

Environmental Monitoring Report

Project No.: 47017-003
July - December 2020
April 2021

Tajikistan: Wholesale Metering and Transmission Reinforcement Project

Prepared by: the State Establishment «Project Management Unit for Electro-Energy Sector» (SE «PMUES») for the Open Joint Stock Holding company “Barqi Tojik” and the Asian Development Bank

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ABBREVIATIONS

ADB	Asian Development Bank
BT	Barqi Tojik
CEMMP	Contractor's Environmental, Health and Safety Management and Monitoring Plan
CT	Current Transformer
EHS	Environmental, Health & Safety
EMP	Environmental Management Plan
ESMP	Environmental and Social Management Plan
HPP	Hydropower Plant
FAT	Factory Acceptance Test
IEE	Initial Environmental Examination
kV	Kilovolt
MVA	Megavolt Ampere (unit used to measure apparent power)
NCN	Non-Conformity Note
OHTL	Overhead Transmission Line
PAM	Project Administration Manual
PIC	Project Implementation Consultant
PMU	Project Management Unit
PPE	Personal Protective Equipment
RoW	Right-of-Way
SS	Substation
SEMP	Specific Environmental Management Plan
SAEMR	Semi - Annual Environmental Monitoring Review
SSEMP	Site-specific Environmental Management Plan
TL	Transmission Line
VT	Voltage Transformer

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Table of Contents

1	INTRODUCTION	5
1.1	Preamble	5
1.2	Headline Information	5
2	PROJECT DESCRIPTION AND CURRENT ACTIVITIES	6
2.1	Project Description.....	6
2.2	Project Contracts and Management	7
2.3	Project Activities During Current Reporting Period	9
2.4	Description of Any Changes to Project Design	10
2.5	Description of Any Changes to Agreed Construction Methods	11
3	ENVIRONMENTAL SAFEGUARD ACTIVITIES	12
3.1	General Description of Environmental Safeguard Activities	12
3.2	Site Inspections	12
3.3	Issues Tracking (Based on Non-Conformance Notices).....	17
3.4	Trends.....	19
4	RESULTS OF ENVIRONMENTAL MONITORING	20
4.1	Overview of Monitoring Conducted during Current Period	20
4.2	Trends.....	20
4.3	Summary of Monitoring Outcomes	20
4.4	Material Resources Utilization.....	20
4.4.1	Current Period.....	20
4.4.2	Cumulative Resource Utilization	20
4.4.3	Waste Management	20
4.4.4.	Cumulative Waste Generation	21
4.5	Health and Safety	21
4.5.1	Community Health and Safety	21
4.5.2	Workers Health and Safety.....	21
4.6	Grievance and Redress Mechanism	22
4.7	Training	22
5	FUNCTIONING OF THE SEMP	23
5.1	SEMP Review	23
6	GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT.....	24
6.1	Good Practice	24
6.2	Opportunities for Improvement.....	25
7.	SUMMARY AND RECOMMENDATIONS	27
7.1	Summary	27
7.2	Recommendations	27

ANNEXES.....	29
Annex I: Main parties involved and their updated contact details.....	29
Annex II: Non-Conformance Notice after visiting the Lot 1 substations in December	30
Annex III: Report submitted after breaking the concrete floors in the former workers campsite near Ayni Substation.....	36
Annex IV: COVID-19 Spread prevention measures designed by Lot 1 Contractor	41
Annex V: Post completion monitoring by the PMU.....	44

1 INTRODUCTION

1.1 Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for the Wholesale Metering and Transmission Reinforcement Project.
2. This report is the 10th EMR for the project for the July-December 2020 reporting period.
3. The Project has been extended until March 2022 after the incorporation of Package 4.

1.2 Headline Information

4. In Lot 1 on Wholesale Metering System, the meters Factory Acceptance Test was conducted successfully in July 2018 by the Contractor Huawei/ TBEA. The Contractor has selected the subcontractor Cuculus GmbH for the software part. A problem with the firmware of the meters has been detected, so the testing of the firmware supposed to be repeated along with the meters' firmware update at the substations. Firmware activities are still on a pending stage because of transportation limitation caused by the COVID-19 virus. 100% of the meters in the substations have been installed as of end of December 2020. The construction of the foundations and erection of the Current and Voltage Transformers inside the substations was completed by September 2019.
5. Regarding the Amendment 2 of Lot 2's work, which includes the renovation of 110 kV switchyard at Rudaki Substation, it started in April 2018. Every activity was developed inside the plot of the Substation and on a working installation. TBEA completed the construction of OHL in October 2018. Renovation of SS Rudaki and extension of SS Ayni were completed in March 2019.
6. Package 4. The objective of the additional subproject is to enhance the system enabling it to control the fluxes of energy in the Transmission Grid item by item from higher to lower levels, meaning all the items, lines, power transformers and busbars in the levels of voltage 500, 220, 110 and 35 kV. The objective is increasing redundancy of measurements on the top levels and full control of losses. Besides, it can provide relevant information of fluxes of energy between different segments of the grid. Package 4 activities are executed inside the substations which are already owned by Barqi Tojik and are located geographically around the country at the substations in the Khatlon region (Vakhsh, Yavan, Kulyab and Nurek districts), Sughd region (Isfara, Istarafshan, Khujand, Penjakent) and the Regions of the Republican Subordination (Rasht and Varzob districts). The environmental assessment was carried out and environmental safeguards DDR was approved in 31 March 2020, concluding that the implementation of this subproject will have limited potential environmental impacts that will have to be mitigated through the implementation of the revised Environmental and Social Management Plan (SSEMP) and the topic-focused procedures and management plans to be developed by the Contractor. Package 4 was awarded in December 2020 to the JV TGEM-SANXING and it is scheduled to be completed by 31 March 2022. To be noted that Package 4 has been referred as Lot 3 in previous safeguards monitoring reports.

2 PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

7. The Republic of Tajikistan has received a grant from the Asian Development Bank (ADB) towards the cost of the Wholesale Metering and Transmission Reinforcement Project. It is expected that the proposed project will improve electricity supply to households and industries in the country by reducing losses through metering entire high and medium voltage transmission grid and expand transmission capacity in Panjakent region that used to suffer from load shedding.
8. Parts of this financing are being used for payments under the contract for: Lot 1) Installation of 1,682 wholesale meters and settlement system including 846 current transformers and 744 voltage transformers in most of the substations along the country, introduction of an advanced metering infrastructure, and introduction of a settlement system; Lot 2) Rehabilitation of Substation Rudaki, Extension of Substation Ayni and Construction of new 220 kV Over Head Transmission Line (OHTL) between Substation (SS)Ayni 220 kV and SS Rudaki, approximately 95 km of new single circuit single conductor with rated capacity of 320 MVA; and the new Package 4) .Replacement or installation of 448 smart meters and 121 metering panels in 175 substations, replacement or installation of 300 current transformers (CTs),105 voltage transformers(VTs) and 196 arresters, installation of modems/data concentrators in the substations, installation of meter cabinets, overvoltage limiters and other minor equipment, communication equipment installation, testing, commissioning and training.
9. The location of the Lot 2 Project component is presented below in Figure 1 in the scale of the country.



