PCBs have to be labelled with sign "Content PCB" and disposed in accordance with "Guidebook on Environmental Sound PCB Management in Electrical Equipment" (prepared under Moldova POPs Stockpiles Sustainable Management and Destruction project)". Notification on presence of such equipment will be sent to The State Committee for Ecology and Environmental 	n/a	There is no demolishing transformer on the site. The purchased transformers within the framework of this project have certificates of conformity to the standards of the Republic of Uzbekistan for transformer oils and transformer passports for PCB testing.	

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	protection (Goskompriroda) and Sanitarian Epidemiological Station for their further actions;			
	<ul style="list-style-type: none"> If demolishing transformers do not contain PCBs, they have to be disposed in accordance with national regulation "Safety regulations for the maintenance of electrical consumers", Approved by State Inspection under Uzenergonadzor, 2004 and Regulation guideline 34-301-941:2007 "Individual norms for oil usage for repairing and maintenance needs for equipment of energy enterprises". 	n/a	There is no demolishing transformer on site	
	<ul style="list-style-type: none"> A separate Waste Management Plan needs to be developed by Contractor, endorsed by PMC and approved by PCU for the construction sites with demolishing works. The Plan has to include information about type of generating wastes, procedure of their collection and disposal; 	yes		The Contractor must develop a separate Waste Management Plan, approved by the Project Management Consultant; he submits the OTM to special collection points and / or to the points of replacement of technical oils; keep a logbook of the turnover of technical oils, which indicates the amount of purchased technical oils for the period, the amount of used technical oils, the actual amount of output of OTM and delivery of OTM relative to the calculated standards in accordance with Appendix No. 2;
	<ul style="list-style-type: none"> Used oil shall be collected into containers placed at the concreted sites and disposed to national oil company designated for accepting and treatment of used oils; 	yes	Based on the Resolution of the Cabinet of Ministers of September 4, 2012 No. 258 of the Republic of Uzbekistan "On the procedure for delivery, collection, settlement, storage and transportation of used technical oils. The	Based on the Resolution of the Cabinet of Ministers of September 4, 2012 No. 258 of the Republic of Uzbekistan "On the procedure for delivery, collection, settlement, storage and transportation of used technical oils. The delivery of used oils is controlled by the

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
			delivery of used oils is controlled by the Head of the TSS. The used oil from the transformers is collected in specially designated metal containers at the concreted areas and sent to the national oil company designated for the reception and treatment of used oils.	Head of the TSS. The used oil from the transformers is collected in specially designated metal containers at the concreted areas and sent to the national oil company designated for the reception and treatment of used oils.
	<ul style="list-style-type: none"> • Refueling vehicles and replacement oils also have to be conducted in special designated and properly equipped places. Emergency facilities have to be at the place for elimination of accident of oil spills; 	yes	Controlled by the Head of TSS.	At the TSS facilities, concrete basins are being built under all transformers for emergency oil drainage. In case of oil spills, they flow through pipelines into metal containers for collecting oils and for sending them to the oil company for their intended purpose.
	<ul style="list-style-type: none"> • A detailed "Waste Asbestos-Containing Material Management Plan" is to be developed by Contractors and implemented during demolishing works; 	yes	There are no asbestos-containing materials during dismantling works.	Waste generated during the entire construction period will be systematically collected, stored and disposed in appropriate specialized places in accordance with the regulations in the field of waste management in Uzbekistan and in the "Waste management plan for asbestos-containing materials".
	<ul style="list-style-type: none"> • Make sure that old pipes (especially asbestos) are not excavated or touched. The new pipes will have to be laid along to the existing. 	yes	No asbestos pipes available.	Make sure that old pipes (especially asbestos) are not available. New metal pipes were laid according to the project together with the

