Environmental Monitoring Report

PUBLIC

Semi-Annual Report: July to December 2024
January 2025

Tajikistan: Dushanbe Urban Water Supply and Sanitation Project - Additional Financing

Prepared by the Project Implementation group for the State Unitary Enterprise Dushanbevodokanal and for the Asian Development Bank

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy

CURRENCY EQUIVALENTS

(as of June December 31, 2024)

Currency Unit	–	Tajik somoni (TJS)
TJS 1.00	=	$ 0.0915
$1.00	=	TJS 10.9325

Abbreviations

ADB	-	Asian Development Bank
BoQ	-	Bill of Quantity
CW		Civil Works
DVK	-	State unitary enterprise (SUE)" Dushanbevodokanal"
DSC	-	Design and Supervision Consultant
DMA		district metering area
EA	-	Executive Agency
EMP	-	Environmental Management Plan
EMR	-	Environmental Monitoring Report
EBDC	-	Executive Body of Dushanbe city
GRP	-	Glass Reinforced Plastic
GRM		Grievance Redress mechanism
HG	-	Head of Group
IA	-	Implementing Agency
IEE	-	Initial Environmental Assessment
NRW		Non- revenue water
PIG	-	Project Implementation Group
PMDSC	-	Project Management, Design and Supervision Consultant
SAEMR		Semi-annual Environmental Monitoring Report
SCADA	-	Supervisory control and data acquisition
SEADC	-	State Executive Authority of Dushanbe city
SSEMP	-	Site-Specific Environmental Management Plan
WSS	-	Water Supply and Sanitation

NOTES

(i) The fiscal year of the Government of Tajikistan ends on December 31.

(ii) In this report, "$" refers to United States dollars.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or Staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of ADB's website.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy

Semiannual Environmental Monitoring Report

Project Number: 50347-003 G0841

Reporting period: July - December 2024

Republic of Tajikistan: Dushanbe Urban Water Supply and Sanitation Project - Additional Financing
(Financed by Asian Development Bank)

Prepared by the project implementation group with support of SMEC in association with LLC PANASIA LTD for the State Unitary Enterprise “Dushanbevodokanal” and the Asian Development Bank

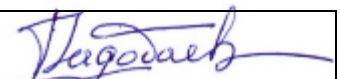
Prepared by	Dilshod DADOBAEV National Environmental Consultant	
Reviewed by	Grzegorz ROKICKI Team Lieder	

Table of Contents

1. INTRODUCTION 6
1.1. Preamble 6
1.2. Headline Information 6
2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES 8
2.1. Project Description 8
2.1.1. Water supply component 9
2.1.2. Sanitation component 1
2.1.3. Institutional Capacity Development 1
2.1.4. Women's Training Center 1
2.2. Project Contracts and Management 4
2.2.1. Project environmental management 10
2.3. Project Activities During Current Reporting Period 11
2.3.1. CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 1: Rehabilitation of Sewerage network Karotegin 11
2.3.2 CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 2: Rehabilitation of Sewerage network Zebuniso 12
2.3.3 CW-05 Detailed design and Construction of Woman Training Center 13
2.3.4 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 3: Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1 14
2.3.5 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 1: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello str 15
2.3.5 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 2: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9 16
2.4. Description of Any Changes to Project Design 17
2.5. Description of Any Changes to Agreed Construction methods 17
3. ENVIRONMENTAL SAFEGUARD ACTIVITIES 18
3.1. General Description of Environmental Safeguard Activities 18
3.2. Site Inspections 18
3.3. ADB's Environmental Safeguards Review Mission (ESRM) 20
3.4. Issues Tracking (Based on Non-Conformance Notices) 22
3.5. Trends 22
3.6. Unanticipated Environmental Impacts or Risks 22
4. RESULTS OF ENVIRONMENTAL MONITORING 23
4.1. Water quality monitoring 23
4.2. Air quality monitoring 23

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy.

4.3. Noise monitoring 23
4.4. Flora and fauna monitoring 23
4.5. Waste Management 23
4.6. Health and Safety 24
4.6.1. Community health and safety 24
4.6.2. Workers' health and safety 24
4.7. Construction camps 25
4.8. Summary of Monitoring Outcomes 25
4.9. Grievance Redress mechanism functioning 45
4.10 Training 45
5. FUNCTIONING OF THE SSEMP 46
5.1. SSEMP Review 46
6. SUMMARY AND RECOMMENDATIONS 49

List of Tables

Table 1: Summary of Civil Works Contracts and works' progress 8
Table 2: Summary of Environmental Personnel 10
Table 3: Environmental Safeguards Activities Carried out During Reporting Period (January - June 2024) 18
Table 4: Recommendations from the Environmental Safeguards Review Mission 21
Table 5: Issues identified during reporting period 22
Table 6: Trends on issues as per semiannual monitoring reports 22
Table 7: Grant Agreement Compliance Status 25
Table 8: Implementation Status of EMP for Woman's Center (CW-05) during the construction period 29
Table 9: Implementation Status of EMP for Sanitation Component (CW-04/1 and CW-04/2) during the construction period 33
Table 10: Implementation Status of EMP for Water Supply Component (CW-02/1, CW-02/2 and CW-02/3) during the pre-construction and construction period 38
Table 11: Status of SSEMPs for reporting period from July to December 2024 47
Table 12: Issues identified during reporting period 49

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy.

1. INTRODUCTION

1.1. Preamble

1. This report represents the Semi - Annual Environmental Monitoring Review (SAEMR) for Additional Financing for Dushanbe Water Supply and Sanitation Project (DWSSP) covering the period July – December 2024.

2. This report is the 5th Environmental Monitoring Report for the project.

1.2. Headline Information

3. This is the fifth SAEMR prepared for the Additional Financing for Dushanbe Water Supply and Sanitation Project and covers the reporting period from July to December 2024. The report describes the status of project implementation, activities carried out by the Project Implementation Group with regard to environmental safeguard issues.

4. The contract for CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 1: Rehabilitation of Sewerage network Karotegin and Lot 2: Rehabilitation of Sewerage network Zebunisso was awarded to OJSC “TajikSGEM”. The civil works on package CW-AF-04 lot 1 and lot 2 commenced in April 2023.

5. The contract for CW-05 "Detailed design and Construction of Woman Training Center" was awarded to the Consortium LLC "Stroy-Center" and LLC "GM and Partners". The civil works on package CW-AF -05 commenced in March 2024.

6. The contract for CW-AF-02 Lot 1 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello street” was awarded to LLC “Hamsafar”. The civil works on package CW-AF -02 Lot 1 commenced in March 2024.

7. The contract for CW-AF-02 Lot 2 ” Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9” was awarded to LLC "Stroy-Center." The civil works on the sub-project commenced in June 2024.

8. The contract for CW-AF-02 Lot 3 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1” was awarded to OJSC "TajikSGEM." The civil works on the sub-project commenced in June 2024.

9. During the reporting period, tenders were conducted for the sub-projects under CW-AF-01, which involve the Rrehabilitation of well fields, pipelines, pumping stations and reservoirs.

1. Sub-project CW-AF-01 Lot 1 “Rehabilitation of the eastern part of KAF I”: The contract has been awarded to LLC “Hihor”; however, construction work did not commence during this reporting period.

2. Sub-project CW-AF-01 Lot 2 “Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field;”: The contract has been awarded to LLC “Intersokhtmon” with LLC “Kokhi Safed” as specialist subcontractor; however, construction work did not commence during this reporting period.

3. Sub-project CW-AF-01 Lot 3 “Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations”: The contract has been awarded to OJSC

“Tojikgidroelectromontaj” (TGEM); however, construction work did not commence during this reporting period.

4. Sub-project CW-AF-01 Lot 4 “Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village”. The contract has been awarded to LLC "JV Ittihod Inshoot and Zumrut" in Joint venture with "LLC Simo Co"; however, construction work did not commence during this reporting period.

10. The tender for the remaining component CW-AF-03 Rehabilitation of Sewerage Collectors of Ayni, N.Muhammad and Akademiks Radjabova is scheduled for the first quarter of 2025.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1. Project Description

11. The proposed grant for AF-DWSSP will expand the scope of the ongoing DWSSP to complement ongoing efforts to improve the infrastructure and performance of WSS services for 352,000 people residing in the south-east part of Dushanbe, the capital of Tajikistan. The proposed project will also improve the management capacity of the service utility, the SUE DVK, which is responsible for WSS services in the city.

12. The AF-DWSSP is intended to expand the scope of the ongoing project to complement it with the planned short-term WSS investments that were envisaged in the Cities Development Initiative for Asia (CDIA) feasibility study, but which were not included in the scope of the ongoing project due to limited funds. The AF-DWSSP will finance: (i) the rehabilitation of water supply network in the DMAs established in the Shohmansur district; (ii) the construction of additional water source and storage facilities; and (iii) rehabilitation of further portions of the main sewage pipeline along with the expansion of the network to unserved areas in the district. Climate-proofing and disaster resilience measures will be adopted to increase resilience of WSS infrastructure. The AF-DWSSP will provide supplementary support to the ongoing institutional strengthening activities with focus on NRW reduction and foster the use of performance-based interventions for asset inventory, leak detection, and small works carried out by both DVK teams and small-scale private operators. It will also build the capacity of DVK on COVID-19 emergency response and actions, and water, sanitation, and hygiene (WASH) targeted measures for vulnerable people and women. A women's training and empowerment center will be established with the main goal to (i) promote WASH awareness, (ii) provide vocational and skills trainings to improve employment opportunities for women, and (iii) provide counseling services and shelter for victims of gender-based violence.

13. The project is aligned with the following impact: quality of life, urban health resilience, and economic growth in Dushanbe improved. The project will have the following outcome: inclusive and sustainable access to safe and resilient water supply and sanitation services in Dushanbe city improved. Outputs are:

- **Output 1: Climate-resilient water supply and sanitation infrastructure rehabilitated and expanded**. This output 1 will be delivered by: (i) rehabilitation of 10 wells, 17 pumps and 5-third stage pump stations, water metering, and other facilities at Kafarnihan-I (KAF-I) and Kafarnihan-2 (KAF-2) including operationalization of SCADA system; (ii) reduced NRW through rehabilitation of 5.6 km transmission main; operationalization of 18 DMAs including installation of 5 bulk meters, 1,600 smart-ready meters, improvement of 23.9 km of distributional network improvements in 12 DMAs, (iii) increased storage capacity by 1,500 cum; (iv) rehabilitation of 3.2 kms of sewage collector and construction of 38.6 kms of secondary and tertiary sewerage.

- **Output 2: Sustainable business model and institutional capacity developed**. This output will support prioritized institutional strengthening actions which are: (i) supporting execution of the business model for DVK developed under DWSSP that covers technical, operational, institutional organizational restructuring and human resource management; (ii) providing further support to the operationalization of the smart information management system to develop greater operational efficiency and seamless integration of customer database, billing, collection, accounting and reporting; (iii) support to nonrevenue water management system operationalized with installation of SCADA for

new network management practices for the 18 DMAs using districts equipped with flow meters, smart-ready meters for household service connections, active leaks detection, and calibration of meters; and (iv) institutional, technical and financial capacity of the PIG and DVK improved.