Figure 1. Location of the Project (Lot 2)

10. The location of the Project component Package 4 is presented below in Figure 2.

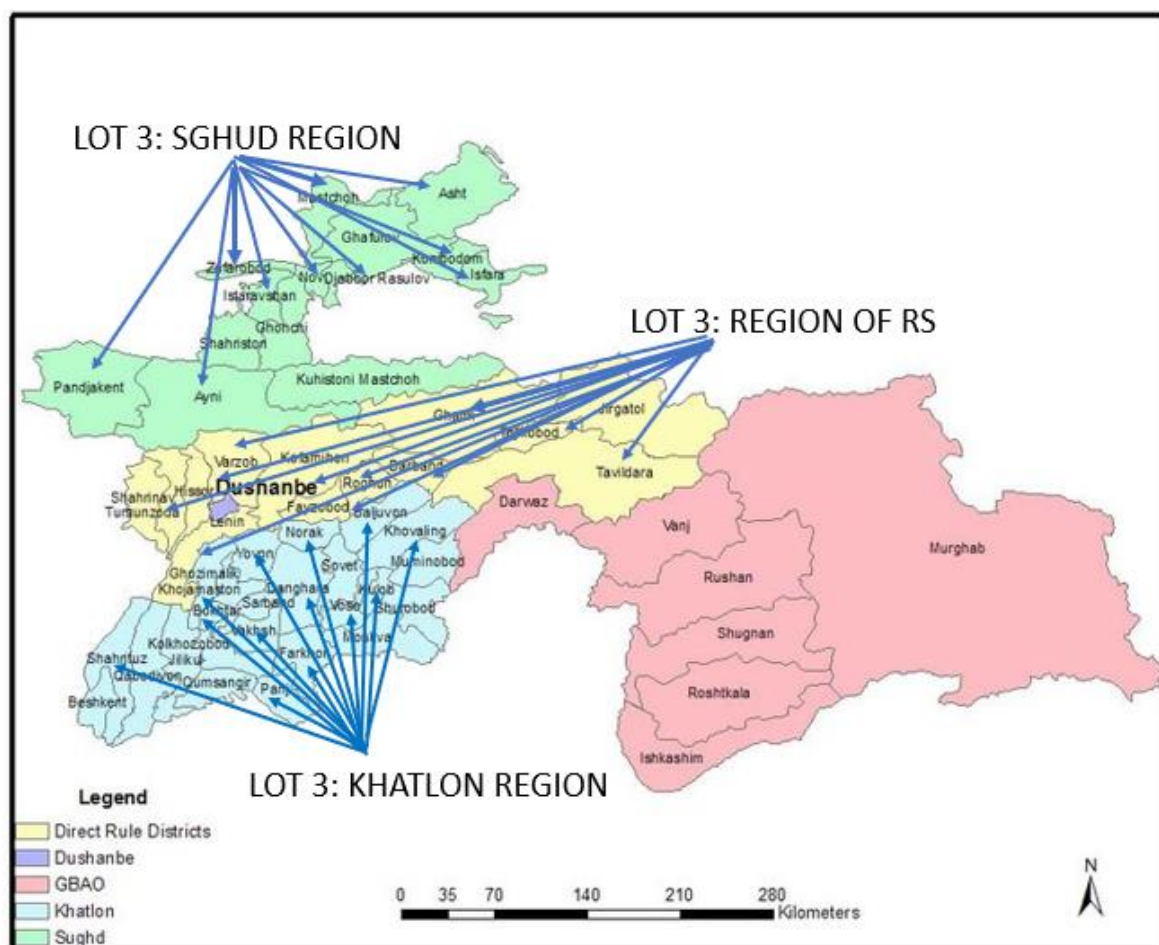


Figure 2. Location (through arrows) of the SSs in the scope of Package 4 activities.

2.2 Project Contracts and Management

11. The Executing Agency for the Project is the public Open Stock Holding Company Barqi Tojik. The Executing Agency has set up a Project Management Unit (PMU) to manage daily coordination, implementation, monitoring and administration activities of the Project.
12. The PMU includes the Projects Monitoring Department whose responsibilities include, among other things, the management of all social and environmental aspects of the project. The Head of the Environment of the Projects Monitoring Department is Mr. Karimov Sirojiddin. The Chief EHS Specialist at the PMU is Mr. Aziz Holov.
13. The Project Implementation Consultant (Mercados-Aries International, formerly AF-Mercados) is providing technical assistance to the PMU in the management and reporting of the project. The PIC is responsible for supervising and reporting on the Contractor's performance in the implementation of the environmental safeguards. The contract with Mercados-Aries International was signed on August 2015 and the current closing date is February 2022.
14. The PIC's international environmental safeguards specialist was Mr. Pasi Vahanne and the national environmental safeguards specialist was Ms. Muazama Burkhanova until July

2018. Afterwards, the position was taken by the international safeguards specialist Mrs. Patricia Ramos Peinado. Given that Mrs. Ramos could not travel to Tajikistan during the period January-June 2020 due to the COVID-19 pandemic, the national environmental and social specialist, Isaev Davron took care of the field visits to the Lot 1 substations for the period 2020 S2 and Patricia Ramos did the reporting. Isaev Davron performed the same role during the previous reporting period January-June 2020 and is familiar with the project.

15. The EHS management of the project for the reporting period 2020 S2 is as shown in the updated Figure 3.

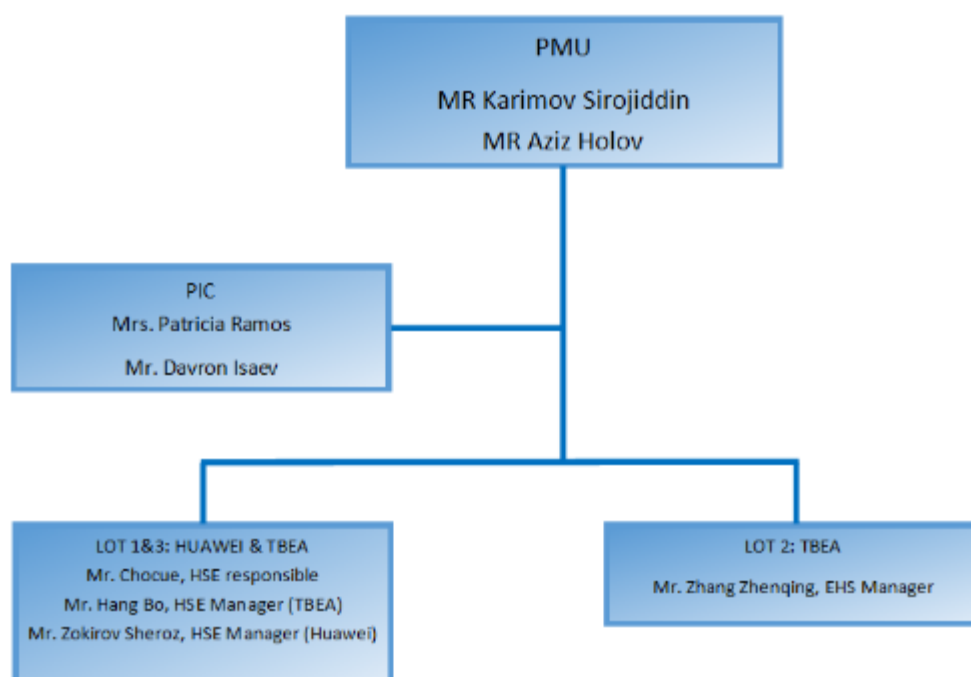


Figure 3. Safeguards management of the project for 2020 S1

16. The contractors for Lot 1 are Huawei & TBEA. The contract was signed on 6 December 2016 and the original completion date was July 4, 2019. The contract was extended until 1 March 2020. The Contractor has requested a contract extension of 5 months due to the period that the implementation has been on-hold due to the COVID-19 pandemic (from 13 April to end July 2020). The contractor for Lot 2 is TBEA and the contract was signed on 28 December 2015 and its end date as stated in the amendment 4 of the contract is 31 December 2019. The contract was extended until 1 March 2020. Package 4 was awarded in December 2020 to the JV TGEM-SANXING and it is scheduled to be completed by 31 March 2022. 31 March 2022 is the planned closing date of the project.
17. The names of the main parties and focal points involved in the project can be found in Annex I together with their contact details.

