

SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

#14 Semi-annual Report

(Reporting Period: July-December 2024)

Loan Number: 3441

Project Number: 43405-028

**GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM
(TRANCHE 6)**

(FINANCED BY THE ASIAN DEVELOPMENT BANK)

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For: The Ministry of Regional Development and Infrastructure of Georgia and the Asian Development Bank

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ABBREVIATIONS

ADB	Asian Development Bank
CC	Construction Company
CCTV	Closed-Circuit Television Video
CAP	Corrective Action Plan
DC	Design Consultant
DPEPSA	Department of Permits, Environmental Protection and Social Affairs
DFPMD	Donors Funded Project Management Department
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
ERP	Emergency Response Plan
ES/ SES	Environmental Specialist/ Senior Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IPMO	Investment Program Management Office
IEE	Initial Environmental Examination
LLC	Limited Liability Company
MFF	Multi-tranche Financing Facility
MEPA	Ministry of Environmental Protection and Agriculture
MRDI	Ministry of Regional Development & Infrastructure
NEA	National Environmental Agency
NCN	Non-compliance Notice
OJSC	Open Joint Stock Company
RE	Resident Engineer
SAEMR	Semi-Annual Environmental Monitoring Report
SC	Supervision Consultant
T6	Tranche 6
USIIP	Urban Sector Improvement Investment Program
UWSCG	United Water Supply Company of Georgia
WHO	World Health Organization
WS	Water Supply
WSS	Water Supply & Sewerage
WWTP	Waste Water Treatment Plant

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I. INTRODUCTION

1.1 Preamble

1. This report represents the Semi-annual Environmental Monitoring Review (SAEMR) for the Urban Services Improvement Investment Program (USIIP), Tranche 6 and describes the period of July-December 2024. USIIP/T6 is financed by the ADB through its Multi-tranche Financing Facility (MFF).
2. This report is the 14th Environmental Monitoring Review (EMR) of Urban Services Improvement Investment Program /Tranche 6.

1.2 Headline Information

Tranche 6 of USIIP includes the following sub-projects:

3. **Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01).** The contract for implementation of the MAR-01 sub-project was signed in September 2022. Initial project completion date was March 2024, but the construction works have not been completed and currently are continued under the Government financing as MFF was closed in March 2024. The new project completion date is March 2025.
4. **Construction of Waste Water Treatment Plant for Marneuli and Bolnisi in Marneuli (MAR-02).** The contract for implementation of the MAR-02 sub-project was signed in October 18, 2019. Initial project completion date was March 2024, but the construction works have not been completed and currently are continued under the Government financing as MFF was closed in March 2024. The new project completion date is June 2025.
5. **The Construction of Water Supply System in Chiatura (CHI-01).** The contract for construction of the Chiatura Water Supply Sub-project (CHI-01) was signed in August 21, 2017 with “Akkord Industry Construction Investment Corporation” OJSC (Azerbaijan). Civil works for Section 1 of the CHI-01 sub-project were successfully completed within the contractual timeframe, 30 June 2021 and are now under operation by the local service center of Chiatura.
6. For Section 2 of the CHI-01 sub-project, the contract period was extended until April 5, 2022. However, these works remain incomplete, as the works were suspended by contractor in April 2022 and “Akkord” has stopped construction activities and abandoned the site. Approximately 43% of the Section 2 works still need to be finalized, following works are incomplete under Section 2 of the Chi-01 sub-project that steel need to be finalized:

Construction of water supply system for Avarioni & Safari areas sub-component:

Construction of Avarioni Reservoir:

- Avarioni reservoir fencing to be done;
- Mechanical and Electrical works to be completed;
- Guard house to be constructed;
- Some house connection work remains to be done.

Construction of BISI Pumping Station

- Bisi pumping station to pump water from Bisi reservoir to Avarioni reservoir is incomplete. The pump house building foundation slab was laid but other works not done, such as installation of the booster pump for providing water in two houses near Navradzeti reservoir.
 - Purchase of generators for BISI pumping stations to ensure smooth operation of PS.
7. A new tender under CHI-01 sub-project will be issued in the Q1 of 2025 to complete these remaining tasks with funding provided through the central government budget. The Tender Documentation are under finalization by the Supervision Company HILL. UWSCG is responsible for ensuring the completion of the CHI-01 sub-project.
8. Environmental Due Diligence Report (EDDR) was prepared by UWSCG/IPMO presenting the assessment of potential environmental impacts and risks of the changes in scope of works for Rehabilitation of the Chiatura Water Supply Project. Measures are presented in this report to avoid, minimize, mitigate or compensate for the adverse impacts. During the preparation of the DDR, the Initial Environmental Examination (IEE) and Environmental Management Plan (EMP), both prepared in June 2017, were used as the baseline documents. Since the project scope has not changed significantly and mainly involves completing unfinished work within the CHI-01 framework, the potential environmental risks and mitigation measures remain unchanged. However, the document has been reviewed and updated to reflect all relevant issues including project duration, and others. EDDR will be attached to tender documentation.
9. During the reporting period, only minor civil works were conducted within the USIIP/T6 under the MAR-01 (Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi) and active construction works were carried out under the MAR-02 (Construction of Waste Water Treatment Plant in Marneuli) sub-project. *Therefore*, only activities related to these sub-projects are included in this report. All detailed information is provided in the sub-chapters 2.3.2 and 2.3.3 and Tables 9-14 below.

2. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

10. The Urban Services Improvement Investment Program was developed as the Government's response to the lack of adequate and/or safe water supply, sewerage and sanitation in urban areas of Georgia. This is intended to optimize social and economic development in selected urban areas through improved urban water and sanitation services, and is financed by the ADB through its Multi-tranche Financing Facility. The Ministry of Regional Development and Infrastructure is the Executing Agency and the "United Water Supply Company of Georgia", LLC is the Implementing Agency of the Investment Program. UWSCG is a 100% state-owned company.

11. The Investment Program improves infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sanitation) in one town. Sub-projects rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works include sewer network, pumping stations, main collectors and waste water treatment plants.

12. Tranche 6 of the Investment Program includes:

- Ñ Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01);
- Ñ Construction of Waste Water Treatment Plant for Marneuli and Bolnisi in Marneuli (MAR-02);
- Ñ Construction of Water Supply System in Chiatura (CHI-01).

13. **Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01 - LOT-01; LOT-02; LOT-03 and LOT-06):** The contract for the implementation of the Lot-01, Lot-02, Lot-03 and Lot-06 under MAR-01 has been awarded to China Geo-engineering Corporation (CGC) (Peoples Republic of China) in September 2022. The project was initially scheduled for completion in March 2024 (the MFF closing date); however, as previously mentioned, the construction works were not completed by the deadline and the completion date has been extended to March 2025, under Government Financing. A brief description of LOT-01, LOT-02, LOT-03, and LOT-06, along with the scope of works, is provided below. Detailed information and percentage of implemented works are provided in chapter 2.3.2 below.

Lot 1: Marneuli city is divided in 6 zones. Zone 1 under LOT-01 mainly includes remaining house connection work. The components of the sub-project that will involve civil works under LOT-01 are as follows:

- Construction of new distribution water system 63 mm PE 100 pipes (4.6 km),
- Commission new distribution 39.5 KM laid earlier
- Approximately 44,1km road reinstatement works¹

¹ Is it simple overlay of the road no new road will be constructed

Lot 2: The geographical boundary for Lot 2 covers zone 2, 3 & 6 of Marneuli. It provides for both water supply & sewerage lines. It is in Northeast directions. Sewer pipeline and water supply pipeline are to be laid. In parallel with the construction works, testing will be carried out on the previously laid water supply and sewage lines by AKELIK GROUP OJSC to ensure its commissioning. The civil works under LOT-02 comprise mainly the following items:

- New distribution water system 40,16 km
- New sewers lines 34,5 km
- Rehabilitation of existing sewers 3.9 km
- New sewage pumping stations 2

Lot 3: The geographical boundary for Lot 3 covers zone 4 & 5 of Marneuli. It covers both water supply & sewerage lines. It is in West direction. Sewer pipe and water supply pipes are to be laid. In parallel with the construction works, testing will be carried out on the previously laid water supply and sewage lines by AKELIK GROUP OJSC to ensure its commissioning. The civil works under LOT-03 comprise mainly the following items:

- New distribution water system (44,3 km)
- Construction of new sewer lines (49,0 km)
- Construction of new sewage pumping stations (3 no.)

Lot 6: It includes Conclusion of new pumping station at Kolagiri and one booster station at Jandhari with mechanical, electrical and SCADA works; Rehabilitation of bore wells at Kolagiri; Finalization of new Reservoir at Jandhari and construction of city reservoir; Transmission line DCI pipes 700 mm, 600 mm & 400 mm pipes from Kolagiri to City reservoir and city reservoir to Jandhari. Also, a chlorination facility is to be installed near Jandhari reservoir. The works under LOT-06 comprise mainly the following items:

- Three new transmission mains DCI pipes 250 mm to 700 mm (total length almost 15.9 km)

14. Post Construction Environmental Audit Report under MAR-01 (LOT-01, LOT-02, LOT-03 and LOT-06) sub-project will be prepared in April 2025 by the Supervision Consultant – HILL and submitted to UWSCG for approval.

15. Construction of Water Supply and Sewerage System in Marneuli and Sewerage System and Collector in Bolnisi, Lot 4 and lot 5. The contract for the implementation of Lot-04 and Lot-05 under MAR-01 sub-project has been awarded to POLAT Yol Yapi Sanayi ve Ticaret Anonim Sirkei (Turkey). Physical works has started in lot 4 and lot 5 in October 2022. The project completion date was set for March 2024, which coincided with the MFF closing date. However, the civil works were not completed by the deadline and continued until the end of November 2024, under government financing. All construction works were 100% completed in November 2024. A brief description of LOT-04, LOT-05, and the scope of works are presented below.

Lot 4: It covers sewer network in Bolnisi city. Bolnisi is distinctly separate habitation and is about 22 km from Marneuli. new sewer lines are to be laid under LOT-04. Earlier laid sewer lines by AKELIK GROUP OJSC would also need to be tested and commissioned. The components of the subproject that will involve civil works under LOT-04 are as follows:




- Construction of new sewer lines (28,6 km)
- Rehabilitation of existing sewer lines (7,5 km)





Lot 5: Sewerage Interceptor (Collector) from Bolnisi to Marneuli. It includes one sewage pumping station to be laid. Earlier laid sewer lines by AKELIK GROUP OJSC would also need to be tested and commissioned. The works under LOT-05 comprise mainly the following items:

- Construction of new sewerage lines (15, 8 km).
- Rehabilitation of earlier laid sewers (7,9 km)

16. The Post Construction Environmental Audit Report under MAR-01 (LOT-04 and LOT-05) sub-project was prepared in December 2024 by the SC – HILL and submitted to the UWSCG for its approval (please see Annex E of this report). The main findings of the PCEAR is provided in the Table 1 below:

Table 1: Summary information of post-construction environmental audit

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status By the December 2024
Bolnisi Pumping Stations						
1	There are no warning and information signs on entrance gates of the Pumping Stations (Photo N1)	Proper Warning and information signs should be installed on entrance gate	Photo N1 	End of March 2025	UWSCG	Not completed by the end of December 2024
2	Deep and unprotected pits, both inside (Photo N2) and outside (Photo N3) the pumping station building	Clearly visible signs/safety tapes, trench side fences or proper cover should be installed around deep open pits/reservoirs (3-7m) to avoid accidents with working personal indoor and outdoor of the Pumping	Photo N2  Photo N3 	Mid. of March 2025	UWSCG	Not completed by the end of December 2024

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment	Responsibility	Status By the December 2024
		Stations				
3	A small amount of construction waste remains on the site, both inside (Photo N5) and outside (Photo N5) the pumping station building.	Construction waste should be removed from the territory and disposed adequately	<p>Photo N4</p>  <p>Photo N5</p> 	End of December 2024	UWSCG	<p>Completed, removed, end of December 2024</p> <p>Completed, removed, end of December 2024, Photo N1</p> 
Construction of Waste Water Collector in Bolnisi						
4	Un-fenced /unsecured pipeline cross river near resident areas (next to PS #2), Photo N6	The sewage collector across the river should be properly fenced off, as children may use the pipeline as a playground or bridge, posing a potential health risk	<p>Photo N6</p> 	End of February 2024	UWSCG	Not completed by the end of December