- **Output 3: Establishment of a Women's Development Center.** This output will support the establishment and operation of a Women's Development Center for women's empowerment, protection and skills development. The center will provide support for women victims of domestic violence and provide vocational, leadership and business skills training to help women realize their full potential. The center will also provide counseling, rehabilitation, and shelter services for victims of gender- based violence.

2.1.1. Water supply component

14. Water supply component consists of the following construction work packages:

WS-1 Rehabilitation of the eastern part of KAF-I.

1.1. Rehabilitation of backup power supply line 6 kV from RU4 to PS No. 37, L=1.8km, including replacement of RU4 equipment and cables.
1.2. Riverbank protection, Length = 400m instead of 100m.
1.3. Delineation of 1st, 2nd and 3rd sanitary protection zones including hydrogeological study.
1.4. Fencing of KAF-I along the riverside: Length = 2.8km
1.5. Repair and Rehabilitation of the existing fencing for the 1st sanitary protection zone at KAF-1, L=3.5 km.
1.6. Replacement of 0.4 kW power supply line and outdoor lightning from RU4 to the eastern entrance gate at KAF-I, Length = 3.5km

WS-2 Rehabilitation of KAF-II well field and transmission line from KAF-II well field to KAF-I well field.

2.1. Rehabilitation of 6 + 4 deep wells in KAF-II; replacement of submersible pumps, water lifting pipes, valves and fittings.

2.2. Replacement of electrical equipment:

(i) transformer TR 630/6 at KAF-II and

(ii) power backup line 6 kV, Length = 500 m.

2.3. Rehabilitation of riverbank protection at KAF-II, Length = 100m.

2.4. Construction of pipeline bridge:

(i) bridge, Length = 450m;

(ii) 2 pipelines, Diameter = 800 mm, Length = 920m and

(iii) replacement of main pipeline, Diameter = 800mm, Length =740+100m.

(iv) protective coating of exposed pipeline sections, Diameter = 1200mm, Length = 400m.

2.5. Delineation of 1st, 2nd and 3rd sanitary protection zones including hydrogeological study, pumping tests and water quality analysis.

2.6. Introduction and Installation of SCADA system.

WS-3 Replacement and rehabilitation and/or upgrading of transmission lines and water mains.

3.1. From PS 191 to PS in micro district 192, Length = 400 m, DN400 HDPE 100 SDR 17.
3.2. From village of Mirzobek to village of Chanoro (Makhalla), Length = 1,500m, D = 200 mm, HDPE 100 SDR 17.

WS-4 Rehabilitation of pumping stations and construction and/or rehabilitation of reservoirs.

4.1. Construction of new pressure pipeline Diameter = 300mm, Length = 1,950 m, from PS 192 to reservoirs at Academic of Sciences and Khovaron.

4.2. Rehabilitation of 3rd lifting pumping station in 192 micro district.

4.3. Rehabilitation of water reservoirs 2 x 500 m3 at Academy of Sciences.

4.4. Fencing of the territory of reservoirs Academy of Sciences, Length = 400 m, construction of guard room and toilet, and landscaping works.

WS-5: Rehabilitation of secondary and tertiary networks and establishment of DMAs

5.1. Rehabilitation of network sections in 12 DMAs

WS-6 Rehabilitation of 3rd lifting pumping stations.

6.1. Reconstruction of pumping station 191 m. District.

6.2. Reconstruction of pumping station at Karateginskaya.

6.3. Reconstruction of pumping station at Kamola.

6.4. Reconstruction of pumping station at Bakhori.

15. The location and spatial coverage of water supply components of DWSSP and AF-DWSSP is provided in Figure 1:

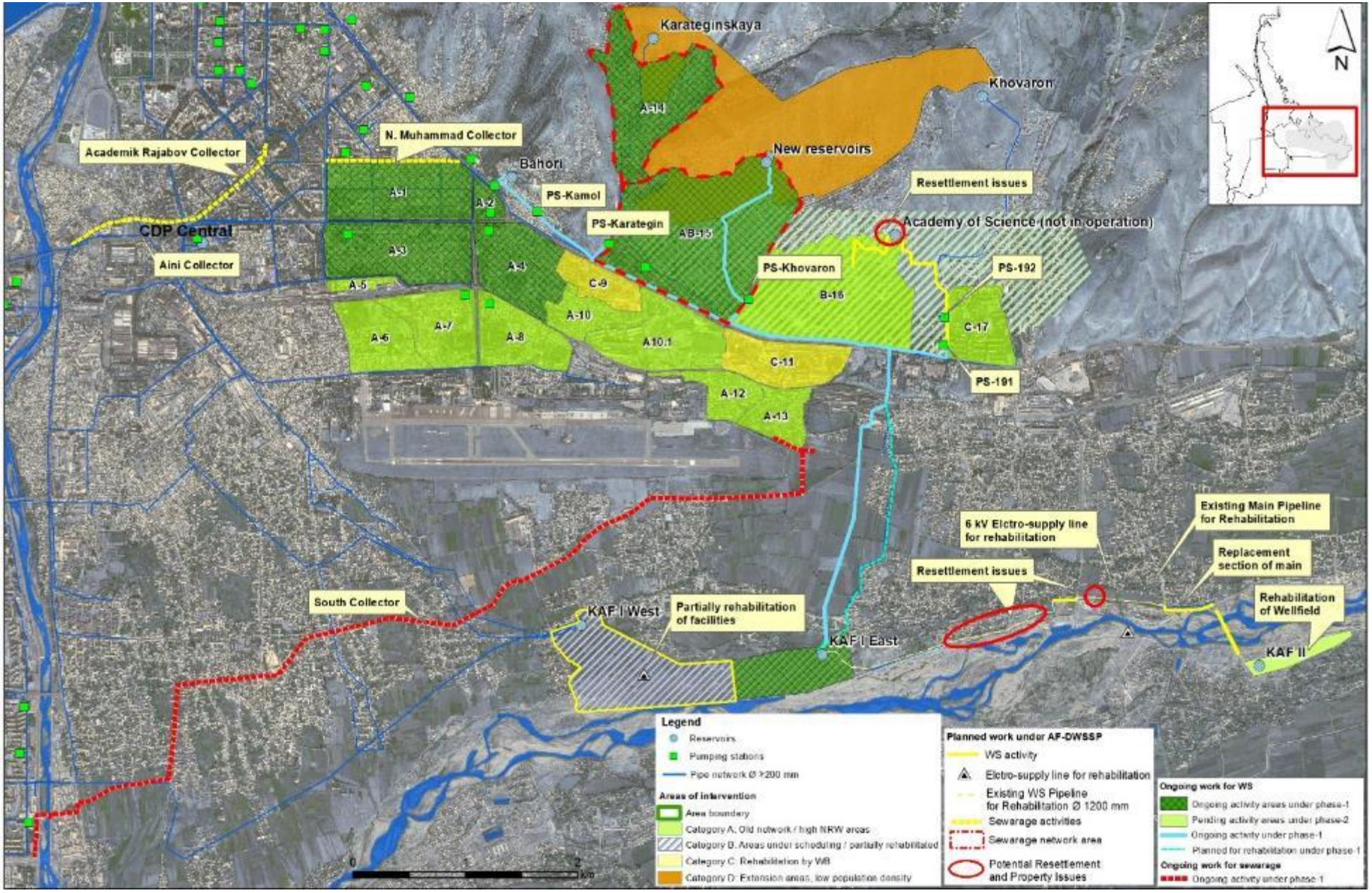


Figure 1: Location and Spatial Coverage of Water Supply and Sanitation Components of DWSSP and AF-DWSSP

2.1.2. Sanitation component

16. Sanitation component consists of the following construction work packages

SS-1: South Collector The south collector has been fully awarded as part of the original DWSSP (Grant 0612-TAJ). There are no remaining components left for AF- DWSSP

SS-2 Construction of remaining section of collector in Ayni Street from Sherozi Street to Kakhorov Street, Diameter = 500 - 600mm, Length = 1.17km, average depth of 3 to 3.5m, including 130m horizontal drilling; catchment area: 3,647,252m2, number of populations: 30,706.

SS-3 Construction of collector in N. Muhammad Street, Diameter = 400mm, Length = 1.05 km, average depth 3.5m, catchment area: 424,550 m2, number of populations: 5,925.

SS-4 Construction of internal sewerage network in Karotegin and Zebunisso (Khovaron village), L=38,6km, D=150-300mm and 500-600, average depth: -2.3m, catchment area: 424,550m2, number of populations: 5,925

SS-5 Construction of a sewerage line in Academics Radjabova Street, Diameter = 400mm, Length = 0.955km, including 40m horizontal drilling, Crossing of Rudaki Street by horizontal drilling, Length = 40m, average depth: -3.5m, catchment area: 48,0002, number of populations: 5,420.

2.1.3. Institutional Capacity Development

17. This activity will support prioritized institutional strengthening actions which are:

- Business model for DVK developed that covers technical, operational, institutional organizational restructuring and human resource management;
- Accountability and incentive mechanism established with a performance benchmarking matrix;
- Smart information management system enhanced for operational efficiency and seamless integration of customer database, billing, collection, accounting and reporting;
- NRW management system operationalized with installation of SCADA for new network management practices for the 18 DMAs using districts equipped with flow meters, smart meters for household service connections, active leaks detection, and calibration of meters;
- Institutional, technical and financial capacity improved; and
- Customer care service standards developed and behavior change communication on water conservation and smart metering conducted.

2.1.4. Women's Training Center

18. The women's training center is now on preliminary design stage. Based on the design, the city already provided land for site of the women's training center. Within the framework of Output 3 – establishment of a women's training and empowerment center in Shohmansur district/ DWSSP target area, the TRTA social team conducted social survey among stakeholders, women and families to understand the current situation and assess challenges,

opportunities and needs of women for livelihood improvement and empowerment of women through the women's training center.

19. Based on data collection results, a concept note for the women's training center has been developed where the structure and functionality scheme of women/training center as well as preliminary requirements of the building capacity were identified. Based on the preliminary ideas, the daily attendance of participants and beneficiaries to the training center were calculated, as well as the number of rooms, sectors and supporting facilities including water and sanitation with the current national and international standards.