18. The contracts are being managed by the Project Management Unit of the power utility Barqi Tojik with the support of the consultancy company Mercados-Aries International in the role of Project Implementation Consultant.

2.3 Project Activities During Current Reporting Period

19. Construction activities for the reporting period are described in Table 1 below. Lot 2 was fully completed in a previous period and Package 4 was just awarded in December 2020. Lot 1 activities have been completed by December 2020.

Table 1. Progress on the construction activities on Lot 1.

N	Month 2020	Construction activities	Percentage of completion
7	July	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	88.1%
8	August	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	88.1%
9	September	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	92.2%
10	October	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	92.2%
11	November	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	92.2%
12	December	Lot 1: Replacement and/or Installation of the CTs/VTs.	100%
		Lot 1: Installation of meters.	100%

20. In Lot 1 on Wholesale Metering System, the meters Factory Acceptance Test was conducted successfully in July 2018 by the Contractor Huawei/ TBEA. The Contractor has selected the subcontractor Cuculus GmbH for the software part. A problem with the firmware of the meters has been detected, so the testing of the firmware will have to be repeated and the firmware at the meters in the substations will have to be updated. Due to the global pandemic situation with COVID-19 selected subcontractor Cuculus GmbH could not travel to Tajikistan, hence, firmware testing and adjusting activities are still pending. The construction of the foundations and erection of the Current Transformers (for commercial metering points in 110 kV, 35 kV, 10 kV and 6 kV systems) and Voltage Transformers (for commercial metering points in 110 kV, 35 kV, 10kV, 6kV and 0.4 kV) inside the substations was completed by September 2019. Meter deployment in all the substations located along the country has been completed by December 2020.
21. The project activities for Lot 2 are the reinforcement of the transmission grid in the Panjakent area, through the construction of a 220 kV Over Head Transmission Line (OHTL) between Ainy and Rudaki Substations, the enhancement and renovation of Rudaki SS, and the construction of a new bay in Ainy SS. The Contractor TBEA completed the works on 25 January 2018 for the original scope. Regarding the Amendment 2 of Lot 2 work, which is the renovation of 110 kV switchyard at Rudaki Substation, it started in

April 2018. Every activity was developed inside the plot of the Substation and on a working installation. TBEA completed most of the works for the variation order on 13 September 2018.

22. The objective of the additional subproject -Package 4- is to enhance the system enabling it to control the fluxes of energy in the Transmission Grid item by item from higher to lower levels, meaning all the items, lines, power transformers and busbars in the levels of voltage 500, 220, 110 and 35 kV. The objective is increasing redundancy of measurements on the top levels and full control of losses. Besides, it can provide relevant information of fluxes of energy between different segments of the grid. Package 4 activities are executed inside the substations which are already owned by Barqi Tojik and are located geographically around the country at the substations in the Khatlon region, Sughd region and the Regions of the Republican Subordination. Package 4 was awarded in December 2020 to the JV TGEM-SANXING and it is scheduled to be completed by 31 March 2022. The construction activities have not yet started.
23. In the table below, it can be seen the number of workers employed for each lot during the reporting period.

Table 2. Number of Workers involved in each Lot (July-December 2020).

Project lots	Number of workers
Lot 1	24
Lot 2	0
Package 4	0 (works did not start yet)

2.4 Description of Any Changes to Project Design

24. An Amendment number 2 to the contract with the Lot 2 contractor and the Project Implementation Consultant (PIC) were signed in order to include in the project scope the rehabilitation of the 110kV bays at Rudaki SS. The "Due Diligence Report Social and Environmental Issues Barqi Tojik and TBEA Amendment no.2 to contract Lot 2" was prepared in October 2017. The implementation of this variation order started on 16 February 2018 and it got mostly completed by 13 September 2018. The completion certificate was issued on 27 September 2018.
25. Package 4 activities were added to the project scope in June 2020. The objective of the additional subproject is to enhance the system enabling it to control the fluxes of energy in the Transmission Grid item by item from higher to lower levels, meaning all the items, lines, power transformers and busbars in the levels of voltage 500, 220, 110 and 35 kV. The objective is increasing redundancy of measurements on the top levels and full control of losses. Besides, it can provide relevant information of fluxes of energy between different segments of the grid. Specifically, Package 4 involves the replacement or installation of 448 smart meters and 121 metering panels in 175substations, replacement or installation of 300 current transformers (CTs),105 voltage transformers (VTs) and 196 arresters, installation of modems/data concentrators in the substations, installation of meter cabinets, overvoltage limiters

and other minor equipment, communication equipment installation, testing, commissioning and training. Package 4 activities are executed inside the substations which are already owned by Barqi Tojik and are located geographically around the country at the substations in the Khatlon region, Sughd region and the Regions of the Republican Subordination. The Initial Environmental Examination (IEE) for the whole Project was updated in August 2020 to incorporate the Package 4 activities and cleared/disclosed by ADB¹.

2.5 Description of Any Changes to Agreed Construction Methods

26. No changes were done during reporting period.

¹ <https://www.adb.org/projects/documents/taj-47017-003-iee>

3 ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

27. Due to the restrictions of movement for slowing down the infections by COVID-19 coronavirus imposed by the PMU, the Government of Tajikistan and other governments, it was not possible for the International Safeguards Specialist to travel to Tajikistan and perform the site visits. Given that scenario, the National Safeguards Specialist performed the site visit of substations around Dushanbe City under Lot 1 together with the PMU and representatives of the Contractor in July and December 2020. No complaints were received, and no accidents happened during the reporting period, as per information received from the PMU. The SSEMPs are being generally implemented except some issues that can be found on Table 4, which were eliminated by 31.12.2020.

3.2 Site Inspections

28. No site visits were implemented by the International Safeguards specialist of the PIC within July-December 2020 period due to restrictions on movement caused by COVID-19 pandemic. Follow-up on the non-conformities was carried out by HSE engineers of the Contractor and Environmental Specialists of the PMUES as well as the PIC.
29. Site visits were performed by the PIC in July 2020 and in December 2020.

Table 3. Audits undertaken during the current period.

Organization	Date of Visit and Place	Auditors Name	Purpose of Audit	Significant Findings
PIC	<p>17/07/2020, visit of: Shursay, Vostochnaya and Akademgorodok SS (LOT 1) together with the PMU EHS Chief Specialist Mr. Aziz Holov. And Mercados specialist Gulchehra Samadova</p> <p>21/07/2020, visit of Shahri, Buston and Promishlennaya SS under LOT 1</p>	Lot 1: Davron Isaev, Mr. Aziz Holov, Gulchehra Samadova, TBEA representative Lu Hanwei	Inspection of the environmental compliance aspects of the project activities. Updating the status of previously identified environmental and safety violations	<p><u>LOT1</u></p> <p>Shursay SS: Transformer oil spills are present on a gravel within substation territory, empty transformer oil barrels are stored inside the substation.</p> <p>Shursay SS: Premises where smart meter rack was installed is used for undesignated purposes by the substation employees. This poses health and safety risks.</p> <p>Akademgorodok, Vostochnaya and Shursay Substations: Reinstatement of the area around the poles of installed CTs and VTs was not done yet, no compacting performed.</p> <p>Academgorodok SS: Meter rack is mounted under split unit air conditioner unit which may cause short circuit of meters or risk of electric shock in event of condensation or water leakage.</p> <p>Two out of four fire extinguishers in Akademgorodok SS are not operational</p>