- 17. Construction of Waste Water Treatment Plant for the Cities of Marneuli and Bolnisi in Marneuli (MAR-02).** The project comprises of the construction of new Wastewater Treatment Plant in Marneuli with the capacity of 9,931 m³/day.
- 18.** The contract No UWSCG-ICB-MAR-02-2019 was signed in October 18, 2019 with Joint venture of Toshiba Water Solutions Pvt. Ltd and IN-SI LLC (JV partner) (India/Georgia). The scheduled completion date was May 2021, Completion date has been proposed to be extended by SC. Revised completion date was March 2024. As it was already mentioned above construction works have not been completed yet and will be continued until the end of June 2024. Currently works are ongoing under the government financing as MFF was closed in March 2024.
- 19. Post Construction Environmental Audit Report under MAR-02 sub-project** will be prepared in July 2025 by the SC – HILL and submitted to the UWSCG for its approval.
- 20. Construction of Water Supply System in Chiatura (CHI-01).** The contract for construction of the Chiatura Water Supply Sub-project was signed on August 21, 2017 with “Akkord Industry Construction Investment Corporation” OJSC (Azerbaijan), the initial completion date was April 15, 2019. The original date for the defect notification was April 14, 2020. Subsequently the works were divided in two sections, section 1 comprised original contract works and section two included: generators for pumping stations, additional water connections, fencing etc. The Contract time for section 1 was extended up to 30 Jun 2021 and these works are taken over and now operated by local service center. Contract time for Section 2 works was extended up to 5 April 2022. However, section 2 works are incomplete, and the Contractor has stopped and abandoned site. More detailed information is provided in para 5-7 above.
- 21.** The work under the CHI-01 project comprises the rehabilitation and construction of the water supply network, transmission pipeline and Reservoirs and pumping stations. In particular, Chi-01 project consists of the following works. All detailed information about the current status and remained works are presented in cub-chapter 2.3.1 and tables 5,6,7, and 8 below.
1. The rehabilitation of the existing WS system by replacing the old pipework;
 2. Connection of the new pipes to the existing pipes;
 3. Rehabilitation of the reservoirs:
 - Bisi (3,000 m³). Through a central pumping station, it supplies water to all Chiatura streets, except for Pataridze and Sopromadze streets, additional pumping station (under construction in the reservoir area) and the addition of 200 meters of network. (60% of the work is completed).
 - Memorial (1,000 m³),
 - Lezhubani (3,000 m³),
 - Rustaveli (350 m³),
 - Perevisa (50 m³)
 - Village Perevisa (50 m³)
 - Tehisa (1,000 m³)
 - Navardzeti (350 m³)
 4. Construction of two new reservoirs – one in Sachkhere and another one alongside the existing Bisi reservoir – Avarioni 1000 m³;
 5. Rehabilitation of Pumping Stations – one in Lezhubani (170 m³/h) and two in Perevisa (105 m³/h);
 6. Construction of new transmission lines to the reservoirs Sachkhere – Bisi and Perevisi – Tehisa (with the exception of the one going from Central Pumping Station (CPS) to Perevisi reservoir);




7. New water supply wells in the neighbouring town of Sachkhere

Post Construction Environmental Audit under CHI-01 sub-project





22. The Post-Construction Environmental Audit Report for the CHI-01 sub-project was prepared in March 2024 by the SC – HILL and afterwards approved by the UWSCG. The audit identified several major non-compliances that remain unresolved, including the need to properly fence the Avarioni reservoir sites and install appropriate warning signs, as well as the requirement to fill and secure the trenches at the BISI Pumping Station with proper fencing along their borders. The report outlines the necessary corrective actions, suggested timelines for their implementation, and the progress made thus far. As noted earlier, the UWSCG plans to complete the Chiatura Water Supply project with funding from the Government Budget by the end of 2025, and a new tender for this work will be announced in Q1 of 2025. Environmental DDR was prepared for the above mentioned tender. More detailed information is provided in paragraph 8 above. The Post-Construction Environmental Audit Report will be updated accordingly in December 2025.
23. A summary of the Post-Construction Environmental Audit and the key findings for the CHI-01 sub-project is provided in the table below:

Table 2: Summary information of post-construction environmental audit, CHI-01 sub-project, April 2024

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment Responsibility	Progress of Corrective Actions
Avarioni Reservoir					
1	Avarioni Reservoir, uncontrolled disposal of construction waste were fixed.	Construction Waste must be collected and disposed from the project area.	Photo N1 	UWSCG End of June 2024	Completed June 2024, Photo N1 
2	Avrioni Reservoir Oil spill Fuels and lubricants spills to be eliminated	Containers with fuel/lubricant should be managed properly (stored at the proper organized place with concrete floor and roofing) to	Photo N2 	UWSCG End of June 2024	Completed June 2024 No traces of leakage were identified in the project area

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment Responsibility	Progress of Corrective Actions
		avoid leakage and ground contamination.			
3	Avarioni Reservoir surplus waste soil soil were piled up on the construction area	Avarioni Reservoir surplus waste soil should be removed completely removed from the disposed area	Photo N3 	UWSCG End of June 2024	Completed June 2024, Photo N3 
4	Prevent access of public to the reservoir site - The fence of the reservoir should be done properly and equipped with Signs, information and warnings	Reservoirs sites should be properly fenced equipped with proper warning signs	Photo N4 	UWSCG UWSCG	Not yet completed ² A new tender will be issued to complete these remaining tasks, with funding provided through the central government budget. UWSCG is responsible for ensuring the completion of the CHI-01 sub-project.
5	There are deep Trenches around the Avarioni Reservoir without Protection	Trenches on the Avarioni Reservoir should be filled or fenced off their borders.	Photo N5		

² At this stage, it is impossible to indicate the exact deadline for improvement, as soon as the date is known, this table will be updated

#	Non-compliance	Corrective action	Construction Site	Terms of accomplishment Responsibility	Progress of Corrective Actions
					
BISI Reservoir and Pumping Station					
6	Open trenches of the BISI Pumping Station are observed	Trenches on the BISI reservoir should be filled or fenced off their borders.	<p style="text-align: center;">Photo N6</p> 	UWSCG	<p>Not yet completed</p> <p>A new tender will be issued to complete these remaining tasks, with funding provided through the central government budget. UWSCG is responsible for ensuring the completion of the CHI-01 sub-project.</p>
7	Uncontrolled disposal of construction waste were outside the BISI reservoir was fixed.	Construction Waste must be collected and disposed from the project area.	<p style="text-align: center;">Photo N7</p> 	UWSCG End of May 2024	<p>Completed May 2024, Photo N4</p> 

2.2 Project Contracts and Management

24. The main institutions that are involved in implementation of the IEE/EMP under USIIP/T6 are UWSCG executing agency (EA), Supervision Consultant (SC) the Construction Company (CC) and to a lesser extent the Ministry of Environmental Protection and Agriculture of Georgia (MoEPA).
25. The Investment Program Management Office (IPMO) under UWSCG, is the Department of Management of Projects Financed by Donor Organizations, which is responsible for the day-to-day management of the project, including the implementation of the EMP. IPMO has an Environmental Specialist Ms. Kate Chomakhidze who is responsible for managing the environmental aspects of the USIIP. The deputy head of the department is Mr. Nodar Rostomashvili.
26. The IPMO Environmental Specialist's responsibilities in respect of implementation of the EMP are as follows:
- (i) Approve the Site Specific Environmental Management Plan (SSEMP) before Contractor takes possession of construction site;
 - (ii) Monitor implementation of EMP and ensure the environmental safeguards compliance;
 - (iii) Review the updated IEE and/or SEMP and send it for clearance to ADB;
 - (iv) Ensure that contractors have access to the EMP and IEE report;
 - (v) Develop SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and summary of GEO final versions of SAEMRs to be uploaded on UWSCG website;
 - (vi) Review and approve the Corrective Action Plan and provide to ADB for review and comments if any;
 - (vii) Participate in public consultations during project implementation;
 - (viii) In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints;
 - (ix) Assist in organizing trainings for the Contractors in coordination with ADB/RETA consultant;
 - (x) Participate in external trainings in environmental management and environmental auditing
27. The SC/HILL hires a full time Environmental Specialist, Mr. Nikoloz Neparidze to assist the IPMO oversee day-to-day implementation of EMPs by contractors under USIIP/T6, including compliance with all government rules and regulations; Support IPMO in the review and endorsement of contractor's SSEMP; Conduct inspections on contractor's implementation of SSEMP and compliance with government rules and regulations; Ensure contractors comply with health and safety requirements per approved SSEMP's Health and Safety Management Plan; Conduct investigations on grievances/complaints, incidents and accidents; Assist IPMO in addressing any grievances in a timely manner as per the GRM; Issue non-compliance notifications to CC; Monitor corrective actions as required in CAPs, and ensure non-compliances are resolved immediately and are not occurring repeatedly; Prepare recommendations for contractors repeated non-compliances on safeguards and EHS requirements; Submit monthly and quarterly environmental monitoring reports to IPMO.
28. The Construction Companies also appointed a full time Environmental specialists under MAR-01 and MAR-02 sub-project. Mr. Guram Tandilashvili is the Environmental Specialist of the construction management team under MAR-02 sub-project, Mr. Sandro Abzianidze is the ESH&S specialist of MAR-01 (LOT-04 and LOT-05) sub-project, Mr. Ivan Inashvili is the Environmental Specialist and Mr. Aleksandre Chitadze is the H&S Specialist of MAR-01 (LOT-01, LOT-02, LOT-03 and LOT-06) sub-project, for more detailed information, please see Table 3 below. Environmental Specialists of CCs are responsible for preparing the Specific

Environmental Management Plan (SSEMP) for endorsement by Supervision Consultant and approval by the UWSCG prior to the Contractor taking possession of the construction site and provide pre-works photo documentation; Ensuring the SSEMP is implemented effectively throughout the construction period; Establish and maintain site records of weekly site inspections using checklists based on SSEMP; Establish and maintain environmental accidents/incidents including resolution activities and environmental monitoring data; Developing Corrective action plans in response to non-compliance notices issued by the SC and UWSCG; Conduct Community relations activities including maintaining complaints register; Routine reporting of SSEMP compliance and community liaison activities; Implement Occupational Health and safety requirements. Implement site clean-up measures after civil works finalization.

- 29.** Department of Permits, Environmental Protection and Social Affairs of the UWSCG is working alongside IPMO to address the environmental and social issues of USIIP. The head of the department is Ms. Maka Goderdzishvili. The Department of Environmental Protection consists of two divisions, the Division of Permits and the Division of Environmental Protection and Social Affairs. Ms. Salome Mosidze is the Head of the Division of Environmental protection and Social Affairs. More detailed description of implementation arrangements; responsibilities and staffing are provided in the Table 3 below.

Table 3: Institutionnel Arrangement, Responsabilités and Staffing

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Department of Permits, Environmental Protection and Social Affairs (Environmental Specialist)
1	Environmental planning and management Contractors Environmental Management Plan (site-specific EMP)	Prepare Specific EMP (SEMP) with supplemented Topic Specific EMPs at pre-construction stage based on IEE/EMP Implement SEMPs approved by IPMO.	Review and endorse the SEMPs; Monitor implementation of SEMPs on daily basis; Monitor monthly environmental monitoring reports or results prepared by the Contractor and report to IPMO.	Review and approve the SEMPs; Monitor implementation of EMP and ensure the environmental safeguards compliance.	Work together with IPMO on addressing the environmental non-compliance issues, if any.
2	Changes in design	Provide details of design changes to CSC required to update IEE/EIA, or SEMPs; Implement updated SEMPs.	Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMPs.	Review the updated IEE and/or SEMPs and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMPs; Upload the approved IEE/SEMP provided by IPMO to UWSCG website for Public Disclosure.
3	Unanticipated impacts	Inform CSC about unanticipated impact and follow the instructions received from IPMO.	Make environmental assessment of the unanticipated impact and update the IEE and/or SEMPs	Review the updated IEE and/or SEMPs and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMPs

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Department of Permits, Environmental Protection and Social Affairs (Environmental Specialist)
4	Reporting	Prepare monthly environmental monitoring reports and send it to CSC and IPMO	<ol style="list-style-type: none"> 1. Prepare inputs to environmental part of quarterly construction progress reports; 2. Prepare inputs to semi-annual environmental monitoring report (SAEMR) to be submitted to IPMO for further review, comments and improvement. 3. Conduct Post-Construction Final Environmental Audit and prepare final environmental audit report. 	<ol style="list-style-type: none"> 1. Prepare SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; 2. Provide ENG and GEO final versions of SAEMRs to be uploaded on UWSCG website. 	Upload the approved reports (ENG and GEO) provided by IPMO to UWSCG website for Public Disclosure
5	Permits and clearances	NA	NA	NA	Obtaining environmental permits and clearances
6	Non-compliances	Prepare a corrective action plan (CAP)	Assist contractor in preparing the CAP.	Review and approve the CAP and provide to ADB for review and comments if any.	
7	Public consultations	Participate in public consultations during project implementation	Organize public consultations: inform people about activities and prepare the record of consultations.	Participate in public consultations during project implementation	UWSCG & IPMO host PCs, CSC will present the topics related to environmental issues