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
				existing irrigation flumes and gas pipes.
Non-hazardous materials	• Segregation of wastes on recyclable and non-recyclable wastes;	yes	The separation of waste into recyclable ones is available organized at the facility.	At the facility, there is a separation of waste into recyclable ones - this is cardboard paper, plywood boards, 50x50 beams, polyethylene bags and metal waste. There is no non-recyclable industrial and toxic waste;
	• Selling recyclable wastes to relevant organizations (paper, scraps, accumulators) and timely disposal of non-recyclable wastes to the landfill, determinate by local khokimiyats;	yes	Available.	Sale of recyclable waste to appropriate organizations (paper, waste materials) of waste at collection points designated by local khokimiyats.
	• Providing hydro isolated septic tank for collecting waste waters at the camp sites and bio toilets for workers at the construction sites and timely disposal of waste waters to the local waste water treatment plants;	no	This is "OPEN" issue in the issues track list. PMC requested the Contractor to provide hydro isolated septic tank for toilets.	On-site the Contractors use insulated bottom pit latrines.
	• Burning of waste on any construction site is forbidden with the exception of stub and small branches from felled trees and bushes, which is better to be burned in order to avoid pest dissemination.	yes	Controlled by the Safety inspector.	At construction sites, wood waste can be burned in the national oven for cooking.
Losses of trees and crops	• Site cleaning for extension existing and construction new TSSs should be done exactly within marked area.	yes	The allocation of land was carried out by the State organizations of Zem Cadastre branches.	Construction of new transport stations is carried out in the fields and within the designated boundaries of the railway.
	• Conduction of a preliminary survey together with Contractor and respective representative of Goskompriroda to define trees for cutting and payments in accordance with CMR # 290 dated from 2014.	yes	A preliminary survey was carried out by an inspector of the district Goskompriroda jointly with the Contractor, and a specialist from PIU-ET.	All objects began to be built after compensation for the felled trees.

<i>Subject</i>	<i>EMP Requirement</i>	<i>Compliance Attained</i>	<i>Comment on Reasons for Partial or Non-Compliance</i>	<i>Required Action and Target Dates to Achieve Compliance</i>
	<ul style="list-style-type: none"> Construction during agricultural off- season may further minimize the impact (loss of agricultural income). Major crops in the project affected are wheat, sunflower, vegetables and cotton, which growing seasonally; 	n/a	The local authorities sent a notification 4-6 months before the commencement of construction work.	All construction work began after the harvest season.
	<ul style="list-style-type: none"> If cutting trees is unavoidable, to compensate losses as indicated in the LARP for this project; 	yes	All compensations are paid.	All compensations are paid.
	<ul style="list-style-type: none"> Do not use chemicals or burning for removal of vegetation; 	yes	Not used.	Not used.
	<ul style="list-style-type: none"> Greening of TSSs as part of the project design; 	yes	Is being carried out. - The date is not yet due.	Recultivation and landscaping is part of the project.
Health and safety issues	<ul style="list-style-type: none"> Contractor and PMC will inform population about anticipated works in the settlement in advance; 	yes	Trainings were carried out by PIU-ET.	Prior to the commencement of construction, a letter was sent to the local authorities and trainings are conducted by the PIU-ET in the Khokimiyats and places of makhalla citizens' meetings.
	<ul style="list-style-type: none"> Contractors will require to develop a Traffic Management Plans with clear indication routes of vehicles' movements, placement special signs, and speeding allowance inside of the settlements and schedule transportation activities by avoiding peak traffic periods; 	n/a	The traffic plan should be developed by the Contractor and agreed by the Project manager. Equipment is delivered to the facilities via the railway line.	The Traffic Management plan establishes the traffic management methods at the work site and must comply with applicable local rules and regulations. The traffic plan should be developed by the Contractor and agreed by the Project manager.
	<ul style="list-style-type: none"> The Traffic Management Plans will be approved by Traffic Police and disclosed to local communities prior commencement of construction works on respective sites; 	n/a	TMP is for pipeline works in residential areas	Traffic was approved by the Traffic Police and handed over to local communities prior to construction work.
	<ul style="list-style-type: none"> Clear signs will be placed at construction sites in view of the public, warning people of potential dangers such as moving vehicles, hazardous materials, excavations etc. and raising awareness on safety issues. 	yes	Are available on the construction site and are agreed by NOKS.	The facilities to be it is required to fenced or put signs, it is taken into account in design decisions and in the requirements of safety.
	<ul style="list-style-type: none"> Contractor will require to install temporary bridges and effectively organize works, which will allow avoid unreasonable delaying of construction works; 	n/a	No need to install temporary bridges.	Since the main installation work is carried out on the existing railway line, the