Organization	Date of Visit and Place	Auditors Name	Purpose of Audit	Significant Findings
PIC	2/12/2020 , visit of: Shursay SS, Vostochnaya SS, Akademgorodok SS, Promishlennaya SS, Shahri SS and Buston SS (Lot 1) together with the PMU EHS Chief Specialist Mr. Aziz Holov, the PMU Head of Construction Department Mr. Jurabek Sharipov, and TBEA project manager Mr. Lu Huang	Mr. Davron Isaev, Mr. Aziz Holov	Audit of the ESMP aspects of the project activities performed during the last 6 months	<p>LOT 1</p> <p>Compaction not yet performed at the following SSs: Akademgorodok Buston Promishlennaya Shursay</p> <p>Levelling not yet performed at the following SSs: Akademgorodok Buston Shahri</p> <p>Gravel not put back at the following SSs: Akademgorodok Buston Promishlennaya Shahri Shursay</p> <p>Outer walls of Vostochnaya Substation have been strengthened by Barqi Tojik to prevent unauthorised access.</p> <p>No uninstalled equipment or garbage laying around in the visited substations.</p> <p>Shahri SS: ongoing graveling and land-levelling activities that were initiated by Barqi Tojik. Graveling and land-levelling activities were also done to the TBEA-installed power transformers.</p> <p>Shursay SS: Substation site was cleaned from empty oil barrels and some minor construction waste.</p>

30. Subsidence has occurred under some of the poles where equipment under LOT 1 was installed. This is happening due to the lack of compaction of the land. In some poles the leveling was not performed and the gravel was not put back. This poses a health and safety risk and the stability of some of the poles is even threaten. Pictures taken with poles with

these issues in Buston, Promishlenaya and Shursay substations can be found below. It is recommended that Barqi Tojik follow-up closely on the re-compaction, leveling and graveling of the poles affected by the project activities under LOT 1 since many of them might be affected by shortcomings. Barqi Tojik should make sure the mitigation activities get implemented before the LOT 1 is officially accepted by the Government. It is suggested that a working group is created for this purpose.



Figure 4. Effects of the lack of compaction, levelling and gravel put back in a pole in Buston substation, Dushanbe, December 2020.



Figure 5. Effects of the lack of compaction, levelling and gravel put back in a pole in Promishlenaya substation, Dushanbe, December 2020.



Figure 6. Effects of the lack of compaction, levelling and gravel put back in a pole in Shursay substation, Dushanbe, December 2020.

31. Meter rack in Akademgorodok SS is mounted under split air conditioning unit (image 13). This may cause short circuit of meters or risk of electric shock in event of condensation or water leakage to the meter rack. The Contractor TBEA has to move the meter rack or Barqi Tojik to move the AC unit so the AC unit is not anymore directly on top of the meters rack. Barqi Tojik to make a decision on what is the preferred and most adequate solution and then making sure it gets implemented.



Figure 7. AC split unit located on top of a meters rack, Akademgorodok Substation, Dushanbe, December 2020

32. This is the summary of the findings of the inspections undertaken in the current period:

Table 4. Summary of the findings.

Main finding	Corrective actions applied or needed	Status
<u>LOT 1</u> Major: Walls of Vostochnaya SS have been strengthened to prevent unauthorized access. This is outside the project scope.	Barqi Tojik has upgraded the walls of Vostochnaya SS and no easy access can be gained into the substation now, eliminating the risk for the Community Health and Safety.	Solved.
<u>LOT 1</u> Major: Deficient compaction, levelling and gravel not put back at the following SSs: Akademgorodok Buston Promishlenaya Shahri Shursay	According to the notice of perform the trouble-shooting measures (Annex II). TBEA Company eliminated all trouble-shooting.	Solved.

33. The PMU has issued environmental and social completion certificates that can be found in Annex V.

3.3 Issues Tracking (Based on Non-Conformance Notices)

34. The status of corrective actions proposed during the previous reporting period that are still pending is presented in Table 5 below. Within the reporting period, PMU issued one major non-conformance notices to the contractor in relation to the identified shortcomings in Lot 1 substations after the site visits. The non-conformance notice can be found in Annex II.

Table 5. Environmental issues tracking

Date of the SAEMR	Non-conformity	Corrective actions applied or needed	Status
2020 S1	LOT 2 Mayor: The set concrete floors were still in place in the Ayni former labor camp (as informed by the PMU)	Concrete floors to be broken and site to be brought to previous condition.	Solved in August 2020. See Annex III.
2020S1	<u>Lot 1 and 2</u> Mayor: Contractor's Monthly Environmental Monitoring Reports not available	Contractor to submit the Monthly Environmental Monitoring Reports since July 2018.	Pending.
2019 S2	Lot 1 (Akademgorodok, Vostochnaya and Shursay Substations) Mayor: Reinstatement of the area around the poles of	Compacting and gravelling has to be done in the substations in order to	Pending.

Date of the SAEMR	Non-conformity	Corrective actions applied or needed	Status
	installed CTs and VTs was not done yet, no compacting and gravelling done.	reinstate the area around the poles of installed CTs and VTs.	
2019 S2	Lot 1 Minor: Some plastic waste, oily rags and empty cans were observed at Akademgorodok substation.	Waste to be collected and disposed safely.	Solved.
2019 S2	Lot 1 Major: No grievance book available at the substations where works are performed.	TBEA workers brigades shall bring a grievance book with them when they move from substation to substation to perform the works.	Solved.
2019 S2	Lot 2 Major: Soil polluted with refrigeration oil from the uninstalled autotransformers in Rudaki Substation. The 7 metal tanks in the regional BT warehouse next to the substitution continue to drip oil.	Barqi Tojik performed the safe pick-up and disposal of the soil polluted with refrigeration oil. All these 7 metal tanks were fixed.	Solved

35. Summary of Issues Tracking Activity for current period.

Table 6. Summary of Environmental and H&S Issues Tracking Activity for Current Period

Total Number of Issues for Project	10
Number of Open Issues or issues with unknown status	6
Number of Closed Issues	4
Percentage Closed	40%
Issues Opened this Reporting Period	4
Issues Closed this Reporting Period	4

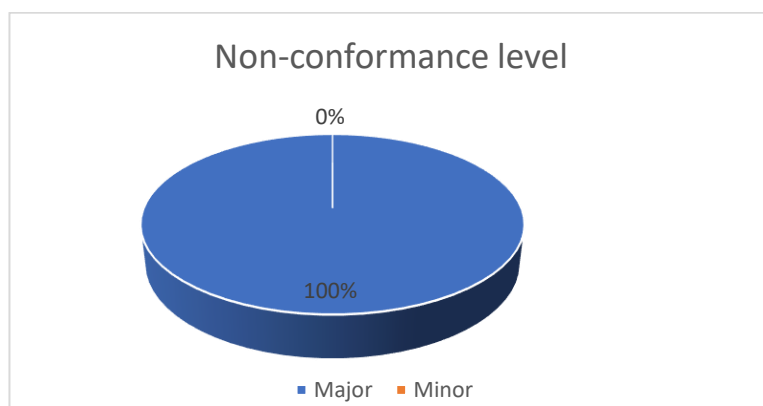


Figure 8. Summary of issues by non-conformance level for by end of 2020.

3.4 Trends

36. The trends from previous periods reports and the current period information are shown in Table 7.

Table 7. Trends on % of closed issues and % of issues closed late.