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Department of Permits, Environmental Protection and Social Affairs (Environmental Specialist)
8	Grievance Redress Mechanism	Project site Focal person to record environmental grievances in the logbook and follow up with UWSCG established practice for grievance redress	<ol style="list-style-type: none"> 1. Ensure that grievances, if any, are being properly documented and addressed timely and effectively. 2. Assist IPMO to develop consolidated GRM database and consolidation of GRM cases both for ENV and Social safeguards 	In case of need assist IPMO Social/Resettlement Consultant in resolving process of environmental safeguards related complaints; Assist IPMO Social/Resettlement Consultant in GRM database consolidation and data analysis.	UWSCG maintains GRM applicable to all projects. UWSCG will ensure IPMO information on grievances is consolidated into the UWSCG grievances (both - environmental and social) without duplication.
9	Trainings	Attend on-site trainings organized by IPMO and ADB/RETA Consultant	Assist the IPMO in organization of trainings for the Contractors on environmental safeguards requirements.	Organize trainings for the Contractors in coordination with ADB/RETA consultant. Participate in external trainings in environmental management and environmental auditing	Participate in external trainings in environmental management and environmental auditing

30. Main organizations involved in the project and related to environmental safeguard are presented in the Table 4 below:

Table 4: List of Main Organizations under USIIP/T6

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Lender	Asian Development Bank	Country Environmental Focal	Ninette R. Pajarillaga, E-mail: npajarillaga@adb.org
		Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili Tel: +995 577 44 09 90 E-mail: nnadashvili@adb.org
		ADB RETA, Environmental Consultant	George Kobaladze Tel: +995 599 689834 E-mail: gkabaladze.consultant@adb.org.me
Borrower	UWSCG	UWSCG, Department of Permits, Environmental Protection and Social Affairs, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
		UWSCG/IPMO, Department of Management of Projects Financed by Donor Organizations, Deputy Head	Mr. Nodar Rostomashvili E-mail: n.rostomashvili@water.gov.ge Tel: +995 597 18 11 11
Borrower	UWSCG/USIIP/T6	Environmental Specialist	Ms. Ketevan Chomakhidze Tel: +995 577 380309 E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	Supervision Consultant: Hill International N.V. (Netherlands)	Environmental Specialist	Mr. Nikoloz Neparidze Tel: 599 346 821 E-mail: nikonep7@outlook.com

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
Contractor CHI-01	“Akkord Industry Construction Investment Corporation” OJSC (Azerbaijan)	EH&S Specialist	Environmental Specialist of CC: Name: Mr. Teodor Kalmakhelidze Tel: +995 598 977 977 E-mail: kalmakhelidzetedore@gmail.com
Contractor MAR-01 Lot-01 Lot-02 Lot-03 Lot-06	China Geo-engineering Corporation (CGC) (Peoples Republic of China)	Environmental Specialist	Mr. Levan Inashvili Tel: +995 591 199 991 E-mail:
		H&S	Mr. Aleksandre Chitadze Tel:+995 577 969 736
Contractor MAR-01 Lot-04 Lot-05	POLAT Yol Yapi Sanayi ve Ticaret Anonim Sirkei (Turkey).	Environmental, H&S Specialist	Mr.Sandro Abzianidze Tel: +995 599 45 29 02 E-mail: sandroabzianidze@gmail.com
Contractor MAR-02	Toshiba Water Solutions Pvt. Ltd and IN-SI LLC (JV partner) (India/Georgia)	Environmental H&S Specialist	Mr. Guram Tandilashvili E-Mail: guram.tandilashvili@gmail.com Mob: +995 577 36 37 29

2.3 Project Activities during Current Reporting Period

2.3.1 Construction Progress under CHI-01 Sub-project, Construction of Water Supply System in Chiatura

31. The physical progress for section of CHI-01 sub-project is 99.7% and for section 2 it is 52.89%. The aggregate progress for all works (section 1 and section 2) is 96.16%. However, actual physical progress for Avarioni works & other miscellaneous works is detailed below.

Table 5: Physical Progress of Works under CHI-01 sub-project

Item No	Description	Unit	Quantity Project	Quantity Completed as of	Percent age

					31.12.2023	
Works related to Avarioni Water Supply						
1	HDPE Pipes installation including fittings and end cups as required.	M	7,384.00	6052	81.96%	
2	Cleaning, flushing and disinfection with chlorine of installed pipelines, including supply and disposal of water	m	7384	0	0.00%	
3	Trenches for pipe installation	m3	5,320.00	4845.15	84.75%	
4	Valves		44.00	16.00	36.36%	
5	House connections implementation and administrative requirements	n	340.00	187.00	55.00%	
6	Hydraulic Chambers	n	12.00	10.00	83.33%	
7	New Reservoir 500 m3	n	1.00	93.00%	88.65%	
8	Reservoir Mechanical Installation	ls	1.00	25.00%	25.00%	
9	Pumping Station Mechanical Installation	ls	1.00	-	0.00%	
10	Electrical Equipment	ls	1.00	-	0.00%	
11	Instruments and SCADA system	ls	1.00	-	0.00%	
12	New Pumping Station Construction	ls	1.00	-	0.00%	
13	Construction of New PS building in front of Bisi Reservoir	ls	1.00	65.00%	65.00%	
B: Misslenious Works						
1	Installation of Generators	ls	1.00	0	0.00%	
2	Installation of Boosters in Navradzeti area	ls	1.00	0	0.00%	
3	Installation of Boosters in Memorial Area	ls	1.00	85.00%	85.00%	

32. The physical progress concerning the main contract is given in the Table 6 below.

Table 6: Progress Concerning the Main Contract

Pipeline	Unit	Quantity	Executed up to May 2022	Executed in year 2022 & 2023	Total executed up to Dec 2023	% Progress
Main Transmission Line	m	16.038	16038	0	16038	100.00%
Distribution Network	m	68.391	68.391	0	68.391	100.00%
DN355 Bisi-CPS Transmission	m	745	745	0	745	100.00%
DN160 CPS-Lezhubani	m	2,165	2165	0	2165	100.00%
DN160 CPS-Perevisi	m	1,810	1810	0	1810	100.00%
DN225 CPS-Rustaveli	m	1,264	1264	0	1264	100.00%

Pipeline	Unit	Quantity	Executed up to May 2022	Executed in year 2022 & 2023	Total executed up to Dec 2023	% Progress
DN225 Lezhubani Res to PS	m	341	341	0	341	100.00%
Q200 ST Lezhubani PS - Memorial Res	m	2025	2025	0	2025	100.00%
Q100 ST Perevisi PS - Tekhisa	m	2053	2053	0	2053	100.00%
DN160 Memorial-Navardzeti	m	1,470	1470	0	1470	100.00%
Giorgadze area	m	1,540	1450	0	1450	100.00%
Total Laid Pipe	m	97,306	97,306	0	97,306	100.00%
House Connection	n	8,457	8,457	0	8,457	100%
Crossings	n	10	0	0	0	100%
Hydraulic Chambers	m3	1,219	1219	0	1219	100%
Hydrants	n	205	205	0	205	100%

33. The Cumulative Progress of Structures Chiatura is given in the Table 7 below.

Table 7: Cumulative Progress of Structures Chiatura

Cumulative Progress	Up to Previous Month				Up to 31 Dec 2023			
	Civil	Mech	Elec	SCADA	Civil	Mech	Elec	SCADA
Wellfield	100%	100%	100%	100%	100%	100%	100%	100%
Sachkhere Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Bisi - New Reservoir	98%	100%	100%	100%	100%	100%	100%	100%
Bisi - Old Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
CPS	95%	100%	100%	100%	100%	100%	100%	100%
Lezhubani Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Perevisi Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Rustaveli Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Tekhisa Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Memorial Reservoir	100%	100%	100%	100%	100%	100%	100%	100%
Perevisi PS	100%	100%	100%	100%	100%	100%	100%	100%
Lezhubani PS	100%	100%	100%	100%	100%	100%	100%	100%
Memorial PS	100%	100%	100%	100%	100%	100%	100%	100%
New Memorial PS	100%	100%	100%	100%	100%	100%	100%	100%

34. The cumulative total physical progress is given in the Table 8 below.

Table 8: Cumulative Total Physical Progress under CHI-01 sub-project

Location	Previous Month	Current Month
Wellfield	100%	100%
Sachkhere Reservoir	100%	100%
Bisi – New Reservoir	99%	100%
CPS	99%	100%
Lezhubani Reservoir	100%	100%
Perevisi Reservoir	100%	100%
Tekhisa Reservoir	100%	100%
Memorial Reservoir	100%	100%

2.3.2 Construction progress under MAR-01 project, Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Collector in Bolnisi (MAR-01/LOT-01/LOT-02/LOT-03/LOT-06)

35. The physical progress of construction activities under MAR-01 (LOT-01, LOT-02, LOT-03 and LOT-06) sub-project as done by China Geo-engineering Corporation (CGC) is presented in the Table 9, 10, 11 and 12 below.

Table 9: Progress of Physical Works, LOT-01

MAJOR ITEMS	As per BOQ	to date	% executed	Remaining
PE pipes supply & install, m	6068	5575	91.88%	493
Fire hydrant, Nos	186	9	4.84%	177
Valves, Nos	119	20	16.81%	99
House connections, Nos	1705	1436	84.22%	269
Pressure testing meter length	4558	35906	787.76%	-31348
Flushing in meters	39469	21000	53.21%	18469

Table 10: Progress of Physical Works, LOT-02

MAJOR ITEMS	As per BOQ	to date	% executed	Remaining
Provide and lay HDPE sewer pipes	34609	31982	92.41%	2627
Provide and lay water supply pipes	43213	41182.7	95.30%	2030.3
Fire Hydrant	278	113	40.65%	165
Valves	343	203	59.18%	140
Manhole	1005	461	45.87%	544
Inspection shafts	1005	955	95.02%	50
Water supply House connection	4027	1757	43.63%	2270
Water meter in apartment blocks, Nos	320	0	0.00%	320
Pressure testing meter	40163	0	0.00%	40163

MAJOR ITEMS	As per BOQ	to date	% executed	Remaining
length				
Pumping station	2	0	0.00%	2

Table 11: Progress of Physical Works, LOT-03

MAJOR ITEMS	As per BOQ	to date	% executed	Remaining
Provide and lay HDPE sewer pipes	49642	814	21525	43.36%
Provide and lay water supply pipes	46360	757	23703.97	51.13%
Fire Hydrant	295	0	40	13.56%
Valves	230	0	35	15.22%
Manhole	1200	0	503	41.92%
Inspection shafts	1428	0	293	20.52%
House connection	2010	0	195	9.70%
water meter in apartment blocks, Nos	320	0	0	0.00%
Pumping station	1	0	0	0.00%
Crossings	12	0	0	0.00%
Sewer pipesCCTV	59206	0	21262.83	35.91%
cleaning of sewer pipes	59206	0	21262.83	35.91%

Table 12: Progress of Physical Works, LOT-06

MAJOR ITEMS	As per BOQ	to date	% executed	Remaining
Transmission Lines DCI pipe, m	18513	0	15327	82.79%
Crossings	8	0	2	25.00%
City Reservoir C30/37 concrete civil works, cum	2612	0	2654	101.61%
Jandhary Reservoir C30/37 Concrete civil, cum	468	0	26	5.56%
Kolagiri Pump house civil	100%	5%	90%	90.00%
Mechanical works				
Kolagiri	100%	5%	95%	95.00%
City Reservoir	100%	0%	90%	90.00%

Jandhary Reservoir	100%	5%	95%	95.00%	
Electrical					
City Reservoir	100%	60%	80%	80.00%	
Jandhary Reservoir	100%	30%	90%	90.00%	

2.3.3 Construction progress under MAR-02 sub-project, Construction of Wastewater Treatment Plant in Marneuli (MAR-02)

36. The progress of construction works under MAR-02 sub-project is given table below.

Table 13: Cumulative Schedule wise Progress under MAR-02 Sub-project, up to Dec 2024

Cumulative Total Progress				
Schedule	Particulars	Up to Previous Month	Current Month	Total
(I)	Site Mobilization	99,23%	0,0%	99,23%
(II)	Excavation work	98,58%	1,42%	100,0%
(III)	Installation Civil work	96,00%	0,0%	96,00%
(III-1)	Installation Architectural work	87,26%	3,81%	91,07%
IV)	Supply of Equipments	99,25%	0,0%	99,25%
(V)	Installation Mechanical	99,00%	0,0%	99,00%
(VI)	Installation Electrical	97,00%	0,0%	97,00%
(VII)	Overall piping	97,50%	0,0%	97,50%
(VIII)	Algeti 35kv Power Line relocation (change order 1)	100,00%	0,0%	100,00%
(IX)	Electrical cable pulling works	97,00%	0,0%	97,00%
X	Metal works (handrail-chequer plate-gratings-steel structures etc)	95,00%	2,50%	97,50%