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
				Contractors do not need temporary bridges.
	• All construction sites will be properly lightened and fenced;	yes	All these types of work are performed by the Employer-NOKS.	All construction sites are properly equipped with lightening and fenced;
	• Development of Site Specific Plans for campsites;	yes	Developed.	The Contractors developed the SSEMP plan prior to the commencement of construction and installation work on the site.
	• After completion works all roads shall be rehabilitated at least up to condition of pre-construction stage.	yes	All roads and crossings will be restored after the completion of construction work. The time is not yet due.	All roads and crossings are being restored according to design solutions.
	• Development Occupation Safety and Health Plan, which covers among others the following topics: usage of PPE, working procedure with hazardous materials (such as asbestos materials, PCBs etc.), training activities and others. The workers have to be provided with appropriate living conditions: safe water supply, washing conditions.	yes	The safety engineer is instructed and supervised by the Engineer and the manager of the Company on health and safety measures, and all conditions for staying at the facility are presented.	Development of a Health and Safety Plan covers among others, the following topics: PPE use, handling of hazardous materials (such as asbestos materials, PCBs, etc.), training activities, and more. Workers should be provided with adequate living conditions: safe water supply, conditions if necessary to wash. The facilities are provided with all necessary means.
	• Comply with requirements of Labor Code of Uzbekistan (1998) and standards on work and health safety	yes	Compliant and supervised by the Contractor's representative and Italferr project manager	Compliant and supervised by the Contractor's representative and Italferr project manager
	• Ensure that all site personnel have a regular E&S training and basic level of environmental awareness training;	yes	Conducted by the contractor's safety engineer every day, environmental consultant from Italferr and	All onsite personnel receive regular safety and environmental (E&S) training

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
			PIU-ET according to the schedule	and basic environmental awareness training;
	<ul style="list-style-type: none"> Ensuring all workers are provided with and required to use PPE. 	yes	There is a safety instructing log at each facility.	All workers are provided with personal protective equipment and must use PPE at the facility under the strict control of the site manager and safety;
Construction camps	<ul style="list-style-type: none"> Development of Separate Site Specific EMP for labor/construction camps (or part of general SEMP). 	yes	The SEMP is not developed separately for construction sites because each Contractor performs work within the framework of the Contract and the type of their activity by type of construction, installation and commissioning	The development of a separate SEMP for workers / construction camps (or the development of a part of the overall EMP), except for the instructions for the prevention of COVID-19, has not been developed.
	<ul style="list-style-type: none"> SSEMP for labor/construction camps will describe waste collection and disposal procedure, set up of camp facilities (such as a storage place for construction materials and techniques if any, laundry and toilets, access roads). 	yes	According to the approved by the SEMP	The construction camp is located inside the construction site at the Raustan and Khakulabad TSS. The construction camp has a water supply, a bathroom, a shower, a washing machine. There is a dining room with a room for storing food and a restroom.
	<ul style="list-style-type: none"> If washing equipment and vehicle is planning to be conducted at the labor/construction camp's site, appropriate wastewater treatment facilities have to be organized on the camp and respective permissions on water intake and waste water disposal need to be received by Contractor from Goskompriroda; 	n/a	Washing the equipment and vehicle not allowed, allowed only to clean wheels of trucks prior to leaving construction site.	Washing the equipment and vehicle not allowed, allowed only to clean wheels of trucks prior to leaving construction site.
	<ul style="list-style-type: none"> Provide safe and adequate living conditions for workers, such as dining rooms, toilets, shower rooms etc. 	yes	These requirements provided by Contractor, but need improvement and it is requested by PMC. It is "OPEN" issue in the issues track list.	Work camps meet the requirements of SanPIN and safe, adequate living conditions for workers such as canteens, toilets, showers, etc.

Subject	EMP Requirement	Compliance Attained	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	<ul style="list-style-type: none"> Contractors shall instruct all the workers to act in a responsible manner. 	yes	Instructions are made daily by a safety engineer.	These requirements are fulfilled before starting work at the facility. The manager (responsible person) ensures that the contract workers from the Engineer undergo training on the safety and prevention of COVID-19.
Archaeological heritages: Chance of finding heritage	<ul style="list-style-type: none"> Excavation and other works need to be suspended immediately; 	yes	Not found	If an object is detected, suspend all work
	<ul style="list-style-type: none"> Area with possible heritage shall be fenced with fencing tape; 	yes	Not found	When archaeological objects are discovered, first of all, it is protected with a safety tape
	<ul style="list-style-type: none"> A designated focal point from a local administration (khokimiyat) needs to be informed and invited for assessment of potential heritage and undertaken necessary actions; 	yes	Not found	Yes, members of the local administration must be notified to evaluate the discovered object and report to the Committee for the Protection of Historic Buildings
	<ul style="list-style-type: none"> Civil works at the finding place could be recommenced after obtaining permission from the focal point. 	yes	Yes, not found	After receiving permission from the coordinator.