Semi-Annual Report No.	Total No. of Issues	% Issues Closed	% Issues Closed Late or still open
9	10	40	60
8	7	14	86 (Note: no monitoring site visits could be performed due to COVID-19)
7	9	22	78
6	8	12	88
5	6	50	50
4	11	100	0
3	10	70	30
2	13	85	15
1	12	92	8

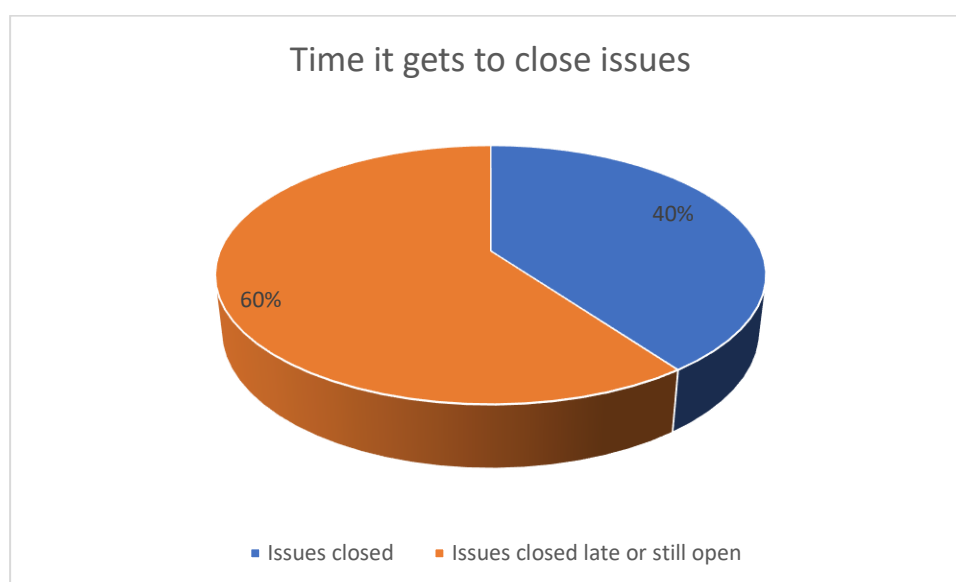


Figure 9. Summary of issues by time it gets to close them in the current semi-annual report.

37. The percentage of issues that are getting closed is medium and it comes from medium-low levels. There is a recurrent trend for Contractor not submitting the Monthly Safeguards Monitoring Reports. They were received only during the first four months for Lot 2 and they have never been received in relation to Lot 1 Barqi Tojik issued several non-conformance notices on it.

3.5 Unanticipated Environmental Impacts or Risks

38. No unanticipated environmental impacts/risks were observed in this reporting period.

4 RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

39. Environmental Monitoring typically consists of two kinds of activities; visual inspections and inspections at the construction sites, and measurements to gain numerical data. Environmental Monitoring Lot 1 and Lot 2 of the Wholesale Metering and Transmission Reinforcement Project is based on the IEE and ESMP attached to it, as well as on Contractor's Environmental Monitoring Plan.
- a. Air Quality. In accordance with EMP/SSEMP no instrumental measurement of air quality is foreseen, only visual observations. Vehicles of Contractor were regularly maintained. No other emissions observed/recorded.
 - b. Water Quality. In accordance with EMP/SSEMP no instrumental measurement of water quality is foreseen, only visual observations.
 - c. Noise. All works during the reporting period were conducted inside the SS and included mostly assembly and installation. Therefore, there was no need to measure the noise level.
 - d. Flora and fauna. All works during the reporting period were conducted inside the SS. No illegal pouncing or cutting of trees were recorded.

4.2 Trends

40. Non-applicable.

4.3 Summary of Monitoring Outcomes

41. Non-applicable.

4.4 Material Resources Utilization

4.4.1 Current Period

42. The contractors are only aware of the cumulative resource utilization.

4.4.2 Cumulative Resource Utilization

43. Water consumption in the substations under Lot 1 has been estimated on 7,600 liters for drinking only during the current reporting period. The workers stay in dormitories, hotels and houses.
44. The estimated gasoline consumption for lots 1 and 2 has been 5 tons and 4 tons of diesel for the current reporting period.

4.4.3 Waste Management

45. Under Lot 1, 1.5 tons of domestic and hazardous waste have been generated and they

have been channelized through the licensed local waste management companies that have frame contracts in place with the BT substations. Un-installed substation equipment has been transferred to several BT's warehouses to be reused as spare parts.

4.4.4. Cumulative Waste Generation

Table 8. Cumulative waste generation in the project.

# of Lot	Non-hazardous waste	Hazardous waste	Un-installed equipment
Lot 1	Very limited generation of domestic waste. The wood boxes where the equipment is transported are collected by people to use them. Other non-hazardous waste is managed by the licensed local waste management companies that have frame contracts in place with the BT substations.	The little pieces of cables are given to a cables manufacturing company. Rest of hazardous waste managed by the licensed local waste management companies that have frame contracts in place with the BT substations.	Kept at Barqi Tojik warehouses to be used as spare parts in the future.
Lot 2	Agreement with a certified solid waste management company for all the activities.	Most of them were brought to Dushanbe. During the construction, the gravel polluted with oil was sealed in a box and put on a special dump site near the border with Uzbekistan.	Kept at Barqi Tojik warehouse in Sughd province to be used as spare parts in the future.
Package 4	Works have not started.	Works have not started.	Works have not started.

4.5 Health and Safety

4.5.1 Community Health and Safety

46. During the current reporting period from July to December 2020 no accidents or incidents have been recorded.

4.5.2 Workers Health and Safety

47. As per the statistics facilitated by the Government of Tajikistan and put in bulked at the WHO COVID-19 dashboard website, as per 19 January 2021, there have been 13,714 confirmed cases in the country and 91 deaths due to the virus since the beginning of the pandemic. The number of confirmed cases has usually been between 30 and 50 cases per day during the reporting period. This data of incidence of the virus is very low when compared with other countries.
48. LOT 1 Contractor was mandated to develop a COVID-19 pandemic management plan as part of the SSEMP, the Contractor had to specifically prepare an attachment to the Site-Specific Environmental Management Plan (SSEMP) in terms of health and safety

plan (HSP) and emergency response plan (ERP). Answering to this request, the Contractor submitted a list of 10 measures that is enclosed in Annex IV. These measures are found adequate by the PIC but: 1. The measures make reference mainly to the Contractor offices, but a big part of the Lot 1 activity happens at the substations; 2. It should be a plan and not a list of measures; 3. There is lack of a detailed COVID-19 Emergency Response Procedure to be followed in case of suspected positive cases, confirmed positive cases and new incorporations of workers travelling from abroad; and lately, should identify and propose how to cover the training needs. Therefore, a comprehensive COVID-19 Management Plan shall be submitted.

- 49. PIC workers based in Dushanbe and working through the subcontractor Taj Hydro, are attending normally to the office now.
- 50. In relation to the on-going Lot 1, the Contractor expressed that there was no accident since they started with the works on October 10, 2018.
- 51. The Contractor EHS responsible for LOT 1 pointed out that a training on H&S is provided to all the workers before they start to work in the project. The contents of that training are: First aid for people who got in touch with electrical current and emergency cases; First aid for people who got injured; Conducting artificial reanimation; Reliving a suffering person from electrical current; Other: safe techniques for decommissioning an electrical device. The document indicates the location of the hospitals in the surrounding of the substations. He said that the workers have been using the required Personal Protective Equipment (PPE).

4.6 Grievance and Redress Mechanism

- 52. There were no complaints recorded during this reporting period as per the PMUES feedback.

4.7 Training

- 53. Health and safety briefings for workers under Lot 1 were performed on a daily basis before initiating construction and meter installation activities. The Lot 1 Contractor has to clarify if those H&S inductions were also covering COVID-19.

5 FUNCTIONING OF THE SEMP

5.1 SEMP Review

54. The status of the environmental management plans is presented in Table 9 below.

Table 9. Status of Environmental Management Plans.