Table 14: Structure wise Progress under MAR-02 sub-project

Cumulative Physical Progress	Up to Previous Month %				Current Month %				Total %			
	Civil	Mech.	Elec	Arch.	Civil	Mech	Elec	Arch.	Civil	Mech	Elec	Arch.
Structures												
Site mobilization & Soil investigations	99,23	No	No	No	0,0	No	No	No	99,23	No	No	No
Permanent Fence	0,00	No	No	No	0,0	No	No	No	0,00	No	No	No
RC Wall	98,97	No	No	No	0,0	No	No	No	98,97	No	No	No
Coarse screen	100,0	100,0	100,0	91,75	0,0	0,0	0,0	8,25	100,0	100,0	100,0	100,0
Inlet PS	100,0	100,0	100,0	91,75	0,0	0,0	0,0	8,25	100,0	100,0	100,0	100,0
Fine screen	100,0	100,0	100,0	91,75	0,0	0,0	0,0	8,25	100,0	100,0	100,0	100,0
Aerated grit chamber	100,0	90,0	100,	No	0,0	0,0	0,0	No	100,0	90,0	100,	No
Primary sed. Tanks	100,0	100,0	100,	No	0,0	0,0	0,0	No	100,0	100,0	100,	No
Aeration tank	100,0	80.0	100,0	No	0,0	0,0	0,0	No	100,0	80,0	100,0	No
Aeration tank distribution chamber	100,0	100,0	100,0	No	0,0	0,0	0,0	No	100,0	100,0	100,0	No
Blower Building	100,0	100,0	100,0	94,15	0,0	0,0	0,0	4,65	100,0	100,0	100,0	98,80
Final sed. Tanks	100,0	100,0	100,0	No	0,0	0,0	0,0	No	100,0	100,0	100,0	No
Final sed. Tanks distribution chamber	100,0	100,0	100,0	No	0,0	0,0	0,0	No	100,0	100,0	100,0	No
Sludge sump cum PS	100,0	100,0	100,0	No	0,0	0,0	0,0	No	100,0	100,0	100,0	No
Digester+thick.sludge pit	100,0	100,0	100,0	No	0,0	0,0	0,0	No	100,0	100,00	100,0	No

Cumulative Physical Progress	Up to Previous Month %				Current Month %				Total %			
	Civil	Mech.	Elec	Arch.	Civil	Mech	Elec	Arch.	Civil	Mech	Elec	Arch.
Structures												
Site mobilization & Soil investigations	99,23	No	No	No	0,0	No	No	No	99,23	No	No	No
Biogas utilization building	100,0	100,0	100,0	93,65	0,0	0,0	0,0	4,30	100,0	100,00	100,0	97,95
Primary sludge thickener & Digested sludge pump	100,0	100,0	100,0	70,0	0,0	0,0	0,0	25	100,0	100,00	100,0	95,0
Mechanical Pre thickening building	100,0	100,0	100,0	93,70	0,0	0,0	0,0	0,0	100,0	100,00	100,0	93,70
Emergency sludge storage place	100,0	No	No	100,0	0,0	0,0	0,0	0,0	100,0	No	No	100,00
Sludge dewatering building	100,0	100,0	100,0	93,70	0,0	0,0	0,0	0,0	100,0	100,00	100,0	93,70
Outflow Measurement Chamber	100,0	100,0	100,0	No	0,0	0,0	0,0	0,0	100,0	100,00	100,00	No
Gas holder	100,0	100,0	100,0	No	0,0	0,0	0,0	0,0	100,0	100,0	100,0	No
Gas torch	100,0	100,0	100,0	0,00	0,0	0,0	0,0	0,0	100,0	100,0	100,0	0,00
FecI3 dosing system	100,0	100,0	100,0	75,00	0,0	0,0	0,0	20,0	100,0	100,00	100,0	95,00
Administration building	100,0	0,0	90,0	92,10	0,0	0,0	0,0	2,97	100,0	0,0	90,0	95,07
Garage & workshop	100,0	0,0	95,0	92,10	0,0	0,0	0,0	2,97	100,0	0,0	95,0	95,07
Scrubber area & CHP	100,0	100,0	100,0	No	0,0	0,0	0,0	0,0	100,0	100,0	100,0	No
diesel tank area	100,0	100,0	100,0	No	0,0	0,0	0,0	0,0	100,0	100,00	100,0	No
substation building-MCC 2	100,0	0,0	100,0	86,00	0,0	0,0	0,0	8,86	100,0	0,0	100,0	94,86
control room - operation build.	100,0	50,0	100,0	85,40	0,0	0,0	0,0	0,0	100,0	50,0	100,0	85,40
MCC-1	100,0	0,0	100,0	86,0	0,0	0,0	0,0	9,0	100,0	0,00	100,0	95,0
MCC-3	100,0	0,0	100,0	92,95	0,0	0,0	0,0	2,05	100,0	0,0	100,0	95,0
Inter connection pipes including champers & manholes for drainage, pipe work, air piping system, potable water and technical water, fire-fighting system.	97,50	No	No	No	0,0	No	No	No	97,5	No	No	No
Roads & drainage channel	8,00	No	No	No	4,00	No	No	No	12,00	No	No	No
Landscaping	0,00	No	No	No	0,00	No	No	No	0,00	No	No	No
Pre -Commissioning of WWTP	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

2. NVIRONMENTAL SAFEGUARD ACTIVITIES





2.1 General Description of Environmental Safeguard Activities




37. During the reporting period (July-December 2024), a total of 11 site visits were conducted under the USIIP/T6 program. These visits identified a total of 43 non-compliances, resulting in 10 non-compliance notices issued to the contractor by the ESs of SC and UWSCG/USIIP. Specifically, within the MAR-02 subproject, 8 non-compliances were identified and 3 non-compliance notices were issued to the contractor. During this period, under the USIIP/T6 MAR-01 subproject 35 non-compliances were identified, resulting in 8 non-compliance notices issued to the contractor. For more details, refer to Table 15 and Annex B.
38. Environmental, H&S Specialist, Mr. Guram Tandilashvili hired by Contractor under the MAR-02 sub-project conducted the day-to-day monitoring of the Marneuli WWTP construction site and developed monthly monitoring reports and represented to SC / Hill.
39. Environmental Specialist, Mr. Levan Inashvili hired by Contractor under the MAR-01/LOT-01/LOT-02/LOT-03/LOT-6 sub-project conducted the day-to-day monitoring of the Marneuli water supply and waste water systems construction sub-project and developed monthly monitoring reports and represented to SC / Hill.
40. Environmental, H&S Specialist, Mr. Sandro Abzianidze hired by Contractor under the MAR-01/LOT-04/LOT-05 sub-project conducted the day-to-day monitoring of the Marneuli water supply and waste water systems construction site and developed monthly monitoring reports and represented to SC / Hill.
41. During the reporting period Environmental Specialist (ES) Mr. Nikoloz Neparidze hired by SC/HILL for the implementation of the IEE/EMP/SEMPs requirements under USIIP/T6 develops quarterly monitoring reports for UWSCG/USIIP based on the monthly reports submitted by Contractor.
42. Environmental Specialist of UWSCG/IPMO, Ms. Ketevan (Kate) Chomakhidze performed monitoring of contractor's performance with the approved EMPs and SSEMPs, environmental standards and other environmental commitments of the contractor. ES of USIIP develops Semi-annual Environmental Monitoring Reports (SAEMR) for USIIP/T6 and submits to ADB based on the quarterly reports prepared by SC and monitoring results of construction sites.
43. The schedule of Joint inspection and summary of inspections/monitoring carried out under sub-projects during the reporting period July-December 2024 are provided in the Table 15 below. It should be noted also that the majority of non-compliances are improved by contractor during the reporting period, issues pending and need further improvement is include fencing of the Jandari Reservoir under MAR-01/LOT-06.


Table 15. Summary of site inspections/monitoring for MAR-01 and MAR-02 sub-projects



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
Continuously during reporting period (July-December 2024) GPC Coordinates: X 44.840296 Y 41.465192	Toshiba Water Solutions Pvt. Ltd and IN-SI LLC MAR-02	Environmental, H&S Specialist of Contractor Mr. Guram Tandilashvili	Day to day monitoring of sites Compliance with Environmental and HES requirements	Environmental and Health and Safety issues on construction sites. Workers always should use complete set of PPE.	Prepare Monthly Environmental Monitoring Reports and send to SC	Completed
12 September 2024		Environmental Specialist of UWSCG/USIIP Ms.Kate Chomakhidze Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze	Regular monitoring of construction sites	Site internally should be arranged properly and cleaned regularly, waste should be placed only at the proper waste containers and removed regularly, Photo N1	Verbal instruction was given to contractor to immediately improve the situation.	Completed, end September 2024, all construction waste is removed from the territory Photo N1




³ The USIIP/T6/MAR-01 subproject has several pending non-compliance, which are described in the subsection entitled: Pending issues under MAR-01 and MAR-02 sub-projects and Implemented Measures. INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>All construction materials should be properly segregated and stored adequately, Photo N2</p>  <p>Construction waste should be timely removed from the construction site and disposed properly</p>	<p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p>	 <p>Completed, end of September 2024, Photo N2</p>  <p>Completed, end of September 2024, Photo N3</p>





Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
						
7 November 2024		ADB's Environmental Safeguard Mission, led by Mrs. Ninette R. Pajarillaga, Country Environmental Focal and Ms. Nino Nadashvili, Associate Safeguards Officer Georgia Resident Mission Asian Development Bank Environmental	ADB's Environmental Safeguard Mission	<p>Waste Management Site internally should be arranged properly and cleaned regularly, waste should be removed regularly, Photo N1</p> 	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p> <p>Corrective Action Plan</p>	<p>Completed, Mid-November 2024, Photo N1</p> 


Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
		Specialist of UWSCG/USIIP Ms.Kate Chomakhidze Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze		All construction materials should be properly segregated and stored adequately, Photo N2  Electric Cables Electric cables should be properly arranged to eliminate any potential hazards for workers and visitors on the site, Photo N3	has been developed by contractor and sent to SC and UWSCG	Completed in November 2024, All cables are removed, Photo N1



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
						
20 December 2024		<p>Environmental Specialist of UWSCG/USIIP Ms.Kate Chomakhidze</p> <p>Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze</p>	Regular Monitoring of Sites	<p>Waste Management Site internally should be arranged properly and cleaned regularly, all construction materials should be properly segregated and stored adequately, Photo N1</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p>	<p>Completed, All materials removed from the construction site</p>


Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>Deep unprotected trenches</p> <p>Deep and unprotected open trenches pose a threat to workers and visitors to the construction site, Photo N2</p> 	<p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, Photo N1</p> 

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	Implementation Status
Continuously during reporting period (July-December 2024)	China Geo-engineering Corporation (CGC) (Peoples Republic of China)	Environmental, H&S Specialist of Contractor Mr. Levan Inashvili	Regular Environmental monitoring of sites	Day to day monitoring of sites Compliance with Environmental and HES requirements	Prepare Monthly Environmental Monitoring Reports and send to SC	Performed monthly during the reporting period
8 August 2024	MAR-01 LOT-01, LOT-02, LOT-03 and LOT-06	Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze	Regular Environmental monitoring of sites	<p>The deep trench is not reinforced with protective shields, Photo N1</p>  <p>The workers are not using the PPE, Photo N2</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p> <p>Corrective Action Plan has been developed</p>	<p>Completed, end of September 2024, Photo N1</p>  <p>Completed, end of September 2024, Photo N2</p>


Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
					by contractor and sent to SC and UWSCG	
10 September 2024		Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze	Regular Environmental monitoring of sites	<p>The deep trench is not reinforced with protective shield, Photo N1</p>  <p>The workers are not using the PPE, Photo N2</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B,</p>	<p>Completed, end of September 2024</p>  <p>Completed, immediately</p>





Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
					<p>non-compliance note)</p> <p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	
12 September 2024		<p>Environmental Specialist of UWSCG/USIIP Ms.Kate Chomakhidze</p> <p>Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze</p>	<p>Regular monitoring of construction sites</p>	<p>Aadequate and sufficient quantity of Safety/warning signs/tapes and trench side barriers around of deep open trenches should be installed to avoid accident of workers on construction site</p> <p>Walls of the deep trenches (>1.5m) should be strengthened by adequate and sufficient quantity of boards to avoid landfall of the soil and accidents (workers</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p>	<p>Completed, end of September 2024</p> <p>Completed, September 2024 Mid.</p>



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				<p>damage), Photo N1</p>  <p>All construction site/segment must have adequate access in order not to endanger the workers, Photo N2</p>  <p>The contractor shall hire a cable control person – flag man to avoid</p>	<p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, September 2024</p> <p>Mid.</p>