7 REVIEW OF SSEMP

100. For all electrification facilities of the Pap-Namangan-Andijan railway line, there are site specific EMP (SSEMP) that take into account the specifics of the electrification facilities under construction. There is also EMP developed by the design institute "Boshtransloyikha" for "Electrification of the railway section of Pap-Namangan-Andijan". See Book 6 3350-POS (Basic provisions of construction organization).

101. These documents contain all the main recommendations for Environmental Management, specific solutions for occupational health and safety, including:

a) In preparation stage for construction:

- On the organization of construction, the main issues of labor safety in construction are considered, and concrete solutions on labor safety, industrial sanitation, and safety, within the scope of requirements of KMK 3.01.02-00 are developed by the construction organization as part of the work performance project;
- Workers, managers, specialists, and employees engaged in construction facilities should be provided with sanitary and household premises (dressing rooms, dryers for clothing and shoes, showers, rooms for food, rest and heating, toilets) under the current standards, nomenclature of inventory buildings, San PiN0023-94;
- Heads of organizations are obliged to provide training and training on labor safety in accordance with GOST 12.0.004-908.

b) In preparation stage for construction:

- During operations of sources of harmful emissions into the atmosphere (GOST 17.2.1.04-77*) is not expected, except for bitumen-heating boilers, the effect of which is short-term and one-time;
- Requirement of protective measures to protect the health and safety of the population and workers, compliance with the requirements for the design of construction plans, placement of temporary inventory buildings on construction sites, selection of places for soil and quarry;
- Careful treatment of archaeological heritage sites, local flora and fauna, mandatory measures to re-cultivate land and improve the area adjacent to the site upon completion of construction will be carried out according to the working documentation "Re-cultivation of disturbed land on the site of electrification Pap-Namangan-Andijan," performed by LLC "Toshkent Suv Loyhiha Invest".

102. In connection with the mitigation measures to COVID-19 outbreak in the Republic of Uzbekistan the SSEMPs were not updated by the Contractors, since the instruction for combating COVID-19 was developed by CNTIC, TEMIRZHOL ZHONDEU.

8 GOOD PRACTICES AND OPPORTUNITIES FOR IMPROVEMENT

8.1 Good Practice

103. At all facilities and sites under the Project of Pap-Namangan-Andijan railway line electrification the works are being carried out with due consideration of good practices with an aim of timely and high-quality implementation of the project. In most of the facilities, the fencing of the territory, lighting and protection of the facility at night, observance of sanitary standards at the site, as well as careful treatment of green plantations on the territory and outside the facilities have been completed. All workers observe the rules of polite and respectful relations with the local population. This avoids accidental conflicts between workers and local populations.

8.2 Opportunities for improvement

104. Despite the fact that the majority of the professional skills the construction workers will receive during their study at the educational institution, the training in the field of labor safety and in the field of some specific skills is often conducted right at the facilities upon employment of the employee. Within the framework of being implemented Contracts P01-1, P01-2, P01-3 the Contractors developed specialized training courses to cover all new equipment, they also conduct training in the field of labor safety and health protection. Organizing additional training has positive impact on the quality and safety of work at construction sites. Contractors also provided workers with the communication devices that ensure efficient communication between working team members. Without reliable communication between all workers at the construction site, the workers will not have all the information. Efficient communication between all members of the team not only accelerates implementation of the project, and also helps in informing each member of the team about various situations. Contractors provide clean drinking water, food, kitchen ware for their workers.

105. As part of the STD program, Contractors under undergoing contracts provide briefings to their staff and the local population with the involvement of medical personnel to ensure prevention of sexually transmitted diseases. Under this program, the mandatory provision of contraceptive means is envisaged.

106. On a conscientious basis, the necessary trips to purchase food products and necessary medicines in shopping centers are organized.