Management Plan	Date of approval	Date of Submission
Contractor's Environmental Management Plan, including H&S Plan for Lot 1 and 2	January 2017	June 2016
Contractor's Site Specific Environmental Management Plan for Lot 1 and 2	June 2017	June 2017
Updated Social and Environmental Management Plan (annex to the revised IEE)	September 2020 (previous version from January 2017)	August 2020

55. The IEE, including the SEMP, is now including Package 4. The IEE indicates that the following mitigation measures will have to be developed and implemented as part of the pre-construction stage: Preparation of a Project specific HSE Policy; Constitute a Project HSE organization and nominate a EHS Manager; Preparation of a Project Specific Construction HSE Plan; Grievance Redress mechanism established and functional; Preparation of Emergency Preparedness and Response Plan; Preparation of a Traffic Management Plan.
56. The Contractor is able in general terms to implement the mitigation and monitoring measures set in the Site-Specific Environmental Management Plans (SSEMPs). The reporting as required in the SSEMPs for LOT 1 has never been performed by the Contractor despite the non-conformity notices issued by the PMU.
57. The mitigation measures set out in the LOT1 SEMP are still appropriate and they are working as intended.

6 GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

58. Barqi Tojik initiated the land-levelling and graveling activities in Shahri Substation, performing them also in the TBEA-installed power transformers. Although it is the responsibility of the Contractor to fix that situation, it is still a good practice that Barqi Tojik is mending it.



Figure 10. Barqi Tojik staff performing land-levelling and graveling activities, Shahri Substation, Dushanbe, December 2020.

59. Outer walls of Vostochnaya Substation have been strengthened by Barqi Tojik to prevent unauthorized access. This is outside the project scope, but it is reported due to the implications for community health and safety.



Figure 11. Outer walls of the Substation have been strengthened, Vostochnaya Substation, Dushanbe, December 2020.

6.2 Opportunities for Improvement

60. Almost each of the visited substations under LOT 1 had autotransformers that had leaked upon filling the insulation oil. Though those transformers were out of project scope, Barqi Tojik and substation staff were recommended to take actions on preventing the further pollution of the soil and gravel, and potentially water. PIC environmental specialist gave relevant recommendations to the PMU regarding safe handling and disposal of the oil-polluted soil and gravel.



Figure 12. Gravel polluted with auto-transformer oil, Vostochnaya Substation, Dushanbe, December 2020.



Figure 13. Gravel polluted with oil, Shursay Substation, Dushanbe, December 2020.

61. It was observed in Shursay Substation that the cables are exposed at the cable duct. This poses an electric shock risk for the Substation staff.



Figure 14. Cables exposed in a cable duct, Shursay Substation, Dushanbe, December 2020.

7. SUMMARY AND RECOMMENDATIONS

7.1 Summary

- 62. No complaints, accidents or incidents were recorded during the reporting period.
- 63. The closure of environmental and H&S has improved during the current reporting period. Breaking the concrete floors in the former Ayni workers campsite and Lot 1 workers carrying a complaint register when moving from one substation to another to perform the works, as well as tidying up the substations of uninstalled equipment and garbage. have been meaningful improvements.
- 64. The re-compaction, levelling and graveling of the poles affected by the project activities under LOT 1 is the main issue to be tackled at the moment.

7.2 Recommendations

- 65. It is recommended that Barqi Tojik follows up closely on the re-compaction, leveling and graveling of the poles affected by the project activities under LOT 1 since many of them might be affected by shortcomings. Barqi Tojik should make sure the mitigation activities get implemented before the LOT 1 is officially accepted by the Government. It is suggested that a working group is created for this purpose.
- 66. Perform a bi-monthly coordination meeting on the EMP and the Corrective Action Plans implementation between the PMU and the PIC, to which representatives of the Contractors might be invited. By having a more fluid and frequent communication channel, there will be a push for making the implementation of those measures smoother and quicker.
- 67. It is suggested that there is close follow-up by Barqi Tojik on the environmental and social mitigation measures to be implemented in the current pre-construction stage for Package 4 by the new Contractor. These mitigation measures are: Preparation of a Project specific HSE Policy; Constitute a Project HSE organization and nominate a EHS Manager; Preparation of a Project Specific Construction HSE Plan; Grievance Redress mechanism established and functional; Preparation of Emergency Preparedness and Response Plan; Preparation of a Traffic Management Plan. The monitoring reports from the Contractor of Package 4 JV TGEM-SANXING have to include a safeguards section. PIC support on this will be provided through the suggested bi-monthly meetings as well as through emails and when demanded by Barqi Tojik. Learning from experience with other Contractors in this project, it is better to be pro-active when it comes to safeguards and to get things right from the beginning.
- 68. The following Corrective Action Plan has been prepared to correct the identified non-conformances.

Table 10. Corrective Action Plan for January-June 2021.

Issues, actions and responsible party	Criteria	Schedule
1. TBEA to submit the Monthly Environmental Monitoring Reports for LOT 1 and LOT 2 since July 2018.	Environmental and Social Management Plan.	By March 22, 2021.
2. PMU to extend Non-Compliance notices to the Contractors for the open issues above and to attach this Corrective Action Plan to them for open issues apart from the lack of compaction, leveling and graveling at the poles in the substations.	Best practice. The PMU are the ultimate responsible of the implementation of the safeguards.	By March 12, 2021.
3. TBEA to re-do the compaction, leveling and graveling of the following SSs: Akademgorodok, Buston, Promishlenaya, Shahri and Shursay.	Environmental and Social Management Plan.	By March 31, 2021.
4. The Contractor TBEA to move the meter rack or Barqi Tojik to move the AC unit so the AC unit is not anymore directly on top of the meters rack.	Environmental and Social Management Plan.	By March 31, 2021.
5. LOT 1 Contractor should prepare and submit a solid COVID-19 Management Plan shall be submitted. Refer to paragraph 47 for more details.	ADB Security Policy Statement for 2009 (SPS).	By March 22, 2021.

ANNEXES

Annex I: Main parties involved and their updated contact details.

Party	Focal point	Contact details of the focal point
Implementing Agency: SE PMUES	Head of the Project Management Unit, Mr. Asrorzoda Nusratullo Sattor	pmu_tj@mail.ru
	Head of the Environmental Sector of the PMU, Mr. Karimov Sirojiddin	pmu_tj@mail.ru
	Chief EHS Specialist at the PMU, Mr. Aziz Holov	pmu_tj@mail.ru
Funding institution: ADB	ADB Regional Environmental Safeguards Consultant. Mrs. Malika Babadzhanova	mbabadjanova1.consultant@adb.org
	ADB National Resettlement Specialist. Mr. Faizullo Kudratov	fkudratov.consultant@adb.org
Project Implementation Consultant: Mercados-Aries International (formerly AF Mercados EMI)	MAI Project Director Mr. Francisco Romero	francisco.romero@mercadosaries.com +34 665024822
	MAI Environmental and Social Specialist, Mrs. Patricia Ramos	patricia.ramos@mercadosaries.com +34 663999667
Lot 1 Contractor: Huawei & TBEA	Mr. Chocue, EHS Responsible Mr. Hang Bo, EHS Manager (TBEA) Mr. Zokirov Sherov, EHS Manager (Huawei) Mr. Jin Dean, EHS Site Manager (TBEA) Mr. Huseynov Ilhom, EHS Site Manager (Huawei) Mr. Guan Yonggang, EHS Site Manager (TBEA) Mr. Nazarhudoev, EHS Site Manager (Huawei) Mr. Zhurakulov Doshod, EHS Site Manager (Huawei)	
Lot 2 Contractor: TBEA	Mr. Zhang Zhenqing, EHS Manager Mr. Guang Yonggang, EHS Ayni Site Manager Mr. Jin Dean, EHS OHL Site Manager Mr. Che Jinlu, EHS Rudaki Site Manager	
In relation to Lot 2	Specialist of the Environmental Committee of Panjakent District. Mr. Pulodov Murod	+992 927601320

Annex II: Non-Conformance Notice after visiting the Lot 1 substations in December.