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status	
				<p>damage of cables</p> <p>Trench construction shall be taken up in small segments, so that work (excavation, pipe laying and refilling) in each segment is completed in a day</p> <p>No trenches shall be kept open in the night/after work hours, in case construction works are not completed during the day time provide adequate lighting to avoid accidents, Photo N3</p> 		<p>Completed, September 2024</p> <p>Completed, September 2024</p> <p>Completed, September 2024</p> <p>Completed, September 2024</p>	<p>Mid.</p> <p>Mid.</p> <p>Mid.</p> <p>Mid.</p>
				<p>General Notes: Informing all residents and</p>		<p>Completed, September 2024</p>	<p>Mid.</p>



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				<p>businesses about the nature and duration of any work well in advance so that they can make necessary preparations if needed</p> <p>The construction area must be constantly watered to reduce dust generation, watering of the road should be carefully managed and maintained, so that the volume and timing of water used is correct and water run-off does not make its way into watercourses</p> <p>Overpasses should be provided for local residents to have easy access to homes and businesses Workers without PPE</p>		<p>Completed, September 2024 Mid.</p> <p>Completed, September 2024 Mid.</p>
16 September 2024		Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz	Permanent monitoring of Sites	The works on 26 May street in Marneuli are continuously being carried out without adequate safety conditions. Among	Verbal instruction was given to contractor to immediately improve the situation.	Completed, end of September 2024



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
		Neparidze		<p>other flaws, shoring is not being used, there is a lack of adequate protection of the trench and the traffic signals are insufficient, this way putting at risk not only workers but the population that needs to use that road, Photo N1</p>  <p>The quality of the performed works is not in accordance with the requirements of the Contract, as the backfilling of the trenches is not being done in layers, nor is it properly compacted, Photo N2</p>	<p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p> <p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, end of September 2024, Photo N1</p>



Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
						
25 September, 2024		Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze	Permanent monitoring of Sites	<p>There is no speed limit sign along the trench The trench boundary is damaged or missing. Garbage is dumped in the trench, Photo N1</p>  <p>If the work is temporarily stopped, the trench should be covered with a special</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p>	<p>Completed, end of September 2024, Photo N1</p> 





Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				<p>cover</p> <p>Earthworks are underway. The deep trench is not reinforced with protective shields, Photo N2</p>  <p>The vehicle passage on the trench is not surrounded by embankments</p> <p>Traffic is blocked for cars.</p> <p>There is no crossing bridge at the entrances to the residents' houses, Photo N3</p>	<p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, end of September 2024, Photo N2</p>  <p>Completed, end of September 2024</p> <p>Completed, end of September 2024</p> <p>Completed, end of September 2024</p>




Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
						
10 October 2024		Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze	Permanent monitoring of Sites	<p>The deep trench is not reinforced with protective shields, Photo N1</p>  <p>The workers are not using the PPE, Photo N2</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B, non-compliance note)</p>	<p>Completed, Mid. October 2024</p> <p>Completed, Mid. October 2024</p>



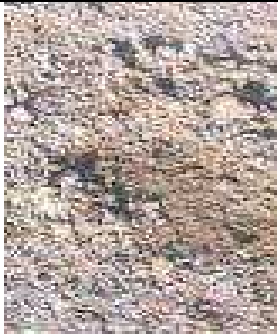

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>The trench boundary is damaged or missing.</p>	<p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, Mid. October 2024</p>
<p>7 November, 2024</p>	<p>MAR-01</p>	<p>ADB's Environmental Safeguard Mission, led by Mrs. Ninette R. Pajarillaga, Country Environmental Focal and Ms. Nino Nadashvili, Safeguards Officer Georgia Resident Mission Asian Development</p>	<p>Semi-annual Environmental Safeguard Mission</p>	<p>Jandari Reservoir Fencing of Jandary Reservoir, Photo N1</p>  <p>City Reservoir Site internally should be</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p>	<p>Not completed</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	Implementation Status
		Bank		<p>cleaned regularly and construction waste should be removed from the site, Photo N2</p> 		<p>Completed, Mid-November 2024, Photo N1</p> 
12 December, 2024		<p>Environmental Specialist of Supervision Consultant HILL Mr.Nikoloz Neparidze</p> <p>Environmental Specialist of UWSCG/USIIP Ms.Kate Chomakhidze</p>	Monthly monitoring of Sites	<p>Construction of Jandari Reservoir in Marneuli, MAR-01/LOT-06</p> <p>An appropriate fence must be installed along the entire perimeter of the Jandari Reservoir to prevent unauthorized persons from entering the construction site and equipped with lockable gate and proper warning and formation signs, Photo N1</p>	<p>Verbal instruction was given to contractor to immediately improve the situation.</p> <p>Non-Compliance Notice was issued and is presented in Annex B of this report.</p> <p>(Photo-documentations are presented in Annex B,</p>	<p>Not yet Completed, Work is underway to cover Jandari Reservoir with Coil. Once the work on the ground is completed, the fence will be installed, end of December 2024</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>The construction site should be graveled to ensure smooth and safe movement of workers and visitors, Photo N2</p>  <p>High visible safety signs/tapes and trench side barriers around of deep open excavation should be installed from all sides to avoid accidents of local population, Photo N3</p>	<p>non-compliance note,)</p> <p>Corrective Action Plan has been developed by contractor and sent to SC and UWSCG</p>	<p>Completed, end of December 2024, Photo N1</p>  <p>Partially completed, Photo N2, Mid. December 2024, Some parts are still open</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>The construction internal area should be regularly cleaned and organized, construction materials should be placed separately and stored properly, Photo N4</p>  <p>A power generator without a drip tray and/or concrete floor causes oil leaks and soil contamination, Photo N5</p>		 <p>Completed, mid. December 2024, Photo N3</p>  <p>Completed, power generator was removed to from the construction site, mid. Of December 2024</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>Burning of waste on the construction site is prohibited, Photo N6</p>  <p>Concrete must be removed from the area and the soil must be reclaimed, Photo N7</p>		<p>Completed, immediately, Photo N4</p>  <p>Completed, December 2024</p> <p>Mid.</p>

Date of Visit	Name of Company Name of Contract	Auditors Name	Purpose of audit	Summary of any Significant Findings	Implemented Actions	³ Implementation Status
				 <p>Safety electric cables should be arraigned at construction site not to create danger for workers, Photo N8</p>  <p>Safety ladder should be installed on construction site to avoid workers damage</p>		 <p>Completed, mid. December 2024, Photo N5</p>  <p>The work was completed and ladder was removed, immediately, December 2024</p>

2.2 Issues Tracking (Based on Non-Conformance Notices)

44. During the reporting period (July-December 2024), a total of 11 site visits were conducted under the USIIP/T6 program. These visits identified a total of 43 non-compliances, resulting in 10 non-compliance notices issued to the contractor by the ESs of SC and UWSCG/USIIP. Specifically, within the MAR-02 subproject, 8 non-compliances were identified and 3 non-compliance notices were issued to the contractor. During this period, under the USIIP/T6 MAR-01 subproject 35 non-compliances were identified, resulting in 8 non-compliance notices issued to the contractor. For more details, refer to Table 15 and A.
45. The contractors were always informed on the detected non-conformances and were demanded to improve on the deadline set and send photos of improvements, Corrective Action Plans (please see Annex C) were developed by contractors and sent to UWSCG/IPMO with improved photos of construction sites. Environmental team of HILL and UWSCG/USIIP monitored the improvements during the next monitoring visits. Corrective action plans were developed by contractors and improved photos of sites were send to SC and UWSCG.
46. A summary of the identified environmental issues for July-December 2024 under MAR-01 (LOT-01, LOT-02, LOT-03, LOT-04, LOT-05 and LOT-06) sub-project is presented in Table 16 below. There is still one open issues: (i) proper fencing of Jandari Reservoir. These non-compliances will be completed by the end of civil works in March 2025. All other non-compliances were corrected by contractor within the indicated deadlines.

Table 16: Summary of Issues Tracking Activity for Current Period MAR-01 (LOT-01, LOT-02, LOT-03, LOT-04, LOT-05 and LOT-06)

Total Number of Issues for Project	35
Issues Opened This Reporting Period	1
Issues Closed This Reporting Period	34
Percentage Closed	97%

47. A summary of the identified environmental issues for July December 2024 under MAR-02 sub-project is presented in Table 17 below. There is no open issues under MAR-02 sub-project, and all non-compliances were eliminated by contractor.

Table 17: Summary of Issues Tracking Activity for Current Period MAR-02

Total Number of Issues for Project	8
Issues Opened This Reporting Period	0
Issues Closed This Reporting Period	8
Percentage Closed	100%

2.3 Trends

48. Information from reports for the previous period (January-June 2024) and for the current period is used to determine trends in environmental issues opened and closed under the USIIP/T6 sub-projects. The status of the main issues for the previous and current reporting periods is presented in Table 18 below.
49. Although the total number of non-compliance increased from 35 (January-June 2024) to 43 (July-December 2024) during the reporting period, the number of outstanding issues

including both projects (MAR-01 and MAR-02) decreased from 15% to 1% and mainly include the fencing of the construction areas, mainly Jandari Reservoir, temporarily during the construction works and after completion of construction.

50. A summary of identified trends for the MAR-01 and MAR-02 sub-projects for the reporting period July-December 2024 compared to January-June 2024 is presented in Table 18 below.

Table 18: Summary of identified trends in environmental issues

Semi-Annual EMR No	Total No of Issues	% issues Closed	% issues closed late
January-June 2024	35	85%	15%
July-December 2024	43	99%	1%

2.4 Unanticipated Environmental Impacts or Risks

51. There were no unanticipated Environmental Impacts and risks under USIIP/T6 during the reporting period.

3. RESULTS OF ENVIRONMENTAL MONITORING

3.1 Overview of Monitoring Conducted during Current Period

52. During the reporting period Environmental measurements of Noise level and ambient air Quality were carried out by contractor under MAR-02 sub-project.

53. Noise standards defined by IFC/WHO 1999, are presented in the Table 19 below.

Table 19: Noise Level Guidelines

Noise	dBA		dBA	
	National Regulations		WHO	
Receptor	Daytime 07:00 - 22:00	Nighttime 22:00 - 07:00	Daytime 07:00- 22:00	Nighttime 22:00- 07:00
Residential; institutional; educational	55	45	55	45
Industrial; commercial	70	70	70	70

54. Air pollution standards by IFC/WHO 1999, are presented in the Table 20 below.

Table 20: Air pollution Guidelines

Contaminants	IFC/WHO Guideline Value (Limit) mg/m ³)
1	2
Inorganic dust	(*IFC does not have a standard for "inorganic dust". Instead IFC applies standards for PM2.5 and PM10). PM10 – 0,02/1 Year 0,05/24 Hour PM2,5-0,01/1 Year 0,025/24 Hour
Carbonic monoxide	n/a
Nitrogen dioxide (NO ₂)	0,2/ 1 Hour 0,04/1 Year
Aldehyde	n/a

55. Georgian Standards for noise level is presented in the table 21 below.

Table 21: Georgian Standards for Noise Levels

Purpose/use of area and premises	Allowable limits (A-Weighted Decibels (dBA))	
	L _{day}	23:00 – 08:00

	08:00 - 19:00, Day	Evening 19:00- 23:00	L_{night}, Night
Educational facilities and library halls	35	35	35
Medical facilities/chambers of medical institutions	40	40	40
Living quarters and dormitories	35	30	30
Hospital chambers	35	30	30
Hotel/motel rooms	40	35	35
Trading halls and reception facilities	55	55	55
Restaurant, bar, cafe halls	50	50	50
Theatre/concert halls and sacred premises	30	30	30
Sport halls and pools	55	55	55
Small offices (100m ³) – working rooms and premises without office equipment	40	40	40
Small offices (100m ³) – working rooms and premises without office equipment	40	40	40
Conference halls /meeting rooms	35	35	35
Areas bordering with houses residential, medical establishments, social service, and children's facilities (>6 story buildings)	55	50	45
The areas bordering with hotels, trade, service, sport, and public organizations	60	55	50

Note: in case noise generated by indoor or outdoor sources is impulse or tonal, the limit must be 5dBA less than indicated in the Table.