20. The women training center will consist of the following structure and building spaces. The training center will have two separate entrances: (1) for the training center and (2) for the one stop support and shelter to the victims of domestic violence. The training center will have the following structure/capacity:

- Hall and reception area; separate area for receptionist (2 people) and wide hall for welcoming guests and participants (15 people at time)
- 1 administration office (3 people)
- 1 trainer's office (5 people)
- 3 meeting rooms equipped for meetings, large gatherings, workshops (20 people)
- 1 room for operation staff (3 people)
- 5 classrooms for trainings (15 people)
- 5 vocational workshop place with necessary training equipment (for cooking class, sewing lessons, beauty business, computer lab, one extra for additional vocational workshop, which might be necessary) (6 people at a time)
- 1 separate full equipped children day care center with facilities (with separate classrooms, bathrooms, dining room, hall) (5 classrooms for up to 15 children)
- 1 fully equipped cafeteria with back office for staff (5 people) and sitting place (15 people)
- 1 fully equipped GYM (20 people per visit)
- 1 sewing workshop (10 people)
- 6 bathrooms separate for male and female (5 people each)

21. The one stop support/shelter for victims of domestic violence will have the following structure/capacity:

- Fully separated with tall fence and one security office (2 people)
- Front yard with benches, and playground for children (10 people)
- Hall and reception area; separate area for receptionist (2 people) and hall for welcoming guests and clients (15 people at time)
- 1 administration office (3 people)
- 4 separate offices for specialists (1 person per office)
- 1 relaxation office
- 1 art therapy office
- 1 playroom (5 children)
- 1 kitchen (4 people)

- 1 dining hall (10 people)
- 6 apartments (bedroom, parlor and kitchen) water sanitation facilities) (12 people x2 per apartment or a 1 family)
- 1 room for operation staff (3 people)
- 3 bathrooms with showers (5 people)

2.2. Project Contracts and Management

22. The project is funded by a grant from the Asian Development Bank (ADB). The project will be implemented by the State Executive Authority of Dushanbe City through SUE Dushanbevodokanal as the project EA. The Project Implementation Group (PIG) established under SUE Dushanbevodokanal will be the Implementation Agency. The PIG will undertake procurement and administer contracts.

23. The project is consisting of 5 Civil Works (CW) packages:

1) CW-AF-01 Rehabilitation of well fields, pipelines, pumping stations and reservoirs (Components WS-1, WS-2, WS-3, WS-4, WS-6)

   Lot 1: Rehabilitation of the eastern part of KAF I

   Lot 2: Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field

   Lot 3: Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations

   Lot 4: Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village

2) CW-AF-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks (Component WS-5)

   Lot 1: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello str.;

   Lot 2: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9

   Lot 3: Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1

3) CW-AF-03 Rehabilitation of Sewerage Collectors of Ayni, N.Muhammad and Akademiks Radjabova (Components SS-2, SS-3, SS-5)

4) CW-AF-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. (Component SS-4)

   Lot 1: Rehabilitation of Sewerage network Karotegin

   Lot 2: Rehabilitation of Sewerage network Zebunisso

5) CW-AF-05 Detailed design and Construction of Woman Training Center

24. Construction works on CW-AF-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 1: Rehabilitation of Sewerage network Karotegin and Lot 2: Rehabilitation of Sewerage network Zebunisso were awarded to Consortium OJSC “TajikSGEM”, LLC “AZkompozit” and LLC “Stroy-Center” on 5 December 2022.

25. Component CW-AF-05, Detailed design and Construction of Woman Training Center were awarded to Consortium LLC “Stroy-Center”, and LLC “GM and Partners” on 3 July 2023.

26. For the sub-projects under CW-AF-02, which involve the rehabilitation of secondary and tertiary networks and the establishment of District Metered Areas (DMAs).

1. Sub-project CW-AF-02 Lot 1 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello street”: The contract was awarded to LLC “Hamsafar” on 4 March 2024.

2. Sub-project CW-AF-02 Lot 2 ” Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9”: The contract was awarded to LLC "Stroy-Center" on 4 March 2024.

3. Sub-project CW-AF-02 Lot 3 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1”: The contract was awarded to OJSC “TajikSGEM” on 4 March 2024.

27. For the sub-projects under CW-AF-02 Rehabilitation of well fields, pipelines, pumping stations and reservoirs.

1. Sub-project CW-AF-01 Lot 1 “Rehabilitation of the eastern part of KAF I”: The contract has been awarded to LLC “Hihor” on September 11, 2024.

2. Sub-project CW-AF-01 Lot 2 “Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field;”: The contract has been awarded to LLC “Intersokhtmon” with LLC “Kokhi Safed” as specialist subcontractor on September 11, 2024.

3. Sub-project CW-AF-01 Lot 3 “Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations”: The contract has been awarded to OJSC “Tojikgidroelectromontaj” (TGEM on September 11, 2024.

4. Sub-project CW-AF-01 Lot 4 “Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village”. The contract has been awarded to LLC "JV Ittihod Inshoot and Zumrut" in Joint venture with "LLC Simo Co" on September 11, 2024.

28. Tenders for remaining components are scheduled in the First Quarter of 2025.

29. The national initial environmental examination report covering entire scope of the project and final construction design was submitted for review by the PIG to the State Ecological Expertise of Committee for Environmental Protection, which issued “environmental appraisal” on 15 February 2022 (Registration No. 212-15), with following conditions:

No	SEE Conditions	Compliance status
1	During the implementation of the project component “Construction of internal sewerage network system in Karotegin and Zebunisso mahalas” it is mandatory to observe the requirements of Construction rules and regulations (SNiP), sanitary norms (SN) 245-71, State and ecological standards, norms and requirements of the legislation of the Republic of Tajikistan in the field of	**Complied, ongoing**

	protection and improvement of environment;	
2	Before the start of construction work to coordinate measures for the protection of the environment and competent authorities;	**Complied.** Prior to commencing the construction works, SSEMP has been prepared and agreed with the Department of Environmental Protection of Dushanbe.
3	The solid domestic, construction and other wastes generated must be collected in a temporary landfill and disposed in a legal landfill in accordance with the established procedure;	**Complied.** The contractor has concluded a contract with the municipality to responsibly dispose of waste. Additionally, they have obtained the necessary permissions to dispose of construction waste in compliance with regulations.
4	Control over observance of the legislation of the Republic of Tajikistan in the field of protection and improvement of environment is assigned to Main Department of environment protection of the city of Dushanbe;	**Complied.** The Environmental Protection Department has been informed about the start of construction work, the contractor and PMDSC maintain regular contact with the Environmental Protection Department of Dushanbe.
5	A copy of this conclusion should be provided to the Department of Environmental Protection of Dushanbe.	**Fully complied.** Copy of conclusion provided to Department of environmental protection of Dushanbe.

30. The contractor of the Woman Training Center submitted a detailed construction design for review to the State Ecological Expertise of Committee for Environmental Protection. The State Ecological Expertise issued an "environmental appraisal" on October 24, 2023, Registration No. 1567-15., with following conditions (Annex 1):

No	SEE Conditions	Compliance status
1	During the construction of the Woman Training Center building, it is essential to adhere strictly to the Land Code, standards, and requirements of the legislation of the Republic of Tajikistan regarding environmental protection and health. Additionally, building standards and requirements (MKSH RT 30-01-2018), sanitary regulations (CH 245 - 71), and fire protection measures must be meticulously followed.	**Complied, ongoing**
2	Establish a specific work schedule for construction activities.	**Complied,** Established work schedule for construction activities: Monday to Friday: - Start work at 8:00 AM - Lunch break from 12:00 PM to 1:00 PM - Resume work from 1:00 PM to 5:00 PM

		Saturday and Sunday day off
3	The landscaping of the building's surroundings should adhere to the construction standards and regulations outlined in MKSH RT 30-01-2018.	**Complied in final design**
4	If it is necessary to cut or fell trees, the permission of the authorized state body in the field of environmental protection should be obtained;	**Complied** Permission for cut trees obtained (Annex 2)
5	Develop and coordinate environmental regulatory documents (waste generation standards) in accordance with established procedures, make environmental payments;	**Complied** Documents have been developed and agreed with Department of Environmental protection of Dushanbe
6	Used energy-saving lamps should be collected according to the established procedure and taken to a special collection point for such lamps;	Will be complied during exploitation stage
7	The Women's Training Center should be designed and constructed in accordance with the general plan of the city of Dushanbe.	**Complied** The final design is awaiting approval from the municipality of Dushanbe.
8	Construction debris and solid household waste should be collected in designated containers and transported to the official city dump following established procedures. Additionally, temporary dumps should be set up on-site as necessary.	**Complied**
9	A copy of this conclusion should be provided to the Department of Environmental Protection of Dushanbe	**Fully complied.** Copy of conclusion provided to Department of environmental protection of Dushanbe.

31. Summary of civil works contracts and works' progress is in Table 1.

Table 1: Summary of Civil Works Contracts and works' progress

Package	Scope	Contractor	Signed	Approval Date			Environmental personnel		Civil Work			(%) Progress as of	
				SSEMP	HSMP	ERP	Environmental officer	Health and Safety officer	Start	End	DLP	31 Jun 2024	31 Dec 2024
CW-AF-01	CW-01 Rehabilitation of well fields, pipelines, pumping stations and reservoirs Lot 1 Rehabilitation of the eastern part of KAF I	LLC Hihor	11 Sep 2024	Dec 2024	Dec 2024	Dec 2024	Guliev A.	Homidov F.	(Jan 2025)	(Jul 2026)	Not yet started	0%	0%
	CW-01 Rehabilitation of well fields, pipelines, pumping stations and reservoirs Lot 2 Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field	LLC Intersokhtmon with LLC Kokhi Safed as specialist subcontractor	11 Sep 2024	Dec 2024	Dec 2024	Dec 2024	Shuhrat Yarov	Makhmadsaid Sharipov	(Jan 2025)	(Jan 2026)	Not yet started	0%	0%
	CW-01 Rehabilitation of well fields, pipelines, pumping stations and reservoirs Lot 3 Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations	OJSC Tojikgidroelectromontaj (TGEM)	11 Sep 2024	-	-	-	Faridun Sudurov	Ermadov Bahrom	(Jan 2025)	(Jan 2026)	Not yet started	0%	0%
	CW-01 Rehabilitation of well fields, pipelines, pumping stations and reservoirs Lot 4 Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village.	LLC JV Ittihod Inshoot and Zumrut" in Joint venture with "LLC Simo Co	11 Sep 2024	Dec 2024	Dec 2024	Dec 2024	Ravshan Odinaev	Sharaf Sattorov	(Jan 2025)	(Jun 2026)	Not yet started	0%	0%
CW-AF-02	CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 1: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello str.	LLC "Hamsafar"	04 Mar 2024	July 2024	July 2024	July 2024	Alimov Sergei	Alimov Sergei	August 2024	(Oct 2025)	Not yet started	0%	42%
	CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 2: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9	LLC "Stroy-Center"	04 Mar 2024	June 2024	June 2024	June 2024	Rustam Ibrohimov	Zokirov Bakhtiyor	June 2024	(Nov 2025)	Not yet started	1%	19%
	CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 3: Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1	OJSC TajikSGEM	04 Mar 2024	June 2024	June 2024	June 2024	Hasan Sherov	Nurmahmad Kholnazarov	June 2024	(Nov 2025)	Not yet started	0%	83%

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy.