107. Advanced Methods

108. From the site allocated for the construction of Raustan TSS, 36.216m³ of plant soil was removed. Since this volume of soil was very large, the ecology specialist of PIU-ET recommended to remove plant soil to the "Molodejniy" park which was under construction in the city of Namangan. Topsoil in the amount of 36.216m³ was transported from the construction site of TSS Raustan. This volume of soil was very large - 36.216 m³, therefore the recommendations on the exchange of topsoil from TSS Raustan to the soil from the park "Molodejniy" under construction in the city of Namangan were given by PIU-ET ecology specialist. The topsoil from the TSS Raustan was transported for the

improvement works of the “Molodejnyi” park in the city of Namangan. At the same time, nonmetallic materials (crushed stone, pebbles) were transported from the territory of the “Molodejnyi” park for the organization of a bulk cushion of TSS Raustan. This park was built in a river opening, in place of a quarry of nonmetallic materials (crushed stone, pebble). Instead of this fertile soil, crushed stone was transported from this quarry.

109. On the new bypass 6.7 km section Uychi-Uchkurgan, a number of recommendations and alternatives on solving the issues of formed quarries were proposed by the PIU-ET Ecology specialist to the Khokim of the Uchkurgan region. As a result of negotiations with the khokim of the Uchkurgan region, these quarries were used for a lemonarium. The area was studied and a quarry was dug out according to the plan of lemonarium, and in this way, the residents from nearby mahallas were provided with job for 100 positions.



110. Similar work was carried out in the same area near the river Noryn; the area was used for the industrial cultivation of rare fish species (red fish, sturgeon, trout and salmon species).

111. All the soil from 6.7 km tunnel excavation was used for unburned bricks for use in the construction of new houses for the displaced population. Employees of the construction organization SPMS and Mostotryad from UTY assisted all displaced people with the delivery of nonmetallic materials (crushed stone, soil, cement and sand) for the construction of new residential buildings on the 6.7 km section of Uychi-Uchkurgan and in Namangan city.

112. As for the signaling and control system of communication, according to the PNA project, new advanced equipment of the MPLS system was installed. The MPLS is the most modernized system that is used throughout the world in the construction and installation of signaling communication systems.

- MPLS technology allows to balance the load on the network by redistributing flows (traffic engineering). This improves QoS performance by optimizing bandwidth usage on under-loaded routes. IP network protocols do not provide this capability.
- Using MPLS technology, service providers can create so-called Virtual Private Networks (VPNs). VPNs contain geographically dispersed nodes that can securely connect them over a shared backbone
- Fast routing in case of failures in communication channels.

113. **Breakdown car GEISMAR V2R 730GR for maintenance and repair of overhead catenary system.**

114. The GEISMAR V2R 730GR breakdown car is a self-propelled vehicle with a combined drive, specially designed for the transport of personnel and tools, as well as equipment for work on railway facilities.



Figure 56 Breakdown car GEISMAR V2R 730GR for maintenance and repair of contact system.

115. The GEISMAR VMT 990 C/GR railroad motor car for overhead catenary is a modern self-propelled two-axle vehicle specially designed for the transport of working crews and for the installation and maintenance of the overhead system. It allows installers to easily and safely reach any points on the contact system and its supports in climatic conditions in Uzbekistan (-30 C / +60 C). The machine can be used on road in all-wheel drive mode on roads with any soil quality.



Рисунок:57 Railway motor car.

116. In connection with the electrification of the railway, cable-laying machines are used, controlled by the operator from the driver's cab, which allow saving efforts and costs for restoring vegetative soil, and quickly restoring the working site. As far as the use of the cable layer is concerned, its vibrating mechanism rocks its blade at a frequency of 1500 times per minute. This action neatly divides the soil in front of the blade and allows for quick and efficient laying of underground utilities.

117. Tamping machine Duomatic 08-32 U/3S

118. The machine is used in the construction of the Pap - Namangan - Andijan railway section. The following equipment is installed on the machine: blocks for the simultaneous tamping of two sleepers, a split structure that moves in the lateral direction. Автоматический синхронный подъем трех рельсов стрелочного перевода.