56. Table 22 shows the threshold values of the major air pollutants as defined by the GEO, IFC and EU legislation.

Table 22: Ambient Air Quality Standards

Parameter	Averaging Period	Limit (µg/m ³)		
		Maximum Permissible Concentration (MPC) in Georgia	IFC Guideline Value	EU Ambient Air Quality Guidelines
Nitrogen Dioxide (NO ₂)	30 minutes	200	-	-
	1 Hour	-	200	200
	24 Hours	40	-	-
	1 Year	-	40	40
Sulphur Dioxide (SO ₂)	10 minutes	-	500	-
	30 minutes	500	-	-
	1 Hour	-	-	350
	24 Hours	50	20	125
Carbon Monoxide (CO)	30 minutes	5,000	-	-
	24 Hours	3,000	-	-
Total Suspended Particulates (TSP) / Dust	24 Hours	150	-	-
	30 minutes	500	-	-
PM10	1 year	40	20	40
	24 hours	50	50	50
PM2.5	1 year	25	10	25
	24 hours	-	25	-
Ozone	8-hour daily max.	120	100	120

57. The Georgian Standards for vibration are designed for human comfort. These are shown in Table 23 below. Note that no standards for building damage exist.

Table 23: Georgian vibration values

Average Geometric Frequencies of Octave Zones (Hz)	Allowable Values X0, Y0, Z0			
	Vibro-acceleration		Vibro-speed	
	m/sec ²	dB	m/sec 10 ⁻⁴	dB
2	4.0	72	3.2	76
4	4.5	73	1.8	71
8	5.6	75	1.1	67
16	11.0	81	1.1	67
31.5	22.0	87	1.1	67
63	45.0	93	1.1	67

Note: It is allowable to exceed vibration normative values during daytime by 5 dB during daytime. In this table of inconstant vibrations, a correction for the allowable level values is 10dB, while the absolute values are multiplied by 0.32. The allowable levels of vibration for hospitals and rest houses have to be reduced by 3dB.

58. Since no construction activities were undertaken within the CHI-01 sub-project during the reporting period, environmental quality measurements were not conducted under this sub-project.

Environmental Quality Measurement of noise, air quality, vibration under MAR-02 Sub-project

59. Environmental instrumental measurements of ambient air quality, noise and vibration within the framework of the MAR-02 subproject were carried out by the Contractor on 26 November 2024. The measurement of noise, vibration and particulate matter was carried out continuously for two hours. The results of the measurement are presented in the Tables 24 and 25 below.

60. The measurement was carried out in the area of the construction site and in the nearest residential building, which is located approximately 50 meters away from the construction site. At the time of measurement, construction works were being carried out with medium intensity. During the measurement period, self-loading and loading vehicles moved on the construction site.

61. The measurement process was not affected by any weather conditions (rain, wind). The air temperature during the measurements was as follows:

- 2024/11/26 - 11 °C - Relative Humidity 40%.

62. The concentration levels of noise, vibration and particulate matter were measured in line with the requirements of Georgian Legislation and the methodology and procedures developed by the Company.

63. As a result of studying the existing situation, two points were determined as measurement locations. Below are the measurement points of environmental quality indicators:

Table 24: The measurement points of environmental quality indicators

Noise Measurement	Construction Site (Measurement Location N1)
	Yard of the residential building adjacent to the project area (measurement point N2)
Air Measurement	Construction Site (Measurement Location N1)
Vibration Measurent	The balcony of the residential building adjacent to the project area

64. The baseline measurements were performed to identify the levels of noise, vibration and major air pollutants.

**Results of the Measurement of Noise and Vibration under MAR-02 sub-project on 25 January 2024
NOISE, MAR-02**

65. As can be seen from the obtained data (please see Table 25 below), the noise level at point N1 is lower than the permissible norm of "NIOSH" (85 dBA) and is 47.9 dBA. The noise level recorded at point N2 (the area surrounding the house) is also lower than the permissible noise norm established by the legislation of Georgia and amounts to 43.6 dBA. As mentioned, during the measurement, construction works were being carried out with low intensity. During the measurement period, self-loading and loading vehicles moved on the construction site.

66. According to the results of 5-minute intervals of noise measurement at measurement location N2 (near the residential house), noise exceeding the permissible norm was not recorded.

67. At point N2 (near the residential building), the peak noise level was recorded in the five-minute interval from 17:05 to 17:10, which was 54.1 dBA.

68. Noise and vibration measurement data N1 and N2 are presented in the table 25 and 26 below.

Table 25: Result of Measurements

Measurement Parameter		Value	Source of Pollution	
Noise dBA	Norm of Georgian legislation (Adjacent to Residential house)	Day	55	
		Night	45	
	Norm of Georgian legislation (Commercial / Industrial Territory)	Day - Night	60	
	Recommendation of the "US National Institute for Occupational Safety and Health" (NIOSH)	8 Hour	85	
	Result - N1 Point (At the Construction site)	2 Hour	47.9	
	Result - N2 Point (At the Res. Buildint)	2 Hour	43.6	
Vibration mm/s	DIN 4150-3 Standard	5	Construction Works	
	Result (Maximum value recorded)	0.38 ²		
Allowable Concentration		24 Hour		25

² The initial and final vibration data are relatively high, which is due to the touch of the device on and off button, as well as moving around the device. Therefore, the initial and the final data are not used in the assessment.

Measurement Parameter			Value	Source of Pollution
PM2.5 (µg/m3)	Result	20 Minute	14	
PM10 (µg/m3)	Allowable Concentration	24 Hour	50	
	Result	20 Minute	5	

69. The vibration level is much lower (about 20 times lower) than the value of the DIN 4150-3 standard. During the measurement, the highest vibration result was recorded at 0.38 mm/s.

AIR POLLUTION, MAR-02

Results of the measurement of the Air Pollution on 23 August 2024

70. The levels of concentrations of particulate matter in the ambient air is lower than the norm established by the legislation of Georgia and the norm/recommendation of the World Health Organization.
71. In the 20-minute measurement interval, the highest level of particulate matter was recorded as PM2.5 - 5 (µg/m3), and PM10 - 14 (µg/m3).
72. The highest concentration of particulate matter was observed in the sample taken at 15:49, which amounted to PM2.5 - 6 (µg/m3), and PM10 - 17 (µg/m3).
73. It should be noted here that the concentrations of particulate matter for the two-hour measurement period (and not for the 20-minute section) are PM2.5 - 5 (µg/m3), and PM10 - 13 (µg/m3).

Environmental Quality Measurement (noise, air, vibration) under MAR-01 Sub-project

74. There were no Environmental Quality Measurements of ambient air quality, noise and vibration within the framework of the MAR-01 (LOT-01, LOT-02, LOT-03 and LOT-06) sub-project, since there were minor construction activities under the above Lots of Mar-01 sub-projects during the reporting period.

Use Measuring Device Noise, vibration, Air Pollution under MAR-02 sub-project

Noise Level Measurements

75. The noise level measurements were implemented in accordance with the British Standard BS 7445-2:2003 'Description and measurement of environmental noise'. The dust concentration measurements in the ambient air were conducted in accordance to the EU standards.
76. The monitoring points were selected, to represent the impact of the construction on local population as realistically as possible.

Noise Measurement Equipment

77. According to the above-mentioned standard, the following equipment was used during the noise level measurement activities:

- Rion NL-52, First class noise measurement device;
- Windscreen, WS-16;
- Tripod;
- SD Card;



Noise measuring device



Windscreen WS-16

3.2 Trends

78. During the reporting period Contractor always implemented Corrective Action Plans based on the Non-compliance Notices issued by UWSCG/USIIP and SC in accordance with the IEE/EMP, SEMP's requirements under MAR-01 and MAR-02 sub-projects, but still within the MAR-01/LOT-06 subproject, one additional mitigation measures is required, including the fencing of the Jandari reservoir after completion of Construction Works, please see Table 31 below.

3.3 Summary of Monitoring outcomes

79. Dust and Noise levels during the construction period under MAR-02 sub-project was not exceeded the existing standards of IFC/WHO, and therefore no additional measures are required. It should also be noted that measurements carried out at construction sites, were temporary and conducted during the daytime and no complaints were received from the local community during the reporting period.

3.4 Material resources Utilization

4.4.1 Current Period

MAR-02

80. During the reporting period (July-December 2024), active civil works were conducted only under the MAR-01/LOT-01, LOT-02, LOT-03, and LOT-06 and MAR-02 sub-projects. As a

result, material resource utilization is reported only for these projects. Please refer to Table 26 below for details on the MAR-02 sub-project.

Table 26: Quantity of Materials Received on MAR 02, December 2024

No.	Material	Quantity	Unit
1	Cement	1.3	t
2	Sand	140	m ³
3	Gravel (Quarry Kariani)	350	m ³

4.4.1 Cumulative Resources Utilization

81. Cumulative resources utilization of electricity, water and fuel for whole project life under MAR-01/LOT-04/LOT-05 is presented in the Table below.

Table 27: Cumulative Resources Utilization under MAR-01/LOT-04/LOT-05 Sub-project, December 2024

N	Utilized Resources	Monthly	Measurement
January-June 2024			
1	Consumption of Water	4020	M3
2	Electricity	9600	kwt
3	Gus	1467	L
July-December 2024			
1	Consumption of Water	1030	M3
2	Electricity	2300	kwt
3	Gus	950	L
Total Whole Project Life			
1	Consumption of Water	5050	M3
2	Electricity	11900	kwt
3	Gus	2417	L

3.5 Waste Management

3.5.1 Current Period

MAR-01 (LOT-04 and LOT-05)

82. CC for MAR-01 and MAR-02 sub-projects developed a Waste Management Plans and agreed with the MoEPA. The Contractor has signed an agreement with the Marneuli Municipality regarding provision of the waste containers, collection and transportation of household waste. In addition to that the contractor has signed an agreement with the licensed company „Sanitary” Ltd for collection, transportation and treatment of the hazardous waste. Temporary hazardous waste storage area has been arranged at the WWTP construction site. Different types of hazardous waste are kept in the restricted area (fenced and roofed) before transporting by the licensed waste transportation/treatment company. Information regarding the generation of waste during reporting period under the MAR-01 sub-project is given in the Table 28 below, relevant agreements are provided in Annex D to this report.

Table 28: Waste generated under the MAR-01 sub-project during the reporting period, July-December 2024

#	Domestic, hazardous Waste & Sewage	Estimated Volume	Storage Area	Licensed Company
1.	Household waste	3M ³	Bolnisi Municipality household	Bolnisi Municipality Cleaning
2	Printer toner	0.4 Kg	Final storage will be at private Company „Sanitary” Ltd but temporary they will be stored in temporary hazardous	Private Company „Sanitary” Ltd
3	Medical Wastes	0,5 kg/Liter	Final storage will be at private Company „Sanitary” Ltd but temporary they will be stored in temporary hazardous	Private Company „Sanitary” Ltd

MAR-02

83. Information regarding the generation of waste during reporting period under the MAR-02 sub-project is given in the Table 29 below:

Table 29: Waste generated under the MAR-02 sub-project during the reporting period, July-December 2024

Information about waste generated & disposed under MAR 02 Contract for the period July-December 2023				
#	Domestic/Hazardous Waste & Sewage	Estimated Volume	Storage Area	Name of Licensed Company
1	Household waste	11m ³	WWTP construction sites	Marneuli Municipality
	Hazardous Waste	28 m3	WWTP construction sites	Private Company „Sanitary” Ltd
3	Used tires	A negligible amount	Temporary waste storage area at the Workshop	
4	Hydraulic and used oil	A negligible amount	Temporary waste storage area at the Workshop	
5	Oil drums	A negligible amount	Temporary waste storage area at the Workshop	
6	Printer tonner	A negligible amount	Temporary waste storage area at the Workshop	
7	Medical Waste	A negligible amount	Temporary waste storage area at the Workshop	

4.5.2 Cumulative Waste Generation

84. Cumulative waste generation under the MAR-02 project for whole project life is provided in the Table below.

Table 30: Cumulative Waste generated under the MAR-02 sub-project

January-June 2023			
#	Domestic/Hazardous Waste	Estimated Volume	Unit
1	Household waste	35	m ³
2	Hazardous Waste	70	m ³
July-December 2022			
1	Household waste	30	m ³
2	Hazardous Waste	15	m ³
January-June 2022			
1	Household waste	15	m ³
2	Hazardous Waste	8	m ³
July-December 2021			
1	Household waste	10	m ³
2	Hazardous Waste	3	m ³
July-December 2023			
1	Household waste	15	m ³
2	Hazardous Waste	37	m ³
January-June 2024			
1	Household waste	13	m ³
2	Hazardous Waste	37	m ³
July-December 2024			
1	Household waste	11	m ³

January-June 2023			
2	Hazardous Waste	28	m ³
Total			
1	Household waste	129	m ³
2	Hazardous Waste	207	m ³

3.6 Health and Safety

3.6.1 Community Health and Safety

85. No community incidents have been reported by SC during reporting period under MAR-01 and MAR-02 sub-projects.

3.6.2 Worker Health and Safety

MAR-01/LOT-01, LOT-02, LOT-03 and LOT-06

86. Environmental Specialist of contractor under MAR-01 sub-project Mr. Levan Inashvili and H&S specialist Mr. Aleksandre Chitadze were performing day-to-day monitoring of ESHS on the Sites and press the Contractor to improve the provision of trench barriers in roads and to provide suitable work boots for the labour force.
87. Health & safety and environment issues which were covered during the reporting period are as follows:
- Excavation of trenches;
88. The Following Workers Health and Safety problems were identified during the site visits under MAR-01 (LOT-01, LOT-02, LOT-03 and LOT-06) sub-project by UWSCG/IPMO/USIIP and SC during the reporting period:
- The walls of the deep trenches (>1.5m) by boards should be strengthened
 - Workers at high altitudes on the reservoir do not wear safety helmets or safety belts

3.6.3 Community Health and Safety

MAR-01 and MAR-02 sub-projects

89. The Following Community Health and Safety problems were identified during the site visits under MAR-01 and MAR-02 sub-projects by UWSCG/IPMO/USIIP and SC:
- Construction sites should be adequately fenced after the completion of the construction activities (MAR-01/LOT-06, Jandari Reservoir)

3.7 Training

- 90.** On site environmental and H&S safeguard trainings were conducted for contractor's environmental team of MAR-01 and MAR-02 sub-project by Environmental Specialists of UWSCG/USIIP and SC/HILL on a regular basis. Environmental specialists of contractors were introduced with all necessary safeguard requirements of ADB/SPS 2009.
- 91.** On-job training were conducted on 12 September, 20 December 2024 by Environmental Specialist Ms. Kate Chomakhidze and ES of SC/HILL Mr. Nikoloz Neparidze after the inspection of the construction works under MAR-01 and MAR-02 sub-projects. Main issues raised during the site visit and training topics were: the walls of the deep trenches (>1.5m) by boards should be strengthened; Workers at high altitudes to use safety helmets and safety belts. The aforementioned training was attended by representatives of the CC and CS teams for environmental protection and H&S.
- 92.** Contractors developed Corrective Action Plans to address nonconformities identified during the site visit and sent them to SC and UWSCG.