Package	Scope	Contractor	Signed	Approval Date			Environmental personnel		Civil Work			(%) Progress as of	
				SSEMP	HSMP	ERP	Environmental officer	Health and Safety officer	Start	End	DLP	31 Jun 2024	31 Dec 2024
CW-AF-03	CW-03 Rehabilitation of Sewerage Collectors of Ayni, N.Muhammad and Akademiks Radjabova	Not selected (Tender documents under review of the bank)	n/a	n/a	n/a	n/a	n/a	n/a	(Q2 2024)	(Q4 2025)	Not yet started	0%	0%
CW-AF-04	CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 1: Rehabilitation of Sewerage network Karotegin	Consortium OJSC "TajikSGEM", LLC "AZkompozit" and LLC "Stroy-Center"	05 Dec 2022	March 2023	March 2023	March 2023	Hasan Sherov	Nurmahmad Kholnazarov	April 2023	(Dec 2025)	Not yet started	54%	87%
	CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 2: Rehabilitation of Sewerage network Zebunisso	Consortium OJSC "TajikSGEM", LLC "AZkompozit" and LLC "Stroy-Center"	05 Dec 2022	March 2023	March 2023	March 2023	Hasan Sherov	Nurmahmad Kholnazarov	April 2023	(Dec 2025)	Not yet started	67%	95%
CW-AF-05	CW-05 Detailed design and Construction of Woman Training Center	Consortium LLC "Stroy-Center", and LLC "GM and Partners"	03 July 2023	October 2023	October 2023	October 2023	Rustam Ibragimov	Dmitry Niyazov	March 2024	(July 2025)	Not yet started	9%	21%

Note: The Month/Years in brackets are planned schedule.
DLP = defects liability period, ERP = Emergency Response Plan, HSMP = Health and Safety Management Plan, SSEMP = site-specific environmental management plan

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy.

2.2.1. Project environmental management

32. The PIG under DVK set up by Resolution of the Government of Tajikistan for management of the contracts implementation hired Environmental Specialist Mr. Kamoliddin Kholov in October 2019.

33. SMEC Int. Pty. Ltd have been selected as Project Management, Design and Supervision Company. PMDSC for Dushanbe Water Supply and Sanitation Project hired National environmental consultant Mr. Dilshod Dadobaev in February 2021 and International environmental consultant Mr. Abu Nahid Munir Uddin in September 2021. All safeguard staff who is working on the Dushanbe Water Supply and Sanitation Project will work on the Additional Financing project as well.

34. Summary of environmental personnel is in Table 2.

Table 2: Summary of Environmental Personnel

Environmental Personnel	Allocated PMs	Date of assignment	Name
Environmental Safeguards Specialist under the PIG	Full-time	05 Oct 2019	Kholov Kamoliddin
International Environmental Specialist (IES) under the PMSDSC	2 PMs (intermittent) + 3 PMs (intermittent)	30 Sep 2021	Abu Nahid Munir Uddin
National Environmental Specialist (NES) under the PMSDSC	18 PMs (intermittent)	23 Feb 2021	Dilshod Dadabaev

PIG = Project Implementation Group, PM = person-month, PMDSC = Project Management Support, Design, and Supervision Consultant

Note: Allocated PMs cover both the original DWSSP and the Additional Financing. For the IES, 3PMs have been added specifically under the Additional Financing component.

35. Project Organization Structure and environmental team are shown in Figure 2 below.

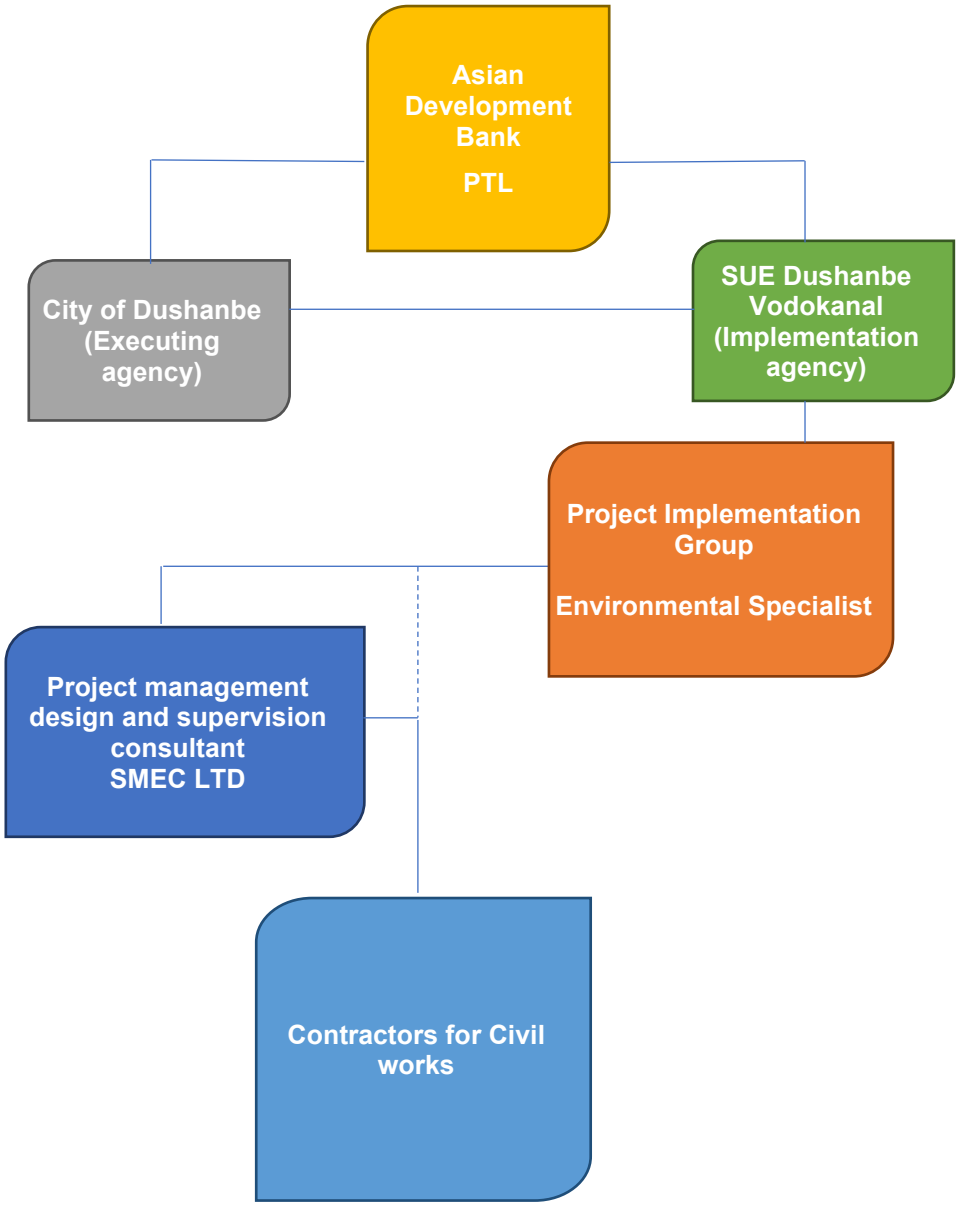


Figure 2: Project Environmental Organization Chart

2.3. Project Activities During Current Reporting Period

2.3.1. CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 1: Rehabilitation of Sewerage network Karotegin

36. Contractor Consortium OJSC “TajikSGEM”, LLC “AZkompozit” and LLC “Stroy-Center” started construction works in April 2023. The contractor performed the following works in the reporting period:

- Laying of UPVC pipes DN160 - 7268m
- Laying of UPVC pipes DN200 – 500 m
- Installation of sewerage wells.
- Planning and remediation activities

Photo 1: Excavation of trench, August 2024

Photo 2: Backfilling of trench, September 2024

Photo 3: Installation PVC pipes, September 2024

Photo 4: Backfilling of trench, December 2024

2.3.2 CW-04 Rehabilitation of Sewerage network for Karotegin and Zebunisso. Lot 2: Rehabilitation of Sewerage network Zebuniso

37. Contractor Consortium OJSC “TajikSGEM”, LLC “AZkompozit” and LLC “Stroy-Center” started construction works in April 2023. The contractor performed the following works in the reporting period:

- Installation of UPVC pipes DN200 streets: 314m
- Installation of UPVC pipes DN160 yards: 7580m.
- Installation of reinforced concrete sewerage wells

Photo 5: Backfilling of trench, September 2024

Photo 6: Restoration of the site at completed section, October 2024

Photo 7: Excavation of trenches, December 2024

Photo 8: Excavation of trenches, December 2024

2.3.3 CW-05 Detailed design and Construction of Woman Training Center

38. Contractor Consortium LLC “Stroy-Center”, and LLC “GM and Partners” started construction works in March 2024. The contractor performed the following works in the reporting period:

- Concreting of the walls and foundation columns.
- Concreting of columns and stiffness diaphragms (RD) of the elevator shaft
- Laying bricks of internal walls of the 2nd floor
- Laying bricks of internal walls of the 3rd floor
- Laying bricks of internal walls of the 4th floor
- Concreting of parapet lintels.

Photo 9: Concrete cure, August 2024

Photo 10: Brickworks, October 2024

Photo 11: Brickworks, October 2024

Photo 12: Brickworks, December 2024

2.3.4 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 3: Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1

39. Contractor OJSC "TajikSGEM" started construction works in June 2024. The contractor performed the following works in the reporting period:

1. Site DMA A-10-1:

- Installation of branch lines;

2. Site DMA C-17:

- Installation of Steel pipes DN325 – 434,2m
- Installation of Steel pipes DN159 - 10m
- Installation of Steel pipes DN89 - 18m
- Installation of Steel pipes DN57 - 24m
- Installation of reinforced concrete manholes – 7 sets.

3. Site DMA A-12:

- Installation of PE pipes DN63÷DN25 - 6447m

4. Site DMA A-13:

- Installation of PE pipes DN75÷DN25 – 4502,97m
- Concreting of the WMC – 29 sets.

Photo 13: Excavating trench, July 2024

Photo 14: Excavating trench, August 2024

Photo 15: Preparation works to jointing pipes, December 2024

Photo 16: Asphalt cut for excavating works, December 2024

2.3.5 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 1: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello str

40. Contractor LLC “Hamsafar” started construction works in July 2024. The contractor performed the following works in the reporting period:

- Installation of PE pipes DN160 - 56m
- Installation of PE pipes DN225 - 27m

Photo 17: Restoration of the site at completed section, October 2024, July 2024

Photo 18: Excavating trench, August 2024

Photo 19: Manual backfilling of wells, September 2024

Photo 20: Backfilling of trenches, September 2024

2.3.5 CW-02 Establishment of DMAs and rehabilitation of secondary and tertiary networks Lot 2: Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9

41. Contractor LLC “Stroy-Center” started construction works in June 2024. The contractor performed the following works in the reporting period:

- Installed HDPE pipe d-160mm - 165m.
- Installed HDPE pipe d-75mm - 189m.
- Installed HDPE pipe d-63mm – 209m.
- Installed HDPE pipes d-50mm – 163,5m.
- Installed HDPE pipes d-25mm - 7700m

Photo 21: Manual excavation of trenches, October 2024

Photo 22: Preparation for pipelaying, October 2024

Photo 23: Pipelaying, October 2024

Photo 24: Pipe jointing, December 2024

2.4. Description of Any Changes to Project Design

42. During the reporting period, there were no alterations made to the project design.

2.5. Description of Any Changes to Agreed Construction methods

43. During the reporting period, there were no alterations made to the agreed construction methods.

3. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1. General Description of Environmental Safeguard Activities

44. The IEE was submitted by DVK to State Ecological expertise of the Committee for environmental protection under Government of Tajikistan (CEP) for getting their positive conclusion (clearance) on 15 February 2022.

45. To ensure that the contractors comply with the requirements of the EMP, PIG prepared and provided the following specification clauses into the bidding documentation:

- List of environmental management requirements to be budgeted by the bidders in their proposals.
- Environmental clauses for contractual terms and conditions.
- IEE and EMP in English and Russian[1] languages.