Wholesale Metering and Transmission Reinforcement Project, Tajikistan
(ADB Grant 0417-TAJ)

Lot 1: "Replacement of electricity meters, replacement of several current transformers, replacement of several voltage transformers, introduction of an advanced metering infrastructure and introduction of a settlement system"

MoM (Protocol) №1

inspections of substations in Dushanbe

from «02» December 2020

Dushanbe city

In November 2019, Mercados environmental consultant Patricia Ramos, together with representatives of the SE PMUES, ADB, and TBEA, checked the condition of some substations in the Dushanbe electric networks. As a result of the audit, comments were identified and sent to the Contractor with an indication of the time frame for correcting the shortcomings.

On December 02, 2020, a review of the work carried out on the noted comments was carried out.

Commission consisting of:

/ J. Sharipov - head of the construction Department of the SE PMUES,

A. Kholov - chief specialist of the monitoring Department,

D. Isaev - environmental consultant Mercados

Lu Guan Wei - TBEA Manager

the following DCEN substations were visited:

- o SS Akademgorodok 110/35/6 kV
- o SS Shursay 110/35/10 kV
- o SS Vostochnaya 110/35/6 kV
- o SS Shakhri 110/10 kV
- o SS Promishlennaya 110/35/10 kV
- o SS Buston 110/10 kV.

It is noted that to date, the work on the comments has not been completed.

During the inspection, it was revealed:

1. Poor backfill led to soil precipitation
2. Poor quality painted Foundation
3. Not backfilling with gravel
4. Not leveled the soil around the foundations

and other shortcomings.

The Contractor should as soon as possible:

1. To work on the weaknesses identified at the substations
2. To check the status of foundations and quality control of work performed on all project objects
3. Eliminate all identified shortcomings at other facilities
4. All work must be carried out in accordance with the SNiP.

Signatures:

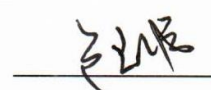
SE PMUES

A blue ink signature, appearing to be 'A. P. P.', written over a horizontal line.A blue ink signature, appearing to be 'P. P.', written over a horizontal line.

AF Mercados

A blue ink signature, appearing to be 'A. M.', written over a horizontal line.

Contractor TBEA

A blue ink signature, appearing to be 'P. P.', written over a horizontal line.

Appendix: photos from substations

Проект по внедрению системы учета оптовых поставок
электроэнергии и улучшению системы электропередачи, Таджикистан,

Грант АБР 0417-TAJ

Лот 1: "Замена электрических счетчиков, частичная замена трансформаторов тока,
частичная замена трансформаторов напряжения, ввод развитой инфраструктуры
измерений (ИАСКУЭ) и системы расчетов"

ПРОТОКОЛ №1

проверки состояния подстанций г. Душанбе

от «02» декабря 2020 года

город Душанбе

В ноябре 2019 г. консультантом-экологом Меркадоса Патрицией Рамос совместно с представителями ЦУП, АБР, ТБЕА была проведена проверка состояния некоторых подстанций Душанбинских электрических сетей. По результату проверки были определены замечания, отправлены Подрядчику с указанием сроков устранения недостатков.

02 декабря 2020 г. была проведена проверка работ, проведенных по отмеченным замечаниям.

Комиссией в составе:

/ Шарипов Д. – начальник отдела строительства ГУ ЦУП,
Холов А. – главный специалист отдела мониторинга,
Исаев Д. – консультант-эколог Меркадос
Лу Гуан Вей – менеджер ТБЕА

были посещены следующие подстанции ДГЭС:

- ПС Академгородок 110/35/6 кВ»
- ПС «Шурсай 110/35/10 кВ»
- ПС «Восточная 110/35/6 кВ»
- ПС «Шахри 110/10 кВ»
- ПС «Промышленная 110/35/10 кВ»
- ПС «Бустон 110/10 кВ».

Отмечается, что до настоящего времени работы по замечаниям не выполнены.

В ходе проверки выявлено:

1. Не качественная обратная засыпка привела к осадке грунта
2. Не качественно покрашены фундаменты
3. Не проведена засыпка гравием
4. Не выровнена почва вокруг фундаментов

и другие недостатки.

Подрядчику надлежит в кратчайшие сроки:

1. Провести работы по устранению выявленных недостатков на подстанциях

2. Провести проверку состояния фундаментов и проверку качества выполненных работ на всех объектах проекта
3. Устранить все выявленные недостатки на остальных объектах
4. Все работы должны быть проведены в соответствии со СНиП.

Подписи:

цуп

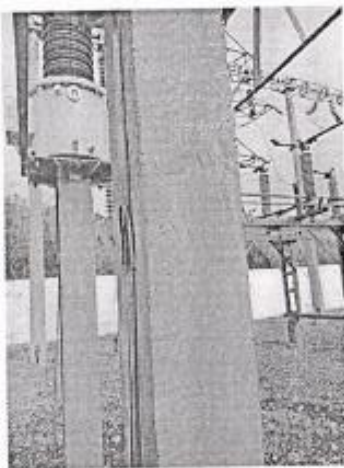
AF Mercados

Подрядчик TBEA

Приложение: фото с подстанций



Mercados-Aries
International.





Annex III: Report submitted after breaking the concrete floors in the former workers campsite near Ayni Substation.

TBEA 特变电工

№.TBEA(PT- 36)

07.08.2020.

To Chairman of Open Stock Holding Company

«BARQI TOJIK»

Mr. Ismoilzoda

Copy: Executive Director of Project Management Unit for
Electro-Energy Sector

Mr. Nazar Nazarzoda

Copy: Team Leader of AF Mercados EMI

Mr: José Ignacio Alcon Rubio

Rehabilitation of substation Rudaki and extension of substation Ayni 220kV
and construction of 220kV OHL between SS Ayni and SS Rudaki

Dear colleagues:

TBEA expresses its respect for your kind support and assistance.

In response to your letter No. 16 / 1098-711 on April 16, 2020, TBEA would like to inform you that our company from 03.08. 2020 to 08/05/2020 dismantled the concrete sites for the former construction camp of the TBEA company and brought the land to its previous state.

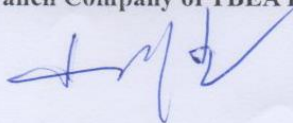
In this regard, we would like to inform you that, in accordance with the Contract, TBEA has restored the condition of the land plots to their previous state, in which they were before the start of construction.

An annex is attached to this letter.

Sincerely Yours,

Manager of Branch Company of TBEA In Tajikistan

Wang Jian



Safarali Mirov
987580100

Equip China Powering the world

TBEA 特变电工



Salim Mirov
987580100

Equip China Powering the world



Safinli Mirov
987980100

Equip China Powering the world

TBEA 特变电工



Sabreli Miner
987580100

Equip China. Powering the world


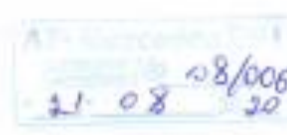

TBEA 特变电工



Safari Mini
987580100

Equip China Powering the world

Annex IV: COVID-19 Spread prevention measures designed by Lot 1 Contractor.