4. FUNCTIONING OF THE SEMP

4.1 SEMP Review (prepared and updated under USIIP/T6, including CHI-01, MAR-01 and Mar-02 sub-projects)

93. The SEMP for Chiatura's water supply network was prepared and approved in January 2020 and further updated and approved during the reporting period, in August 2020 due to changes in the project design.
94. The following SEMPs have been prepared and approved under CHI-01 and MAR-01 sub-project during the previous reporting periods:

CHI-01 Sub-project:

- SEMP for CAMP site (approved in August 2018)
 - SEMP for Sachkhere Reservoir (approved in August 2018);
 - SEMP for Bisi Reservoir (approved in September 2018);
 - SEMP for Lezhubani Reservoir (approved in September 2018);
 - SEMP for Navardzeti Reservoir (approved in September 2018);
 - SEMP for Perevisy Reservoir (approved in September 2018);
 - SEMP for Rustaveli reservoir (approved in September 2018);
 - SEMP for Tekhisa Reservoir (approved in September 2018);
 - SEMP for Chiatura Well fields (approved in November 2018);
 - SEMP for Chiatura Water Supply components (Avarioni&Sapari) (Approved in 10 August 2020)
95. The following SEMPs have been updated due to the changes in project design under CHI-01 sub-project.
- SEMP for Sachkhere reservoir (December 2019);
 - SEMP for Bisi Reservoir (December 2019)

MAR-01 sub-project:

- SEMP for Jandary Reservoir (approved in March 2019);
- SEMP for Kolagiri Pumping Station (approved in March 2019);
- SEMP for CAMP (approved in May 2019)
- SEMP for City Reservoir (approved May 2019)

MAR-02 sub-project:

- SSEMP for MAR-02 (approved in March 2020)

Updated SEMPs under MAR-01 sub-project

- SEMP for MAR-01 (LOT-01/LOT-02/LOT-03 and LOT-06) (September 2022)
- SEMP for MAR-01 (LOT-04/LOT-05) (September 2022)

96. All SEMP's were prepared by Contractor, endorsed by SC and approved by UWSCG. SEMP's were reviewed/commented by the ADB.

5. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

5.1 Good Practice

- 97.** During the reporting period, relations between UWSCG/IPMO/USIIP, supervisory consultants, contractors and local communities were improved to avoid further inconsistencies within the USIIP/T6 subprojects. The Contractor always provides the visitors to the Marneuli WWTP construction site with personal protective equipment, safety vests and helmets.

5.2 Opportunities for Improvement

- 98.** During the reporting period, IPMO improved tracking of corrective actions. Close monitoring, guidance and communication between PIU, SC and CC has been improved to avoid inconsistencies and improve the current situation. Issues identified during the previous SAEMR, July-December 2023 were taken into account by UWSCG/USIIP and SC/HILL.

6. SUMMARY AND RECOMMENDATIONS

6.1 Summary

99. Individual and joint on-site monitoring activities were conducted by Environmental Specialists of UWSCG/USIIP Ms. Ketevan Chomakhidze and Mr. Nikoloz Neparidze Environmental Specialist of SC/HILL.
100. During the reporting period (July-December 2024), a total of ten site visits were conducted under the USIIP/T6 program. These visits identified a total of 35 non-compliances, resulting in 7 non-compliance notices issued to the contractor by the ESs of SC and UWSCG/USIIP. Specifically, within the MAR-02 subproject, 15 non-compliances were identified and 3 non-compliance notices were issued to the contractor. During this period, under the USIIP/T6 MAR-01 subproject 20 non-compliances were identified, resulting in 6 non-compliance notices issued to the contractor.
101. No Environmental Quality Measurement was conducted under CHI-01 sub-project as there were no construction activities under the project during the reporting period.
102. During the reporting period environmental quality measurements of ambient air pollution and noise level were conducted under MAR-01 and MAR-02 sub-projects on the monthly (Mar-02) and semi-annual basis (Mar-01).
103. Table 31 below provides more detailed information about the Recommendations to Address Environmental, Social and H&S Non-Compliances identified during the reporting period, July-December 2024 under USIIP/T6 sub-projects.

6.2 Recommendations

- 104.** During the reporting period, July-December 2024, the USIIP/T6 was implemented in accordance with the requirements of ADB - SPS 2009 and the National Legislation.
- 105.** Recommendations for the implementation of USIIP/T6 during the next reporting period January-June 2025 are provided in the Table 31 below:

Table 31: Recommendations to Address Environmental Issues under USIIP/T6 sub-projects

Recommendations under MAR-01	
Recommendations MAR-01 (LOT-01/LOT-02/LOT-03/LOT-04/LOT-05/LOT-06)	Implementation Status and Date
MAR-01/LOT-06 Fencing of Jandari Reservoir, installation of the information signs	Instruction are given to contractor to conduct relevant mitigation measures by the end March 2025

- 106.** Conduct bi-annual quality measurements monitoring of Noise and Air quality under MAR-02 project at the WWTP construction site and nearest sensitive receptors. The schedule of environmental quality measurements to be carried out during the next reporting period, until the end of June 2025 is presented in the Table 32 below.

Table 32: Conduct Monitoring of Environmental Quality under MAR-02 sub-project

Parameters	Quarterly measurement
Dust	June 2025
PM _{2.5} and PM ₁₀	June 2025
Vibration	June 2025
Carbon monoxide	June 2025
Nitrogen dioxide	June 2025
Noise	June 2025

- 107.** The Post-construction Environmental Audit Report to be prepared for MAR-02 sub-project in July 2025
- 108.** The Post-construction Environmental Audit Report to be conducted in April 2025 under MAR-01 sub-project.

ANNEXES

ANNEX A: PHOTOS OF SITES

MAR-02, CONSTRUCTION OF WWTP IN MARNEULI

Photo N1 Marneuli WWTP



Photo N2 Marneuli WWTP



Photo N3, Marneuli WWTP



Photo N4 Marneuli WWTP, ADB's Environmental Safeguard Mission, 26 September 2024



PHOTO N5 – MAR-01 – (LOT-01, LOT-02, LOT-03 and LOT-06)

Photo N1 – Jnadari Reservoir



Photo N3 – MAR-01, Construction of the Pumping Stations in Bolnisi



ANNEX B: NON-COMPLIANCE NOTICES

NON-COMPLIANCE NOTICE, MAR-01, 8 AUGUST 2024

Visit report		08 August 2024
Project : Urban Services Improvement Investment Program (USIP), Georgia Contract: MAR 01 Contractor: China Geo Corporation		Site Visit Report
On 07 August 2024 I visited Manual ongoing activities (Street Works) on 1 location at the coordinates: 1. 41°28'50.2"N 84°47'26.4"E Earthworks are underway. The deep trench is not reinforced with protective shields. The workers are not using the PPE.		



Environmental Expert:

Nikolaos Niftharidis

NON-COMPLIANCE NOTICE, MAR-01, 9 SEPTEMBER 2024

Visit report		09 September 2024
Project : Urban Services Improvement Investment Program (USIP), Georgia Contract: MAR 01 Contractor: China Geo Corporation		Site Visit Report
On 09 September 2024 I visited Manual ongoing activities (Street Works) on 2 locations at the coordinates: 1. 41°28'57.6"N 84°47'36.4"E Earthworks are underway. The deep trench is not reinforced with protective shields. The workers are not using the PPE.		



Environmental Expert:

Nikolaos Niftharidis

NON-COMPLIANCE NOTICE, MAR-01, 12 SEPTEMBER 2024

Non-Compliance Notice, UWSCG

Site Visit: 12 September 2024

Project: USIP	Non-Compliance Notice
Contract No: LOT-01, LOT-02, LOT-03 and LOT-06	CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS IN MARBELL AND SEWERAGE SYSTEM AND COLLECTOR IN BOLNIS; USIP/IS/CW/2022/MAR-01
Contractor: China Geo-engineering Corporation (CGC) (People's Republic of China)	
Supervisor Consultant: HILL	
Reference: CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEM IN MARBELL	

This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented **urgently**.

NON-COMPLIANCE

- Adequate and sufficient quantity of Safetywarning signposts and trench side barriers around of deep open trenches should be installed to avoid accident of workers on construction site (Photo N1)
- Walls of the deep trenches (1.5m) should be strengthened by adequate and sufficient quantity of boards to avoid landslide of the soil and accidents (workers damage) (Photo N2, Photo N3, Photo N4)
- All construction site/segment must have adequate access in order not to endanger the workers (Photo N4)
- The contractor shall hire a cable control person – flag man to avoid damage of cables (Photo N5)
- Trench construction shall be taken up in small segments, so that work (excavation, pipe laying and rolling) in each segment is completed in a day (Photo N1)
- No trenches shall be kept open in the night/after work hours, in case construction works are not completed during the day time provide adequate lighting to avoid accidents (Photo N3)

General Notes:

- Informing all residents and businesses about the nature and duration of any work well in advance so that they can make necessary preparations if needed
- The construction area must be correctly covered to reduce dust generation, watering of the road should be carefully managed and maintained, so that the volume and timing of water used is correct and water run off does not make its way into watercourses
- Overpasses should be provided for local residents to have easy access to farms and businesses
- Workers without PPE

Photos of LOT-02, Tarebely Street

Photo N1



Photo N2



Photo N3



Photo N4



Photo N5, LOT-02, GamaKhunda Street



Photo N6, LOT-2, Tarebely Street



Photo N7



Photo N8, LOT 02 GamaKhunda Street



All these conditions have to be removed urgently by contractor and Supervisor

Date of site visit: 12 September 2024

Kate Chomakhidze, Environmental Consultant
UWSCG/USIP

NON-COMPLIANCE NOTICE, MAR-01, 16 SEPTEMBER 2024

Ref: UWS000-1-1-090-0182-0003-2024-09-16 Date: 16th of September, 2024

CHINA GEO-ENGINEERING CORPORATION
Georgia Regional Office: Room 106, 777 Lane, Block 3E,
No. 6 Tamarindville St., Thibault, 3177

Attention: Mr. J. J. Shree, Project Manager

United Water Supply Company of Georgia (UWSCG)
1441 GDOT Urban Services Improvement Investment Program, Tranche 6
Construction of Water Supply and Sewerage Systems to Meters and Sewerage Systems and Collectors in
Bakula - Contract # UDIP70/W/2022L30MAR-01

Subject: Unsatisfactory safety conditions and bad quality of works

Re: E-mail of RC dated 04 Sept 2024

Dear Sir,

The engineer is noting that, despite several warnings, the current works on 36 May street in Bakula are continuously being carried out without adequate safety conditions. Among other items, shoring is not being used, there is a lack of adequate protection of the trench and the traffic signals are insufficient, this way putting at risk not only workers but the population that needs to use that road.

It should also be noted that the quality of the performed works is not in accordance with the requirements of the Contract, as the backfilling of the trenches is not being done in layers, nor is it properly compacted.