Table 3: Environmental Safeguards Activities Carried out During Reporting Period (January - June 2024)

Environmental Safeguard Activities
PIG environmental specialist (Mr. Kamoliddin Kholov) - Participation in preparation of Environmental Monitoring Report - Conducting audits and inspections - Liaising with regulatory agencies - Participation in preparation of bidding documentation
PDCSC Environmental consultant Dilshod Dadobaev - Preparation of Environmental Monitoring Report - Developing environmental monitoring plan - Conducting audits and inspections - Reviewing and updating SSEMPs - Participation in preparation of bidding documentation

3.2. Site Inspections

46. The primary aim of conducting inspections and audits is to promote and enforce environmentally responsible practices within project operations. Additionally, these processes support the establishment of robust governance and effective environmental management in everyday activities. Inspections and audits are essential for ensuring that projects comply with environmental regulations and standards.

47. During these evaluations, environmental specialists visit project sites to assess various elements of environmental management. They examine the implementation of safeguard requirements and verify that projects adhere to relevant environmental laws. A total of 49 site visits were carried out to conduct a thorough compliance assessment with these regulations. Each visit included detailed inspections of the project locations, discussions with project personnel, and reviews of documentation pertaining to environmental management practices. Overall, the adherence to safeguard requirements was found to be satisfactory.

[1] All people speak Russian and better understand technical and technical terms in Russian than Tajik.

48. It is crucial to understand that inspections and audits extend beyond merely pinpointing instances of non-compliance. They also function as valuable opportunities for learning and enhancement. The insights gained from these visits can highlight areas where additional training or resources may be beneficial, as well as identify procedural or practice changes that could lead to improved environmental outcomes.

49. The accompanying photographs serve as visual documentation of some findings from the site inspections. These images illustrate the conditions observed during the evaluations and provide concrete evidence of both compliance levels and potential areas for improvement. By visually capturing and documenting these findings, it becomes easier to communicate the results of the inspections and audits to stakeholders and decision-makers, fostering a clearer understanding of the current state of environmental management within the projects. evidence of both compliance and areas for improvement.

Photo 25: CW02 Lot 3: Lack of trench barriers, September 2024

Photo 26: CW02 Lot 3: Trench barriers installed, September 2024

3.3. ADB's Environmental Safeguards Review Mission (ESRM)

50. During the reporting period, experts from the Asian Development Bank (ADB) conducted a series of site visits to monitor the progress of the construction project. Notably, on August 28 and 31, 2024, ADB Executive Director Mr. Nim Dorji visited Tajikistan to assess the construction sites firsthand. His visit provided valuable insights into the project's implementation and facilitated direct communication with local stakeholders.

Photo 27: Review mission, 28 November 2024

51. Additionally, a dedicated country safeguard mission conducted an in-depth review of the project sites on October 10, 2024. This mission aimed to ensure compliance with environmental and social safeguards, highlighting ADB's commitment to sustainable development practices.

Photo 28:Country safeguard mission, October 10, 2024

Furthermore, on November 4, 2024, an ADB consultant carried out a comprehensive review during the Grant and Technical Assistance (TA) consultation missions. This review identified minor environmental concerns related to the use of personal protective equipment (PPE) among workers at the construction sites. In response to these findings, the Project Implementation Group (PIG), in collaboration with the contractor and the Project Management and Design Supervision Consultant (SMEC Ltd.), has agreed to implement all recommended corrective actions by December 31, 2024. This proactive approach underscores the commitment of all parties involved to uphold safety and environmental standards throughout the project's lifecycle.

Photo 29: Meeting with ADB mission in PIG.

2024. A summary of the identified deficiencies and the proposed corrective measures is provided in the table below.

Table 4: Recommendations from the Environmental Safeguards Review Mission

SN	Proposed Action	Responsibility	Due Date	Action Taken
1	ire the supervisory consultant's national Environmental Specialist, the, to provide training on	P.I.G. and Construction Supervision Consultant	March 2025	Trainigs have been conducted before the due-date both on-site and in PIG's office.

SN	Proposed Action	Responsibility	Due Date	Action Taken
	environmental safety measures for the PIG, contractors and subcontractors.			

3.4. Issues Tracking (Based on Non-Conformance Notices)

52. Table 5 summarizes implementation Status of Corrective Actions proposed in the reporting period. All issues from the previous period were closed during the previous monitoring period (by December 31, 2024).

Table 5: Issues identified during reporting period

Issue	Required Action	Responsibility	Timing (Target Dates)
Lack of trench barriers, September 2024	Install rigid trench barriers	Contractor CW02 Lot 3.	**Resolved**, Barriers installed (Photo 25, 26)

3.5. Trends

53. Some trends can be identified from the previous SAEMRs. The following table shows the number of issues identified in each period and the percent of closed issues at the end of the period.

Table 6: Trends on issues as per semiannual monitoring reports

SAEMR Number and period	Unsolved Issues from previous periods	No of issues identified in the period	Total	No of issues Closed	% of issues Closed
1st SAEMR, June-December 2022	0	0	0	0	0%
2nd SAEMR, January-June 2023	0	5	5	5	100%
3rd SAEMR, July-December 2023	0	4	4	4	100%
4th SAEMR, January-June 2024	0	1	1	1	100%
5th SAEMR, July-December 2024	0	1	1	1	100%

3.6. Unanticipated Environmental Impacts or Risks

54. N/A: no unanticipated environmental impacts and risks were identified.

4. RESULTS OF ENVIRONMENTAL MONITORING

56. During the reporting period, we did not receive any complaints or concerns from individuals or stakeholders regarding air quality, dust, or noise levels. This lack of feedback suggests that there were no significant issues related to air quality or noise disturbances in the monitored area. The absence of complaints indicates that the overall environmental conditions were deemed satisfactory and did not present any noticeable problems.

57. It is important to highlight that our environmental monitoring plan, which outlines our monitoring protocols, does not mandate specific air quality measurements in the absence of complaints from the community or stakeholders. Throughout the reporting period, we also conducted baseline measurements of various environmental indicators for new sub-projects prior to the initiation of construction activities. This proactive approach ensures that we have a comprehensive understanding of the environmental conditions before any development begins, thereby allowing us to effectively manage and mitigate potential impacts as needed.

4.1. Water quality monitoring

58. During the reporting period, no activities were carried out in the riverbed or in close proximity to watercourses. As a result, no water quality samples were collected. Prior to the commencement of construction activities, baseline monitoring will be performed by a licensed laboratory contracted by the contractor.

4.2. Air quality monitoring

59. In accordance with the IEE, a comprehensive Environmental Monitoring Plan was developed in consultation with the CEP. Prior to the commencement of construction activities, baseline monitoring will be performed by a licensed laboratory contracted by the contractor.

4.3. Noise monitoring

60. Prior to the commencement of construction activities, baseline noise monitoring is being performed by a licensed laboratory contracted by the contractor.

4.4. Flora and fauna monitoring

61. Monitoring of fauna is not foreseen for this Project according to IEE/EMP. All works take place within the localized urban area.

4.5. Waste Management

62. The Contractor has liaised with Local Administration for disposal of construction waste. The waste management meets the requirements on collection point for household waste. The household wastes are taken by agreement with municipalities of Dushanbe to designated city landfill. There is agreement with Dushanbe municipal service authorities on disposal of construction waste in landfill located in mahalla Chorbog.

63. During reporting period in total for ongoing subprojects around 1.4 tons of household wastes have been disposed at designated landfill.

4.6. Health and Safety

64. The Contractors took all precautions at all construction sites for health and safety of the workers and the people of the surroundings in accordance with the Health and Safety Plan submitted by the Contractor and approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC. Health and Safety measures are continuously applied, maintained and monitored by the health and safety manager of the Contractor and Environmental and social staff of the PMDSC and the PIG. No accidents or incidents have been recorded during the period.

4.6.1. Community health and safety

65. The territories of all construction sites are mostly fenced, appropriate informational and warning signs are installed. During the reporting period, no incidents occurred that led to community health and safety issues, including traffic accidents.

4.6.2. Workers' health and safety

66. Health and Safety measures were continuously applied, maintained and checked by the health and safety managers of Contractors and monitored by the Environmental and social guarantee staff of the PMDSC and the PIG. No accidents or incidents have been recorded during the period.

67. The Contractor assumed the following obligations:

- Implementing and adhering to all health and safety measures and protocols as outlined by the project management team.
- Providing necessary training and resources to workers to ensure they are aware of and able to follow safety procedures.
- Regularly monitoring and inspecting the work area for any potential hazards or risks.
- Reporting any accidents, incidents, or near-misses immediately to the project management team.
- Taking appropriate corrective actions to address any identified safety issues or concerns.
- Ensuring that all workers have access to personal protective equipment (PPE) and that it is used correctly.
- Complying with all relevant health and safety laws, regulations, and standards.
- Conducting regular safety meetings and toolbox talks to communicate and reinforce safe working practices.
- Coordinating with other contractors and subcontractors to ensure a cohesive approach to health and safety on the project.
- Providing documentation and records of safety inspections, training, and incident reports as required.

68. Overall, the contractor is responsible for creating and maintaining a safe working environment for their employees and ensuring that all necessary precautions are taken to prevent accidents or incidents from occurring.

4.7. Construction camps

69. No separate construction camp was established for the components because all workers are local. The offices of Contractors are arranged in sleeping-cars.

4.8. Summary of Monitoring Outcomes

70. Status of compliance with environmental safeguards related covenants in the Project's Grant Agreement signed between Republic of Tajikistan and ADB on 18 October 2022[2] is summarized in Table 7.

Table 7: Grant Agreement Compliance Status

Schedule	Paragraph	Covenant	Compliance Status
3	3	**Procurement** The Recipient shall or shall cause DVK, through SEADC not award any Works contracts until: each of ADB and the State Committee on Environment of the Recipient has granted the final approval of the IEE; and	Complied IEE approved by ADB, and Ecological Expertise of Committee for Environmental Protection, which issued "environmental appraisal" on 15 February 2022 (Registration No. 212-15)
3	3	the Recipient has incorporated, or has caused DVK, through SEADC, to incorporate, the relevant provisions from the EMP into the Works contract.	Complied, The provisions that are pertinent to the Environmental Management Plan (EMP) have been integrated into the Works contracts.
3	10	**Environment** The Recipient shall ensure, or shall cause DVK, through SEADC, to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with all applicable laws and regulations of the Recipient relating to environment, health and safety;	Ongoing in Compliance The Recipient is responsible for ensuring that the Project and all its facilities are prepared, designed, constructed, implemented, operated, and decommissioned in compliance with all relevant environmental, health, and safety laws and regulations of the Recipient.
3	10	The Environmental Safeguards;	Ongoing in Compliance The recipient is responsible for ensuring that all aspects of the Project, including preparation, design,

[2] ADB. Grant Agreement (Special operations) for Additional Financing for Dushanbe Water Supply and Sanitation Project (18 October 2022): https://www.adb.org/sites/default/files/project-documents/50347/50347-003-grj-en.pdf

Schedule	Paragraph	Covenant	Compliance Status
			construction, implementation, operation, and decommissioning, adhere to the Environmental Safeguards.
3	10	All measures and requirements set forth in the IEE, the EMP, and any corrective or preventative actions set forth in the Safeguards Monitoring Report or corrective action plan.	Ongoing in Compliance The Recipient is responsible for ensuring that all aspects of the Project, including its preparation, design, construction, implementation, operation, and decommissioning, adhere to the guidelines and regulations outlined in the IEE, EMP, and any corrective or preventative measures specified in the Safeguards Monitoring Report or corrective action plan.
3	14	**Human and Financial Resources to Implement Safeguards Requirements** The Recipient shall make available, or shall cause SEADC to make available to DVK, necessary budgetary and human resources to fully implement the EMP and the RP.	Ongoing in Compliance, Both PIG and PDMSC's environmental personnel have been mobilized in accordance with the IEE.
3	15	**Safeguards-Related Provisions in Bidding Documents and Works Contracts.** The Recipient shall ensure, or shall cause DVK, through SEADC, to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures and requirements relevant to the contractor set forth in the IEE, the EMP and the RP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in the Safeguards Monitoring Report or corrective action plan;	Ongoing in Compliance Contracts under bidding include EMPs cleared by ADB and applicable conditions of national IEE clearances listed under para.24.
3	15	(b) make available a budget for all such environmental and social measures;	Ongoing in Compliance, The budget allocated for environmental and social measures
3	15	(c) provide the Recipient, through DVK, 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 that were not considered in the IEE, the EMP	Ongoing in Compliance No unforeseen risks or impacts were identified during the reporting period.