119. Electric locomotives of a new generation - on the electrified Pap - Namangan – Andijan section. New electric locomotives of the new generation with asynchronous traction motors using recuperation will be used, when electrical energy is returned to the contact line and can be consumed by other electric locomotives located with it on the same section.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

120. Results of analysis of construction activity for the period July - December 2020 at all project sites of the Pap-Namangan-Andijan railway line, allow making the following conclusions:

- (i) Construction works have not been fully started and deployed at all sites of the projects;
- (ii) Environmental safeguards under the SEMP are fully implemented at all construction sites;
- (iii) All contractors have approved SEMP on construction sites. The contractors promptly eliminate any environmental issues identified during own monitoring and non-compliances observed by PMC. Complex issues are resolved in strict compliance with the national legislation in close contact with the PIU-ET and the relevant state organizations and local population.
- (iv) Among non-compliances observed during reporting period were mainly: no wearing PPE (in some cases), non-proper storage of hazardous wastes, non-conformity of completeness of fire protection equipment. But after monitoring the site all such non-compliances were eliminated.
- (v) Non-compliances observed during previous reporting period were fixed and checked by PMC and RETA consultant.
- (vi) The issues identified during this monitoring period is summarized in **Table 15**.

Table 15. Issues Identified During the Monitoring Period (Jul – Dec 2020)

Issue	Required Action	Responsibility	Timing (Target Dates)
Installation of metal fences along the tunnel trench.	Detailed design completed	NOKS and RRJ-Kokand	March 15, 2021
Cold process asphalt road covering in the village Kizil-Ravat.	Project is being developed	NOKS and RRJ-Kokand	April 15, 2021

9.2 Recommendations






121. For the next semi-annual period the following recommendations are proposed:

Table 16: Proposed recommendation for period January - June 2021



#	Recommendation	Date of implementation
1	To ensure that all sub-contractors submit SEMP prior to commencement of construction works with changes to prevent COVID-19.	07-08. 2021
2	To conduct frequent trainings on implementing protective measures for subcontractors and compliance with all COVID-19 protection measures.	10-11. 2020
3	To Conduct noise and dust level measurements during construction works at/near sensitive receptors at TSS Khakkulabad and TSS Raustan.	09-12. 2020
4.	To implement Corrective Action Plan.	09-12. 2021
	To include in the bidding documents - all IIE requirements, - the contractor must have a health and safety specialist, - provide the EMP to the GRP-ET and the ITALFERR consultant, - to include in the EMP the solid waste management and the budget for the implementation of environmental protection measures throughout the section of the VEL under construction, - conclude agreements with local organizations on the use of drinking water and sewerage, - electricity, - conclude an agreement with Makhsustrans for the removal of garbage from the construction camp, - as well as with the local medical center to provide medical assistance for the prevention of COVID-19 and in case of an accident.	16-03. 2021
5.	Include in the semi-annual report for the period Jan-Jul 2021. Construction of external power supply for TPP Raustan -220 / 27.5 / 10 kV and TPP Khakulabad - 110 / 27.5 / 10 kV.	01-06. 2021

10 APPENDICES

Appendix 10.1 Reports from subcontractors


 ПУОС Хаккулабад (Электроаппарат).d	 20200509 CNTIC - The security plan du	 ПЛАН УПРАВЛЕНИ Я_ОКРУЖАЮЩЕЙ_С	 Экология.ENG.doc x	 Охрана труда ENG.docx
Modified EMP on the prevention of COVID-19.	Special Security Plan during Pandemic of CNTIC	Special Security Plan during Pandemic of Temirzhol Zhondeu	Environmental Plan of Temirzhol Zhondeu	Labor protection rules for employees of Temirzhol Zhondeu

Appendix10.2 Laboratory protocols and Acts on CO, NO₂, SO₂, dust and noise monitoring presented in EXCEL program

 СЭС НАМАНГАН.xlsx	 СЭС НАМАНГАН (2).xlsx
Acts and protocols dated September 21, 2020.	Acts and protocols dated December 21, 2020.

Appendix 10.3. Minutes of JSC “Uzbekiston temir yollari” Board from 09.09.2020 on “Electrification, modernization and uncompleted construction and installation

works”