HUAWEI		Wholesale Metering and Transmission Reinforcement Project, Tajikistan, ADB Grant 0417-TA/ Lot 1: "Replacement of electricity meters, replacement of several current transformers, replacement of several voltage transformers, introduction of an advanced metering infrastructure and introduction of a settlement system"		TBEA	
LETTER					
Ref. No: Lot1-HUAWEI&TBEA-PMU-LE-20-0096					
To: Government of the Republic of Tajikistan State Establishment "Project Management Unit for Electro-Energy Sector" OSHC "Barki Tojik" Headquarter					
Attn: Mr. M. Ismoilzoda, Chairman of OSHC "Barki Tojik" Mr. N. Nazarzoda, Executive Director of PMU					
Cc: AF Mercados EMI					
Date: August 20 th , 2020					
<input checked="" type="checkbox"/> Reply required <input type="checkbox"/> For Action <input checked="" type="checkbox"/> For Info <input type="checkbox"/> Others					
Subject: Reply to the official letter No.16-2631-2758 dated August 18 th , 2020					
Dear Sirs,					
The Consortium expresses its deepest respect and appreciation for cooperation.					
In accordance with the Employer's requirements issued by the official letter No. 16-2631-2758 dated August 18 th , 2020 for the supplementation of the site environmental management plan at the Lot-1 project sites submitted by DTS 0003 dated January 11, 2017, the Contractor hereby attaches a list of safety measures to avert the spread of infection during the coronavirus pandemic among the Contractor's personnel, involved in the above-mentioned project. This list of measures has been drawn up by the Contractor's responsible staff and is consistent with all WHO recommendations.					
Attachment: List of preventive measures to avert the spread of coronavirus during the pandemic.					
Thank you, Best regards,					
Marufjon Qosimov,					
In the capacity of representative of HUAWEI INTERNATIONAL PTE.LTD					
Signature: 					
					
1 of 1					

No./№	List of preventive measures to avert the spread of coronavirus during the pandemic / Список превентивных мер по недопущению распространения коронавируса в период пандемии
1	Once in a week the Contractor makes disinfection of the office / Подрядчиком производится дезинфекция офисного помещения один раз в неделю
2	The Contractor provides its employees with masks and antiseptics / Подрядчиком предоставляются маски и антисептики для рабочего персонала
3	Every day the Contractor`s administrative personnel controls the temperature of its employees twice in a day, and also requests them to make a health check in the special system / Ежедневно административный персонал Подрядчика дважды в день контролирует температуру своих работников, а также просит их провести проверку состояния здоровья в специальной системе
4	All employees and visitors of the Contractor`s office are strongly required to wear mask in office / Всем сотрудникам и посетителям офиса Подрядчика настоятельно рекомендуется носить маску в офисе
5	The contractor`s requires to keep social distance in its office / Подрядчик требует соблюдать социальную дистанцию в своем офисе
6	The contractor`s requires all personnel to frequently wash their hands and use antiseptics / Подрядчик требует от своего персонала часто мыть руки и использовать антисептики
7	All employees and visitors of the Contractor`s office should disinfect their hands before entering the office / Все сотрудники и посетители офиса Подрядчика должны продезинфицировать свои руки перед входом в офис
8	In special cases the Contractor provides its employees with medical disposable protective clothing / В особых случаях Подрядчик предоставляет своим сотрудникам медицинскую одноразовую защитную одежду
9	The Contractor requires to avoid non-essential guests visiting its office and recommends to use remote communication tools / Подрядчик требует избегать посещения своего офиса посетителями, не являющимися необходимыми, и рекомендует использовать средства удаленной связи

10	<p>When the Contractor`s employee feels discomfort or have any symptoms of coronavirus, he/she should report to the supervisor immediately and work remotely. The Contractor`s company, in its turn, will help in seeking related resource for testing and treatment / Если сотрудник Подрядчика чувствует дискомфорт или симптомы коронавируса, он должен немедленно сообщить об этом руководителю и удаленно работать. В свою очередь, компания Подрядчика поможет в поиске ресурсов для тестирования и лечения</p>
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Annex V: Post completion monitoring by the PMU.

A. LOT 1

Checklist for environmental audit of the completed civil works

Project:	Republic of Tajikistan: Wholesale Metering and Transmission Reinforcement Project. ADB Grant 0417. Lot-1	Implementing agency	SEPMU
		Inspection Consultant	Mercados - Aries International
Site:	Substations	Contractor	TBEA & Huawei Consortium
Date:	October – December	Name of inspector	Aziz Kholov - Specialist of the Social and Environmental Monitoring Department

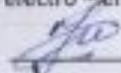
No	Type of work	Impact	Measures as per	Control	Carried out measures
1	Project site vegetation rehabilitation (re-vegetation)	Change of land cover, erosion resulting from the construction activities	Proper landscaping with drainage	SEPMU	Landscape restore to its previous state
2	Demolishing old foundations	Exposure to dust will lead to respiratory disease	Taking necessary precautions to avoid the release of unnecessary dust during excavation and loading/unloading materials	SEPMU/Contractor	Performed
3	Oil management	Equipment and machinery repairing/maintenance	All oil spills on soil surface must be removed and disposed relevantly	SEPMU/supervision consultant	All fuel leakages are removed from soil surface

4	Waste management	Waste accumulation, air and soil pollution	Collect and disposal all wastes at designated location;	SEPMU	All wastes took away at the whole construction sites
5	Remove useless equipment	Housekeeping matters	Contractor removed equipment and machinery;	SEPMU/Contractor	Contractor useless main equipment
6	Existing infrastructure facilities	Damage or disturbance to existing services (supply of electricity, water, gas, telecom etc.)	Reinstatement to pre-construction conditions or proper relocation, to be certified by the service companies	SEPMU/Contractor	The condition before construction is restored

TBEA & Huawei Consortium

王立平

Government agency Power management Unit for
electro-energy sector



Project Manager – Sh. Nematov

Flawed

B. LOT 2

Checklist for environmental audit of the completed civil works

Project:	Republic of Tajikistan: Wholesale Metering and Transmission Reinforcement Project. ADB Grant 0417. Lot-2	Implementing agency	SEPMU
		Inspection Consultant	Mercados - Aries International
Site:	Ayni SS, Rudaki SS, OHL Ayni-Rudaki	Contractor	TBEA Co. Ltd.
Date:	24/25.12.2020	Name of inspector	Aziz Kholov - Specialist of Social and Environmental Monitoring Department

No	Type of work	Impact	Measures as per	Control	Carried out measures
1	Project site vegetation rehabilitation (re-vegetation)	Change of land cover, erosion resulting from the construction activities	Proper landscaping with drainage	SEPMU	Landscape restore to its previous state
2	Oil management	Equipment and machinery repairing/maintenance	All oil spills on soil surface must be removed and disposed relevantly	SEPMU/supervision consultant	All fuel leakages are removed from soil surface
3	Waste management	Waste accumulation, air and soil pollution	Collect and disposal all wastes at designated location;	SEPMU	All wastes took away at the whole construction sites

4	Remove useless equipment	Housekeeping matters	Contractor removed equipment and machinery;	SEPMU/Contractor	Contractor useless main equipment
5	Road reinstatement	Road damages causing pollution, traffic disturbance and accidents.	Access road reinstated to pre-construction or better conditions	SEPMU/Contractor	The approach roads are restored
6	Existing infrastructure facilities	Damage or disturbance to existing services (supply of electricity, water, gas, telecom etc.)	Reinstatement to pre-construction conditions or proper relocation, to be certified by the service companies	SEPMU/Contractor	The conditions before construction is restored
7	Camp site facilities	Residual pollution and disturbance to the localities	All temporary facilities removed and cleaned up	SEPMU/Contractor	All facilities cleaned and removed

TBEA Co. Ltd.

王立平

Government agency Power management Unit for
electro – energy sector

Sh. Nematov

Project Manager – Sh. Nematov

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