Schedule	Paragraph	Covenant	Compliance Status
		and the RP;	
3	15	(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and	Ongoing in Compliance, A pre-works conditions report for each civil works package will be prepared prior to the start of civil works.
3	15	(e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.	Ongoing in Compliance PDMSC in conjunction with PIG will control it
3	16	**Safeguards Monitoring and Reporting** The Recipient shall, or shall cause DVK, through SEADC, to: (a) Submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to the respective affected people under the Environmental Safeguards, the Involuntary Resettlement Safeguards and the Indigenous Peoples Safeguards promptly upon submission,	Ongoing in Compliance, The information from this SAEMR will be translated into Russian language[3] and disclosed at the website of DVK www.okd.tj
3	16	(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE, the EMP and the RP (including, without limitation, as a result of any change of design, baseline or other current conditions), promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan;	Ongoing in Compliance No unforeseen risks or impacts were identified during the reporting period.
3	16	(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP or the RP promptly after becoming aware of the breach; and	Ongoing in Compliance No actual or potential breach of compliance with the measures and requirements were identified during the reporting period.
3	18	**Labor Standards, Health and Safety** The Recipient shall ensure, or shall cause DVK, through SEADC, to ensure, that the core labor standards and the Recipient's applicable laws and regulations are complied with during Project implementation. The Recipient shall, or shall cause DVK, through	Ongoing in Compliance During the implementation of the Project, utmost care is taken to ensure compliance with the core labor standards and the relevant laws and regulations of the Borrower. The bidding documents and contracts that are financed by ADB under the Project contain specific provisions that

[3] All people speak Russian and better understand technical and technical terms in Russian than Tajik

Schedule	Paragraph	Covenant	Compliance Status
		SEADC, to ensure 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 Recipient's applicable labor law and regulations and incorporate applicable workplace occupational safety norms;	mandate the contractors to comply with the applicable labor laws and regulations of the Borrower. Additionally, the contractors are required to incorporate workplace occupational safety norms as a part of their compliance obligations.
3	18	(b) do not use child labor;	Ongoing in Compliance PDMSC in conjunction with PIG will control it
3	18	(c) do not discriminate workers in respect of employment and occupation;	Ongoing in Compliance PDMSC in conjunction with PIG will control it
3	18	(d) do not use forced labor;	Ongoing in Compliance PDMSC in conjunction with PIG will control it
3	18	(e) allow freedom of association and effectively recognize the right to collective bargaining; and	Ongoing in Compliance PDMSC in conjunction with PIG will control it
3	18	(f) disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS[4]. to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	Ongoing in Compliance PDMSC, in collaboration with PIG, is organizing an awareness training program to educate contractors working on the Project and the local communities, particularly women, about the dangers of sexually transmitted diseases, including HIV/AIDS. The aim is to ensure that all parties involved are well-informed and equipped to protect themselves and others from the risks associated with these infections.

71. Status of compliance with the Project EMP for pre-construction period attached to IEE is summarized in Table 8.

[4] HIV/AIDS – Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome

Table 8: Implementation Status of EMP for Woman's Center (CW-05) during the construction period

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Hiring of local workers	1. Induction of the workers on community health and safety, grievance redress mechanism, and consultation and communications plan 2. No child labor will be employed in the project	**Yes** All workers local Worker instructed on HSE. No child labor used		
Encounter PCR along the pipeline routes	1. A chance find procedure will be included in the SSEMP to ensure appropriate measures are taken in the event cultural resources are encountered.	**YES**		
Generation of spoil material and other construction waste	1. Implementation of the Waste Management Plan (WMP) 2. Where possible, surplus materials will be re-used or recycled 3. Stored properly in correctly labeled containers at construction areas 4. Oil and fuel should be stored in mobile bunds to contain spillage 5. The Contractor shall also prepare a spill response plan as part of the SSEMP 6. Waste, both hazardous and non-hazardous, shall be collected and disposed of by a licensed waste management contractor	**Yes** Waste management plan developed and implemented		
Work related accidents during construction	1. An Occupational Health and Safety (OHS) Plan shall be prepared by the Contractor to manage worker safety on-site a. OHS Risk Assessment b. Safety Training Program c. Safety Inspection d. Personal Protective Equipment (PPE) 2. Implementation of COVID-19 measures to manage risk on construction sites	**Yes** OHS plan developed and implemented		
Increased of localized noise level	13. Works will be scheduled to coincide with periods when people would least likely be affected; work hours and workdays will be limited to less noise-sensitive times. Hours-of-work will be approved by	**Yes** Working hours scheduled between 8 am to 5 pm		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	the PMDSC having due regard for possible noise disturbance to the residents or other activities. Construction activities will be strictly prohibited between 10 PM and 7 AM. If the project site is located close to sensitive areas (within 250 meters) such as medical facilities and schools, the Contractor's hours of working will be limited to 8 AM to 6 PM. 14. Use temporary noise barriers while working in sensitive locations in case accidence of allowable limits is expected. Placing the barrier close to the source proves to be effective. 15. Give notice as early as possible to sensitive receptors for periods of noisier works such as excavation. Describe the activities and how long they are expected to take. Keep affected neighbors informed of progress. 16. Within normal working hours, where it is reasonable to do so: o schedule noisy activities for less sensitive times. o provide periods of respite from noisier works (for example, periodic breaks from jackhammer noise). 17. The weekend/evening periods are important for community rest and recreation and provide respite when noisy work has been conducted throughout the week. Accordingly, work will not be scheduled during these times. 18. All mechanical plant is to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices, will be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair.			
	19. Fit all pneumatic tools with an effective silencer on their air exhaust port.			

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	20. Install less noisy movement/reversing warning systems for equipment and vehicles that will operate for extended periods, during sensitive times or in close proximity to sensitive sites. Occupational health and safety requirements for use of warning systems must be followed. 21. Turn off plant when not being used. 22. All vehicular movements to and from the site to only occur during the scheduled normal working hours, unless approval has been granted by the PMDSC. 23. Where possible, no truck associated with the work will be left standing with its engine operating in a street adjacent to a residential area. 24. Provision of noise protection kits such as ear plug, earmuff, for workers who are working in the area with noise level is higher than 85 dB(A).			
Generation of dust and air pollution	25. Implementation of the Air Quality Management Plan 26. No equipment using any fuel that may produce air pollutants, including mobile generators, will be installed without consent of the PMDSC. 27. Construction equipment will be maintained to a good standard and fitted with pollution control devices which will be regularly monitored by the PMDSC. 28. No burning of debris or other materials will occur on the site. 29. The Contractor will ensure that material stockpiles will be located in sheltered areas and be covered with tarpaulins or other such suitable covering to prevent material becoming airborne. All trucks used for transporting materials to and from the sites will be covered with canvas tarpaulins, or other acceptable type cover (which will be properly secured) to prevent debris and/or materials from falling from or being blown off the vehicle(s).	**Yes** Air Quality management plan developed and implemented		
	31. Effective use of water sprays will be			

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	implemented (e.g., Carry out watering for dust control at least 3 times a day: in the morning, at noon, and in the afternoon during dry weather with temperatures of over 25°C, or in windy weather. 32. Avoid overwatering as this may make the surrounding muddy). All water used for controlling dust will be free of odor and pollution.			
Impact on health, safety and convenience of businesses, residences and users of the street area.	33. The public will be barred from construction areas, and excavations will be fenced, and sign posted.	**Yes** Barriers and warning signs installed		
Trees that need to but to accommodate pipelines either in private or public land	34. Where vegetation occurs, the Contractor will follow the procedures for tree cutting as stipulated by the CEP – elaboration of permit for the cutting of trees in the territory of the Republic of Tajikistan 35. Where practical, the Contractor shall remove existing trees and re-plant them within the vicinity of the building so as to cause minimal impact. When this is not possible, the Contractor shall discuss with CEP alternative locations for the re-planting of the trees. 36. Where trees will be cut, they shall be replaced on a 1:3 basis. The replaced trees shall be the same as the trees cut. The Contractor will be responsible for maintaining the trees for a six-month period. If any of the trees die within this period, the Contractor will replace the tree on a 1:1 basis.	**Yes** Tree cut permission obtained		

Table 9: Implementation Status of EMP for Sanitation Component (CW-04/1 and CW-04/2) during the construction period