<p style="text-align: center;">“ТАСДИҚЛАЙМАН” “Ўзбекистон темир йўллари” АЖ Бошқарув раиси в.б.  Хасилов Х.Н. «09» 09 2020 йили</p>	
<p style="text-align: center;">Электрлаштириш, модернизация қилиш ва қурилиш йуқуиланмаган объектлардаги қурилиш монтаж ишлари бўйича</p>	
<p style="text-align: center;">БАЁННОМА</p>	
<p>Ташкент ш.</p>	<p style="text-align: right;">09. 09 2020 йили</p>
<p>Рансалик қилади:</p>	<p>Хасилов Х.Н. – бошқарув раиси в.б. “Ўзбекистон темир йўллари” АЖ</p>
<p>Қатнашувчилар:</p>	<p>Техник ва техноложик бошқармаси бошлиғи Каршиев О.К., Капитал қурилиш дирекцияси бошлиқ ўринбасари - Қудратов А.М., ММЙХ бошлиғи - Одиллов А.Р., Йўл хўжаллиғи бошқармаси бошлиғи - Умаров Э.Р., РЖУ-Қўқон бош муҳандиси Умаров Н.О., РСҲ Қўқон бошлиғи- Абдуллаев И.Т., “1-Сон Энергомонтаж поезди” УҚ бошлиқ ўринбасари - Никомов Р., “Боштранслейнх” АЖ ГИП- Шакиров Р., “Тоштемирйўллойиха” директори Рўзиев Р., “Камчик” йўл хўжаллиғи дистанцияси бошлиғи Едиков Ж., ММЙХ участка бошлиғи - Отаев А.</p>
<p style="text-align: center;">Қўн тарихи:</p>	
<p>Лойихаларни амалга ошириш бўйича қурилиш жараёларини ташкиллаштириш, молиявий ва моддий техника таъминоти билан боғлиқ масалаларни ҳал эттиш тўғрисида</p>	
<p style="text-align: center;">(Хасилов, Каршиев, Умаров, Қудратов, Рўзиев, Хасилов)</p>	
<p>Лойихаларни ўз вақтида фойдаланишга топшириш, лойиха объектларини қурилиш жараёларини ташкиллаштириш юзасидан амалга оширилаётган чора-тадбирлар ҳақидаги билдирилган фикр мулоҳазаларини нобатта олган ҳолда, йўқилиш қарор қилади:</p>	
<p>- ПК66-ПК70 темир йўл оралиғида лойихада берилган 1:1.5 ер қийлигини 1:2 қийлиққа ўзгартириш бўйича; - ПК64-ПК70 темир йўл оралиғида кўчки хавфи юқори бўлган ортиқча тупроқлар ўрганилиб, худуддан танқарига чиқариб ташлаш бўйича.</p>	
<p>“Қўқон темир йўл транспорти қасб хунар коллежы биноси ва иншоотларини реконструкция қилиш”</p>	
<p>6. Молия бошқармаси (Холжаев) капитал қурилиш дирекциясига Қўқон темир йўл транспорти қасб хунар коллежы биноси ва иншоотларини қурилиш монтаж ишларини якунилаш учун 4 046 млн.сўм маблағи ажратилиши таъминлансин.</p>	
<p>“Электрлаштирилган Қарши-Термиз участкасини қурилиши”</p>	
<p>7. МТУ Қарши (Порқобиллов) “Тоштемирйўллойиха” МЧЖ билан биргаликда Ақробод ним тортиш станцияси биносини бузиб, арзон янги турдаги композит материаллардан қайта қуриш ва бузилган бинодан чиққан материалларни қайтадан бошқа бинонинг қурилишида ишлатилишини тўғрисидаги буйруқ тайёрласин.</p>	
<p>- 2020 йил 1 октябрда қалар - Ақробод ним тортиш станцияси биносини қайта қурилиши тўғрисидаги таъминлансин;</p>	
<p>8. 2020 Молия бошқармаси (Холжаев) МТУ Қарши талабномасига асосан Ақробод ним тортиш станцияси қайта қурилиши сарф харажатлари учун молиялаштириш таъминлансин.</p>	
<p>“Бухоро-Мискен темир йўл линияси қурилиши”</p>	
<p>9. Тоштемирйўллойиха” МЧЖ(Рўзиев) рзд.Турон-Блок пост 17км темир йўл оралиғининг 350км-356км қисмида хизмат қўрсатиш автойўли учун асфальт ётқизишгача бажариладиган асос қисми бўйича лойиха смета хўажатларини Қўнгирот МТУга белгиланган тартибда тақдим этсин.</p>	
<p>10. МТУ Қўнгирот (Қудовбергенов) рзд.Турон-Блок пост 17км темир йўл оралиғининг 350км-356км қисмида хизмат қўрсатиш автойўли учун асфальт ётқизишгача бажариладиган асос қисми ишлари учун “Ўзтемирйўлқурилишмонтаж” УҚ билан белгиланган тартибда шартнома тузсин ва амалга оширсин.</p>	
<p>“Хўжақент темир йўл бекатини қайта қуриш”</p>	
<p>11. “Боштранслейнх” АЖ (Рўзиев) 17.09.2020 йилда қалар ўз хисобидан ЭЦ пости биноси деворларида пайдо бўлган ёриқлар сабабини аниқлаш тадқиқот ишларини бажариб ёриқларни бартараф эттиш бўйича лойиха смета хўажатларини ишлаб чиқиб дирекцияга тақдим этсин.</p>	