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Temporary disruption of traffic and blockage of access roads	1. The Contractor will be responsible for the preparation of the Traffic Management Plan (TMP) as part of the SSEMP prior to start of any construction works. 2. The Contractor will strictly follow the TMP 3. The TMP will also describe the method for provision of access in roads	**Yes**, Traffic management plan prepared and agreed with Traffic Policy		
Hiring of local workers	1. Induction of the workers on community health and safety, grievance redress mechanism, and consultation and communications plan 2. No child labor will be employed in the project	**Yes,** all workers local, before starting the work workers are being trained on HS **Yes**		
Encounter PCR along the pipeline routes	1. A chance find procedure will be included in the SSEMP to ensure appropriate measures are taken in the event cultural resources are encountered.	**Yes,** chance find procedure prepared		
Siltation	1. Any deep excavations in unstable soils will be shored by the Contractor, and below grade construction brought to grade quickly, then excavations closed. 2. Surface soils should be temporarily graded-to-drain and protected as necessary to reduce erosion and sediment runoff.	**Yes,** The contractcor is responsible for ensuring the safety of the excavation by shoring it with appropriate support systems. Once the necessary shoring is in place, below-grade construction work can proceed.		
Generation of spoil material and other construction waste	1. Implementation of the Waste Management Plan (WMP) 2. Where possible, surplus materials will be re-used or recycled 3. Stored properly in correctly labeled containers at construction areas 4. Oil and fuel should be stored in mobile bunds to contain spillage 5. The Contractor shall also prepare a spill	**Yes,** Waste management plan prepared and agreed with Department of Environmental protection of Dushanbe		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	response plan as part of the SSEMP 6. Waste, both hazardous and non-hazardous, shall be collected and disposed of by a licensed waste management contractor 7. The Contractor will be responsible for the preparation and implementation of a method statement for the safe removal, storage and disposal of asbestos containing materials from the site			
Work related accidents during construction	1. An Occupational Health and Safety (OHS) Plan shall be prepared by the Contractor to manage worker safety on-site a. OHS Risk Assessment b. Safety Training Program c. Safety Inspection d. Personal Protective Equipment (PPE) 2. Implementation of COVID-19 measures to manage 1. risk on construction sites	**Yes**, OHS Plan prepared, Implementation controlled by PMDSC and PIG		
Increased of localized noise level	1. Receptors for periods of noisier works such as excavation. Describe the activities and how long they are expected to take. Keep affected neighbors informed of progress. 2. Within normal working hours, where it is reasonable to do so: o schedule noisy activities for less sensitive times. o provide periods of respite from noisier works (for example, periodic breaks from jackhammer noise). 3. The weekend/evening periods are important for community rest and recreation and provide respite when noisy work has been conducted throughout the week. Accordingly, work will not be scheduled	**Yes**, Noise management plan prepared, working hours agreed with local municipality		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	during these times. 4. All mechanical plant is to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices, will be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair. 5. Fit all pneumatic tools with an effective silencer on their air exhaust port. 6. Install less noisy movement/reversing warning systems for equipment and vehicles that will operate for extended periods, during sensitive times or in close proximity to sensitive sites. Occupational health and safety requirements for use of warning systems must be followed. 7. Turn off plant when not being used. 8. All vehicular movements to and from the site to only occur during the scheduled normal working hours, unless approval has been granted by the PMDSC. 9. Where possible, no truck associated with the work will be left standing with its engine operating in a 2. street adjacent to a residential area.			
Generation of dust and air pollution	1. Implementation of the Air Quality Management Plan 2. No equipment using any fuel that may produce air pollutants, including mobile generators, will be installed without consent of the PMDSC. 3. Construction equipment will be maintained to a good standard and fitted with pollution control devices which will be regularly	**Yes**, Air quality management and dust suppression plan prepared		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	monitored by the PMDSC. 4. No burning of debris or other materials will occur on the site. 5. The Contractor will ensure that material stockpiles will be located in sheltered areas and be covered with tarpaulins or other such suitable covering to prevent material becoming airborne. 6. All trucks used for transporting materials to and from the sites will be covered with canvas tarpaulins, or other acceptable type cover (which will be properly secured) to prevent debris and/or materials from falling from or being blown off the vehicle(s). 7. Effective use of water sprays will be implemented (e.g., Carry out watering for dust control at least 3 times a day: in the morning, at noon, and in the afternoon during dry weather with temperatures of over 25°C, or in windy weather. 8. Avoid overwatering as this may make the surrounding muddy). All water used for controlling dust will be free of odor and pollution.			
Impact on health, safety and convenience of businesses, residences and users of the street area.	1. Minimize the period of time that a segment of excavation is kept open by not allowing trenching to outpace pipe laying by more than a day or so. Trenches should be backfilled, and ground leveled after installation of piping. Place only bedding and pipe materials at the location that will be used within the next few days work, well out of the line of traffic. Clean up and remove from the site any excess spoil, wood used for shoring and construction materials upon completion of the segment. Compact soil in trench and clean surrounding pavement areas	**Yes**, Minimized the time and length (100 m) that a segment of excavation is open 2. Temporary bridging or tape barriers at trench entrances to residences and businesses installed.		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	to reduce blowing dust. 2. Provide temporary bridging across the trench at entries to residences and businesses. Otherwise, provide tape barriers to reduce the possibility of an accident. 3. Once work is complete on a segment, pavement surfaces and masonry work (curbs, abutments, stairs, drains, drives, etc.) should be repaired and returned to original condition. All roadway surfaces should be repaired as construction progresses; bid packages will contain a unit bid price for roadway repair, and for repair of any other facility, structure or surface that is likely to be damaged in quantity during construction. 4. The construction approach will minimize the time that any one segment is under construction or roadway/walkway left un-repaired to reduce the construction impact, done by limiting the length of open trench to 100 m or less. 5. The public will be barred from construction areas, and excavations will be fenced, and sign posted. Workers should not be allowed to enter trenches deeper than waist height unless they are properly shored.			
Trees that need to but to accommodate pipelines either in private or public land	1. Fell trees and re-plant them within the vicinity of the pipeline so as to cause minimal impact. When this is not possible, the Contractor shall discuss with CEP alternative locations for the re-planting of the trees. 2. Where trees will be cut, they shall be replaced on a 1:3 basis. The replaced trees shall be the same as the trees cut. The Contractor will be responsible for maintaining the trees for a six-month period. If any of the trees die within this period, the Contractor will replace the tree on a 1:1 basis.	**Yes**, During the reporting period, no trees were cut down. The contractor will obtain cutting permission as required.		

Table 10: Implementation Status of EMP for Water Supply Component (CW-02/1, CW-02/2 and CW-02/3) during the pre-construction and construction period

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
Design and Pre-Construction Phase				
Water quality issues in the KAF-I and KAF-II	1. Limit activities that may affect the water quality of the existing water sources.	**Yes,** Construction works designed to no impact to water quality		
Un-defined SPZ leading to groundwater pollution	2. Follow the procedures defined in SPZs to define and establish the SPZ	**Yes,** SPZ procedures followed		
Design for the riverbank protection works	3. Preparation of the Riverbank Protection Plan as part of the Site-Specific Environmental Management Plan (SSEMP)	**Yes,** No rivers in the project zone		
Involuntary resettlement	4. Ensure that Land Acquisition and Resettlement Plan (LARP) is completed and implemented before start of construction works	**Yes,** LARP prepared and implemented		
Construction Phase				
Temporary disruption of traffic and blockage of access roads	1. The Contractor will be responsible for the preparation of the Traffic Management Plan (TMP) as part of the SSEMP prior to start of any construction works. 2. The Contractor will strictly follow the TMP 3. The TMP will also describe the method for provision of access in roads	**Yes,** Traffic management plan developed and following		
Hiring of local workers	1. Induction of the workers on community health and safety, grievance redress mechanism, and consultation and communications plan 2. No child labor will be employed in the project	**Yes,** All workers are local		
Encounter PCR along the	1. A chance find procedure will be included in the	**Yes,** Chance find		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
pipeline routes	SSEMP to ensure appropriate measures are taken in the event cultural resources are encountered.	procedures developed		
Siltation	1. Any deep excavations in unstable soils will be shored by the Contractor, and below grade construction brought to grade quickly, then excavations closed. 2. Surface soils should be temporarily graded-to-drain and protected as necessary to reduce erosion and sediment runoff.	**Yes**, deep excavation will be shored		
Generation of spoil material and other construction waste	1. Implementation of the Waste Management Plan (WMP) 2. Where possible, surplus materials will be re-used or recycled 3. Stored properly in correctly labeled containers at construction areas 4. Oil and fuel should be stored in mobile bunds to contain spillage 5. The Contractor shall also prepare a spill response plan as part of the SSEMP 6. Waste, both hazardous and non-hazardous, shall be collected and disposed of by a licensed waste management contractor 7. The Contractor will be responsible for the preparation and implementation of a method statement for the safe removal, storage and disposal of asbestos containing materials from the site 8. Spoil material from reservoir will be managed properly 9. Spoil material from pipeline trenches will be tested for soil contamination before final disposal.	**Yes,** waste and materials management plan developed and implemented		
Work related accidents during construction	1. An Occupational Health and Safety (OHS) Plan shall be prepared by the Contractor to manage worker safety on-site a. OHS Risk Assessment b. Safety Training Program	**Yes,** OHS plan developed		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	c. Safety Inspection d. Personal Protective Equipment (PPE) 2. Implementation of COVID-19 measures to manage risk on construction sites			
Degradation of water quality of the river	1. Sheet piles will be erected between the work site and the river to prevent the ingress of water at the work site. Provision of riverbank protection works	**Yes,** there is no rivers in the construction area		
Increased of localized noise level	1. Works will be scheduled to coincide with periods when people would least likely be affected; work hours and workdays will be limited to less noise-sensitive times. Hours-of-work will be approved by the PMDSC having due regard for possible noise disturbance to the residents or other activities. Construction activities will be strictly prohibited between 10 PM and 7 AM in the residential areas. When operating close to sensitive areas (within 250 meters) such as medical facilities and schools, the Contractor's hours of working shall be limited to 8 AM to 6 PM. 2. Use temporary noise barriers while working in sensitive locations in case accidence of allowable limits is expected. Placing the barrier close to the source proves to be effective. 3. Give notice as early as possible to sensitive receptors for periods of noisier works such as excavation. Describe the activities and how long they are expected to take. Keep affected neighbors informed of progress. 4. Within normal working hours, where it is reasonable to do so:schedule noisy activities for less sensitive times. 5. Provide periods of respite from noisier works (for example, periodic breaks from jackhammer noise). 6. The weekend/evening periods are important for community rest and recreation and provide respite	**Yes,** noise management plan developed and implemented. Contractor's hours of working limited to 8 AM to 6 PM.		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	when noisy work has been conducted throughout the week. Accordingly, work will not be scheduled during these times. 7. All mechanical plant is to be silenced by the best practical means using current technology. Mechanical plant, including noise-suppression devices, will be maintained to the manufacturer's specifications. Internal combustion engines are to be fitted with a suitable muffler in good repair. 8. Fit all pneumatic tools with an effective silencer on their air exhaust port. 9. Install less noisy movement/reversing warning systems for equipment and vehicles that will operate for extended periods, during sensitive times or near sensitive sites. Occupational health and safety requirements for use of warning systems must be followed. 10. Turn off plant when not being used. 11. All vehicular movements to and from the site to only occur during the scheduled normal working hours, unless approval has been granted by the PMDSC. 12. Where possible, no truck associated with the work will be left standing with its engine operating in a street adjacent to a residential area. 13. Provision of noise protection kits such as ear plug,			
Generation of dust and air pollution	1. Implementation of the Air Quality Management Plan 2. No equipment using any fuel that may produce air pollutants, including mobile generators, will be installed without consent of the PMDSC. 3. Construction equipment will be maintained to a good standard and fitted with pollution control devices which will be regularly monitored by the PMDSC. 4. No burning of debris or other materials will occur on the site. 5. The Contractor will ensure that material stockpiles will be located in sheltered areas and be covered	**Yes,** Dust management plan developed and implemented		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	with tarpaulins or other such suitable covering to prevent material becoming airborne. 6. Avoid overwatering as this may make the surrounding muddy). All water used for controlling dust will be free of odor and pollution.			
Accumulation of pollutants in the newly constructed or repaired water mains, tanks and reservoir	1. Pipelines can be disinfected through chlorination. Initial chlorine conCenterations shall be made high enough (about 50 mg/l) to overcome the chlorine demand of contaminants. 2. Chlorination is repeated until residual chlorine is one mg/l, after which the structure is flushed out before being placed into use. 3. Installation contracts shall include a bid item for disinfection of installed piping.	**Yes,** pipeline disinfection will be carried out in coordination with the Sanitary and Epidemiological Service.		
Temporary disruption to water supply	1. Inform the public 24 hours in advance of any periods where water supply will be interrupted for more than one hour.	**Yes,** possible water supply disruption will be coordinated with city officials		
Impact on health, safety and convenience of businesses, residences and users of the street area.	1. Minimize the period of time that a segment of excavation is kept open by not allowing trenching to outpace pipe laying by more than a day or so. Trenches should be backfilled, and ground leveled after installation of piping. 2. Place only bedding and pipe materials at the location that will be used within the next few days work, well out of the line of traffic. Clean up and remove from the site any excess spoil, wood used for shoring and construction materials upon completion of the segment. Compact soil in trench and clean surrounding pavement areas to reduce blowing dust. 3. Provide temporary bridging across the trench at entries to residences and businesses. Otherwise, provide tape barriers to reduce the possibility of an accident.	**Yes,** the length of the open trench segment is limited		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	4. Once work is complete on a segment, pavement surfaces and masonry work (curbs, abutments, stairs, drains, drives, etc.) should be repaired and returned to original condition. All roadway surfaces should be repaired as construction progresses; bid packages will contain a unit bid price for roadway repair, and for repair of any other facility, structure or surface that is likely to be damaged in quantity during construction. 5. The construction approach will minimize the time that any one segment is under construction or roadway/walkway left un-repaired to reduce the construction impact, done by limiting the length of open trench to 100 m or less. 6. The public will be barred from construction areas, and excavations will be fenced, and sign posted. Workers should not be allowed to enter trenches deeper than waist height unless they are properly shored.			
Trees that need to but to accommodate pipelines either in private or public land	1. Where vegetation occurs on private land, owners will be compensated (only fruit trees). Where vegetation occurs on public land, the Contractor will follow the procedures for tree cutting as stipulated by the Committee for Environmental Protection (CEP) – elaboration of permit for the cutting of trees in the territory of the Republic of Tajikistan 2. Where practical, the Contractor shall remove existing trees and re-plant them within the vicinity of the pipeline so as to cause minimal impact. When this is not possible, the Contractor shall discuss with CEP alternative locations for the re-planting of the trees. 3. Where trees will be cut, they shall be replaced on a 1:3 basis. The replaced trees shall be the same as the trees cut. The Contractor will be responsible for maintaining the trees for a six-month period. If any	**Yes,** LARP implemented. Permits for cutting down trees have been obtained		

Potential Impact / Issue	Mitigation / Management Measure	Compliance Status	Comment on Reasons for Partial or Non-Compliance	Required Action and Target Dates to Achieve Compliance
	of			
Work related accidents during operation and maintenance	1. An Occupational Health and Safety (OHS) Plan shall be prepared by the Contractor to manage worker safety on-site a. OHS Risk Assessment b. Safety Training Program c. Safety Inspection d. Personal Protective Equipment (PPE) e. Operational procedure for the management of liquid chlorine. f. Operational procedure for working with electrical equipment, including transformers. A plan for annual medicals to test workers general health.	**Yes,** OHS Plan developed and implemented		
Emergency scenarios that could impact the new pipelines and pipeline joints (spill, fire and explosion, work-site accident, earthquake and floods)	1. Preparation of an Emergency Response Plan (ERP) a. Oil, fuel and liquid chlorine spills; b. Fire and explosions; c. Work-site accidents; and d. Earthquake and floods. 2. The plan will detail the process for handling, and subsequently reporting, emergencies, and specify the organizational structure (including responsibilities of nominated personnel).	**Yes,** Emergency response plan developed and implemented		
Activities within the SPZ that have impact on water supply	1. Control the activities within the SPZ and ensuring compliance with the SPZ.	**Yes**, Activities within SPZ are coordinated with DVK officials		

4.9. Grievance Redress mechanism functioning

72. The contractors have established on-site offices where individuals can obtain information about the project's progress. The contractor regularly updates the public through consultations and notice boards regarding the construction's scope, schedule, and any activities that may cause inconveniences or limited access. Noticeboards and signs in Tajik language were provided. Throughout this period, no complaints were received regarding the environmental conditions.

4.10 Training

73. The management team at PIG is committed to enhancing the skills and knowledge of project managers from our contracting partners. To achieve this, we conduct monthly training sessions specifically designed for these project managers.

74. During these sessions, we delve into the critical safety requirements that must be adhered to during construction projects. We emphasize not only the importance of following safety protocols to protect the well-being of all personnel on site but also the necessity of fostering a culture of safety that permeates throughout the entire organization.

75. Moreover, these training sessions aim to promote a responsible attitude towards environmental stewardship among contractors. We believe that it is essential for project managers to understand their role in minimizing environmental impact and to actively engage in practices that support sustainability. This includes educating them on best practices for waste management, resource conservation, and the implementation of eco-friendly technologies.

76. By combining safety training with a strong focus on environmental responsibility, PIG management ensures that our contractors are well-equipped to manage their projects effectively while safeguarding both people and the planet. These monthly sessions not only enhance compliance with regulations but also cultivate a shared commitment to excellence and responsibility within the industry.

Photo 30: Process of training session for contractors' project managers in PIG

5. FUNCTIONING OF THE SSEMP

5.1. SSEMP Review

77. The contract for AF CW-04 lot 1 and lot 2 Rehabilitation of Sewerage network for Karotegin and Zebunisso was awarded to Consortium OJSC “TajikSGEM”, LLC “AZkompozit” and LLC “Stroy-Center” The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on 19 March 2023, before the commencement of civil works.

78. The contract for AF CW-05 “Detailed design and Construction of Woman Training Center was awarded to Consortium LLC “Stroy-Center”, and LLC “GM and Partners”. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on 20 October 2023, no civil works started during reporting period.

79. The contract for CW-AF-02 Lot 1 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello street” was awarded to LLC “Hamsafar”. The Contractor submitted the first draft of the SSEPM on May 27, 2024. After a thorough review, the SSEMP has been returned with comments for revisions. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on 17 July 2024, before the commencement of civil works.

80. The contract for CW-AF-02 Lot 2 ” Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9” was awarded to LLC “Stroy-Center”. The Contractor submitted the first draft of the SSEPM on May 17, 2024. After a thorough review, the SSEMP has been returned with comments for revisions. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on 14 June 2024, before the commencement of civil works.

81. The contract for CW-AF-02 Lot 3 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1” was awarded to OJSC “TajikSGEM.” The Contractor submitted the first draft of the SSEPM on April 26, 2024. After a thorough review, the SSEMP has been returned with comments for revisions. The SSEMP not approved by the end of the reporting period. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on 26 June 2024, before the commencement of civil works.

82. The contract for CW-AF-01 Lot 1 “Rehabilitation of the eastern part of KAF I”: was awarded to LLC “Hinor” on September 11, 2024. The Contractor submitted the first draft of the SSEPM on December 5, 2024. After a thorough review, the SSEMP has been returned with comments for revisions. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on December 25 2024, before the commencement of civil works.

83. The contract for CW-AF-01 Lot 2 “Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field;” was awarded to LLC “Intersokhtmon” with LLC “Kokhi Safed” as specialist subcontractor on September 11, 2024. The Contractor submitted the first draft of the SSEPM on November 26, 2024. After a thorough review, the SSEMP has been

returned with comments for revisions. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on December 202024, before the commencement of civil works.

84. The contract for CW-AF-01 Lot 3 “Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations” was awarded to OJSC “Tojikgidroelectromontaj” (TGEM on September 11, 2024. The Contractor submitted the first draft of the SSEMP on November 13, 2024. After a thorough review, the SSEMP has been returned with comments for revisions. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on December 23, 2024, before the commencement of civil works.

85. The contract for CW-AF-01 Lot 4 “Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village” was awarded to LLC "JV Ittihod Inshoot and Zumrut" in Joint venture with "LLC Simo Co" on September 11, 2024. The Contractor submitted the first draft of the SSEMP on December 13, 2024. The SSEMP was finally approved by the Dushanbe Environmental Protection Department, after the approval of PIG, following the review and approval of PMDSC on December 23 2024, before the commencement of civil works.

Table 11: Status of SSEMPs for reporting period from July to December 2024

Package	Status	Note
AF CW-04 lot 1 and lot 2 Rehabilitation of Sewerage network for Karotegin and Zebunisso	SSEMP received and approved by PIG in March 2023 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
AF CW-05 “Detailed design and Construction of Woman Training Center	SSEMP received and approved by PIG in October 2023 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-02 Lot 1 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-6, A-7 and Gastello street”	SSEMP received and approved by PIG in July 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-02 Lot 2 ” Rehabilitation of secondary and tertiary networks and establishment of DMAs: A-5, A-8, A-10 and C-9”	SSEMP received and approved by PIG in June 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-02 Lot 3 “Rehabilitation of secondary and tertiary networks and establishment of DMAs: C-11, C-17, A-12, A-13 and A-10-1”	SSEMP received and approved by PIG in June 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-01 Lot 1 “Rehabilitation of the eastern part of KAF I”	SSEMP received and approved by PIG in December 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-01 Lot 2 “Rehabilitation of KAF II well field and transmission line from KAF II well field to KAF I well field;”	SSEMP received and approved by PIG in December 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place

CW-AF-01 Lot 3 “Rehabilitation and/or upgrading of transmission lines and 3rd lifting pumping stations	SSEMP received and approved by PIG in December 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place
CW-AF-01 Lot 4 “Upgrading of pipelines, water mains, pumping station and reservoirs in Quarters #9 and #13 of Khovaron Village”	SSEMP received and approved by PIG in December 2024 before commencement of civil works	Scan letter from PIG with approval of SSEMP is in place

6. SUMMARY AND RECOMMENDATIONS

86. The environmental monitoring activities conducted during this reporting period demonstrate that the project contractors are generally adhering to the environmental management and mitigation measures outlined in the project's environmental management plan (EMP) and site-specific environmental management plans (SSEMPs). The environmental team from the Project Implementation Group (PIG) and the Project Management, Design and Supervision Consultant (PMDSC) have been actively overseeing construction activities to ensure proper environmental controls are in place.

87. During the reporting period, the key environmental and safety issues identified included a lack of trench barriers at one construction site. This issue was promptly addressed by the contractor upon being notified, with the installation of the required barriers. No other major non-compliances were observed during the site inspections.

88. The contractors have also implemented necessary measures to provide workers with adequate sanitary conditions, drinking water, personal protective equipment (PPE), and fire safety gear. Safety protocols are being enforced to minimize accidents and injuries. However, some minor shortcomings in the provision of PPE were noted during inspections, which were subsequently rectified by the contractors.

89. A summary of the environmental and safety concerns that arose during the reporting period, along with the corrective measures taken, is presented in Table 12. It is important to note that the two non-conformance issues identified during this period have been completely resolved.

Table 12: Issues identified during reporting period

Issue	Required Action	Responsibility	Timing (Target Dates)
1. Lack of trench barriers, September 2024	Install rigid trench barriers	Contractor CW02 Lot 3.	**Resolved**, Barriers installed (Photo 25, 26)