- ПК66-ПК70 темир йўл оралиғида лойиҳада берилган 1:1.5 ор қисқини 1:2 қилишқа ўзгартирили буйича;
- ПК66-ПК70 темир йўл оралиғида кўчи халфи юқори бўлган ерликка тузроқлар ўрнатилиб, хушудан таъқирга чиқариб ташлаш буйича.

"Қўқон темир йўл транспорти қасб хушар қолледаи биноси ва иншоотларини реконструкция қилиш"

6. Мелия бонкармаси (Ходжаев) капитал қурилиш дарахонаси Қўқон темир йўл транслрти қасб хушар қолледаи биноси ва иншоотларини қурилиш монтлаш ишларини якунидаш учун 4 646 млн.сўм қаблаги ақаралиши таъминланган.

"Электрлаштирилган Қарши-Термиз участкасини қурилиши"

7. МТУ Қарши (Нордубилов) "Топтемирйўлобиха" МЧЖ билан бирлигида Ақробод ним тортиш станцияси биносини қузиб, ақрон ишти турдаги қомисит материаллардан қайта қурилиш ва бузилган бинодан чиққан материалларни қайтадан бонша биносини қурилишида ишлатилиши тўғрисидаги буйруқ тайёрланган.

- 2020 йил 1 октябрга қадар - Ақробод ним тортиш станцияси биносини қайта қурилиши тўғрисидаги таъминланган;

8. 2020 Мелия бонкармаси (Ходжаев) МТУ Қарши талабномасига асосан Ақробод ним тортиш станцияси қайта қурилиши сарф қаражатлари учун молиялаштирилиш таъминланган.

"Бухоро Милоси темир йўл линияси қурилиши"

9. Топтемирйўлобиха" МЧЖ(Гўнаев) рзд.Турон-Блок пост 17км темир йўл оралиғинида 350км-356км қисмида қизмат кўрсатитиш автойўли учун асфалт ётқизишга бажариладиган асос қисми буйича лойиҳа смета қувожатларини Қўнгрот МТУга бевиталишга тартибда тақдим этган.

10. МТУ Қўнгрот (Қўлобберганов) рзд.Турон-Блок пост 17км темир йўл оралиғинида 350км-356км қисмида қизмат кўрсатитиш автойўли учун асфалт ётқизишга бажариладиган асос қисми ишлари учун "Ўзтемирйўлқурилишмонтаж" УЖ билан бевиталишга тартибда шартнома тузиш ва амалга оширсин.

"Хўжакент темир йўл бекатини қайта қурилиши"

11. "Бонтранслейнх" АЖ (Рўзиев) 17.09.2020 йилда қадар ўз қисобидан ЭЦ пости биноси деворларига пайдо бўлган ғришлар сабабидан аниқлаш таққикот ишларини бажариб ғришларни бартараф этсин буйича лойиҳа смета қувожатларини ишлаб чиқиб дарахонага тақдим этсин.

"Самарқанда-Бухоро" темир йўл участкасинида юқори тезликда қизмат кўрсатитиш йўловчи поездлар қаражатини таъминлаштарини"

12. Ташқиш таъқикот этган бонкармаси (Ақроров) "Самарқанда-Бухоро" темир йўл участкасинида юқори тезликда қаражатлашучи йўловчи поездлар қаражатини таъминлаштарини" қабиласини молиялаштирилиш мабсаи йўқлиги ҳамда 38,3540 Раёсатлар қурилиш ишларини қаражатларини қоллаш мақсадида, "Ўзбекистон темир йўлобиха" АЖ ишти 2019 йил 28 февралдаги "Ўзбекистон-Бухоро темир йўл участкаси ўз қисми қабиласини ошларини тўғрисидаги №153-Н қонли буйруқига ўзгартирил қаритилиб молиялаштирилиш "Навоб-Бухоро темир йўл участкасинида қурилиш" тизумидан амалга ошларини қўрсатиб ўтилган.

Бевитнома тузувчи

Б.Н.Рихматуллаев