Once again, we instruct you to work according to Contract specifications and to submit a plan on how you intend to correct the already backfilled trenches.

Yours faithfully,

Narendra Singh Shekharwal
Engineer's Representative / Chief Resident Engineer
Hill International - Temelsu I.V.

Encl.: Three photographs showing unsatisfactory situation

For: Mr. Greg Kakekolis, Deputy Director of UWSICG



NON-COMPLIANCE NOTICE, MAR-01, 26 SEPTEMBER 2024

Visit report

25 September 2024

Project : Urban Services Improvement Investment Program (USIP), Georgia	Site Visit Report
Contract: MAR 01	
Contractor: China Geo Corporation	

On 24 September 2024 (visited)

Maintain ongoing activities (Street Works) on 4 locations at the coordinates:

1. 41.482758; 44.788674
There is no speed limit sign along the trench
The trench boundary is damaged or missing.
Garbage is dumped in the trench.
If the work is temporarily stopped, the trench should be covered with a special cover
2. 41.485188; 44.788857
Earthworks are underway
The deep trench is not surrounded with protective shields.
The vehicle passage on the trench is not surrounded by embankments
3. 41.475499; 44.808018
Traffic is blocked for cars.
There are no limit signs set at the head and end of the blocked section.
There is no crossing bridge at the entrance to the residents' houses
4. 41.485571; 44.808018
Earthworks are underway.
Traffic is blocked for cars.
There is no crossing bridge at the entrance to the residents' houses



Photos - Location 4



Environmental Expert

Nikoloz Nigharidze

NON-COMPLIANCE NOTICE, MAR-01/LOT-04, LOT-05, 10 OCTOBER 2024

Visit report

10 October 2024

Project: Urban Services Improvement Investment Program (USIP), Georgia	Site Visit Report
Contractor: M&A 01	
Contractor: China Geo Corporation	
On 9 October 2024 I visited:	
Marazuli ongoing activities (Street Works) on 4 locations at the coordinates:	
1. 41.491562; 44.892643 Earthworks are underway. The deep trench is not reinforced with protective shields. The workers are not using the PPE.	
2. 41.481673; 44.781936 Earthworks are underway. The trench boundary is damaged or missing.	



Photos - Location 2

Location



Environmental Expert:

Nikoloz Nepharidze

NON-COMPLIANCE NOTICE, MAR-01/LOT-04, LOT-05, 12 DECEMBER 2024

Non-Compliance Notice: UWSOG

Site Visit: 12 December, 2024

<p>Project: USIP Contract No.: No UWSOS-ICB-MAR-01/LOT-01/LOT-02/LOT-03/LOT-04 Contractor: China Geo-engineering Corporation (CGC) (People's Republic of China) Supervisor/Consultant: HLL Reference: 'CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEM IN MARNEULI', LOT-01, LOT-02, LOT-03 and LOT-04</p>	<p>Non-compliance Notice: CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS IN MARNEULI AND SEWERAGE SYSTEM AND COLLECTOR IN BOUNSI USIP/ITS/CW/2022/MAR-01</p>
<p>This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented until 20 December 2024.</p>	
<p>Construction of Jandari Reservoir in Momeali:</p> <ul style="list-style-type: none"> - An appropriate fence must be installed along the entire perimeter of the Jandari Reservoir to prevent unauthorized persons from entering the construction site and equipped with lockable gate and proper warning and formation signs (Photo No. 1); - The construction site should be gravelled to ensure smooth and safe movement of workers and visitors (Photo No. 2); - High visible safety signboards and trench side barriers around of deep open excavation should be installed from all sides to avoid accidents of local population (Photo No. 3); - The construction internal area should be regularly cleaned and organized, construction materials should be placed separately and stored properly (Photo No. 4); - A power generator without a drip tray and/or concrete floor causes oil leaks and soil contamination (Photo No. 5); - Burning of waste on the construction site is prohibited (Photo No. 6); - Concrete must be removed from the area and the soil must be reclaimed (Photo No. 7); - Safety electric cables should be arranged at construction site not to create danger for workers (Photo No. 8); - Safety ladder should be installed on construction site to avoid workers damage (Photo No. 9). 	
<p>Photos of Jandari Reservoir under MAR-01 sub-project (12 December, 2024)</p>	



<p>All these conditions have to be remedied within 7 working days: 20 December 2024</p>	
<p>Date of the visit: 12 December 2024 Site Monitoring was carried out by: Hava Chomachidze, Environmental Consultant of UWSOS/USIP</p>	<p>NCR is prepared by: Kato Chomachidze, Environmental Consultant, UWSOG/USIP</p>

Non-Compliance Notice, UWSOG

Site Visit: 12 December, 2024

Project: USIP Contract No: MAR-01/LOT-04, LOT-05 Contractor: POLAT Yol Yapı Sanayi ve Ticaret Anonim Sirketi (Turkey) Supervisor Consultant: HILL Reference: "CONSTRUCTION OF SEWERAGE SYSTEM IN BOLNISI"	Non-Compliance Notice CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEMS IN MARNULLI AND SEWERAGE SYSTEM AND COLLECTION IN BOLNISI; USIP/TACW/2022/MAR.01
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This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented **urgently**.

Construction of Sewerage Network and Pumping Stations in Bolnisi

1. Proper Warning and information signs should installed on entrance gate (Photo N1);
2. Un-fenced/unsecured pipeline cross river near resident areas, where children may use it as a playground make threats to local population and should be adequately fenced and protected (Photo No. 2);
3. Clearly visible sign/safety tapes, trench side fences or proper cover should be installed around deep open pits/reservoirs (3-7m) to avoid accidents with working personal (Photo No. 3) (should be replaced immediately)

Photos of Bolnisi WW Network and Pumping Stations, PS#2 and PS#3



All these conditions have to be remedied immediately

Date of site visit: 12 December 2024

Site Monitoring was carried out by:
 Kate Chomakhidze, Environmental Consultant of UWSOG/USIP

NCN is prepared by Kate Chomakhidze, Environmental Consultant, UWSOG/USIP

NON-COMPLIANCE NOTICE, MAR-02 – WWTP, 12 SEPTEMBER 2024

Non-Compliance Notice, UWSOG

Site Visit: 12 September 2024

Project: USIP Contract: UWSOG/USIP/MAR-02 Contractor: Tobias Water Solutions, Inc (US) Supervisor Consultant: Hill International N.V. (Netherlands) Reference: "CONSTRUCTION OF WASTE WATER TREATMENT PLANT IN MARNULLI"	Non-Compliance Notice CONSTRUCTION OF WASTE WATER TREATMENT PLANT IN MARNULLI
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This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented within 8 working days.

NON-COMPLIANCE IN MARNULLI (MAR-02)

Construction of WWTP in Marnull

- Site internally should be arranged properly and cleaned regularly; waste should be placed only at the proper waste containers and removed regularly (Photo N1, Photo N2)
- All construction materials should be properly segregated and stored adequately (Photo N3)
- Construction waste should be timely removed from the construction site and disposed properly. (Photo N4)

Photos of Marnull WWTP



Photo 93



Photo 94



All items on this form must be addressed by both the contractor and the supervisor within 3 working days, by September 13, 2024.

Date of site visit: 12 September 2024

Kate Chernikoff, Environmental Consultant
JRWSC003EP

NON-COMPLIANCE NOTICE, MAR-02 WWTP, 20 DECEMBER 2024

Non-Compliance Notice, UWSCG

Site Visit: 20 December 2024

Project: USRP	Non-Compliance Notice CONSTRUCTION OF WASTE WATER TREATMENT PLANT IN MARHELUJ
Contract: UWSCG-MAR-02	
Contractor: Toshiba Water Solutions Pte Ltd	
Supervisor Consultant: H2 International N.V. (Netherlands)	
Reference: "CONSTRUCTION OF WASTE WATER TREATMENT PLANT IN MARHELUJ"	

This notice is to advise you, the Contractor, on the referenced Contract, of the following notice on environmental measures to be implemented within 6 working days.

NON-COMPLIANCE IN MARHELUJ (MAR-02)

Construction of WWTP in Marhejul

Waste Management

- Site materials should be arranged properly and cleaned regularly, all construction materials should be properly segregated and stored adequately (Photo N1, Photo N2)

Deep unprotected trenches




- Deep and unprotected trenches poses a threat to workers and visitors to the construction site (Photo N3)

Photos of Marhejul WWTP Construction Site



All these conditions must be addressed by both the contractor and the supervisor within 6 working days, by end of 27 December 2024	
Date of site visit: 20 December 2024	
Kate Chenukhites, Environmental Consultant UWSCG/USRP	

ANNEX C: CORRECTIVE ACTION PLAN

  中国地质工程集团有限公司 CHINA GEO-ENGINEERING CORPORATION					
"CONSTRUCTION OF WATER SUPPLY AND SEWERAGE SYSTEM IN MARENULLI", LOT-01, LOT-02, LOT-03 and LOT-06					
Corrective Action Report (CAR)					
CAP No:		Issue Date:	12 December 2024	NCR Date and No:	17 December 2024
Construction of Jandari Reservoir in Marneuli					
<u>Non-Compliance</u>			<u>Corrective Actions Taken</u>		
<p>1. An appropriate fence must be installed along the entire perimeter of the Jandari Reservoir to prevent unauthorized persons from entering the construction site and equipped with lockable gate and proper warning and formation signs. (Photo No. 1):</p> 			<p>1. Work is underway to cover the Jandari Reservoir with soil. To allow trucks access to the working area, the fence has been temporarily dismantled. Once the work on the ground is completed, the fence will be restored;</p>		

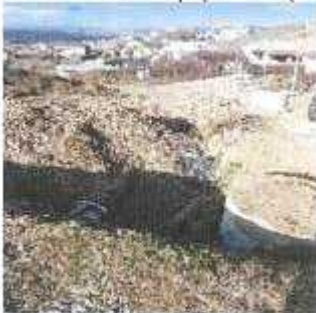
2. The construction site should be graveled to ensure smooth and safe movement of workers and visitors (Photo No. 2);



2. The construction site is completely covered with gravel (Photo No. 1);



3. High visible safety signs/tapes and trench side barriers around of deep open excavation should be installed from all sides to avoid accidents of local population (Photo No.3);



3. The construction site is completely covered with a layer of gravel. (Photo No. 2);



4. The construction internal area should be regularly cleaned and organized, construction materials should be placed separately and stored properly (Photo No. 4);



4. The construction internal area is cleaned (Photo No. 3);



5. A power generator without a drip tray and/or concrete floor causes oil leaks and soil contamination (Photo No. 5);



5. A power generator is no longer needed, it has finished its job and was sent to the workshop for repairs;

6. Burning of waste on the construction site is prohibited (Photo No. 6);



6. Burned waste was removed from the construction site (Photo No. 4);



7. Concrete must be removed from the area and the soil must be reclaimed (Photo No. 7);



7. Concrete was removed from the construction site. The soil was reclaimed (Photo No. 5);



8. Safety electric cables should be arranged at construction site not to create danger for workers (Photo No. 8);



8. The work was completed and the electric cable were removed (Photo No. 6).



9. Safety ladder should be installed on construction site to avoid workers damage (PhotoNo. 9).



9. The work was completed and the ladder were removed (PhotoNo. 7).



Prepared by:

Giorgi Gvasalia

Contractor's Environmental Manager:

Signature:

13. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

14. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

15. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

Bagian 5. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

16. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

17. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

Bagian 6. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

18. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

Bagian 7. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

19. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

20. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

21. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

Bagian 8. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

22. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

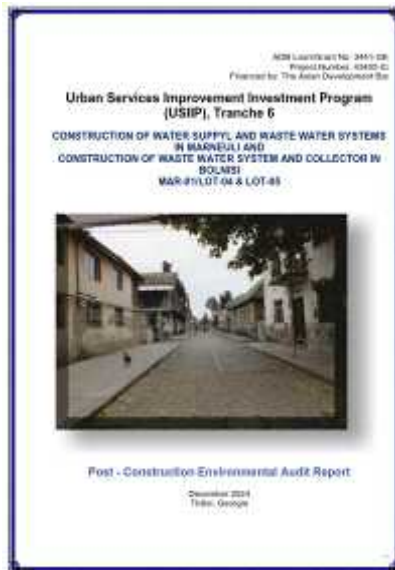
Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

Bagian 9. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

23. Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang dengan nomor urut yang tertera di bagian belakang.

Kertasnya terdapat di bagian belakang dan terdapat di bagian belakang.

ANNEX E: POST CONSTRUCTION ENVIRONMENTAL AUDIT REPORT, MAR-01/LOT-04 AND LOT-05



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ABBREVIATIONS

ADB	Asian Development Bank
DEPRP	Department of Management of Projects Financed by Donor Organizations
DPSPSA	Department of Permit, Environmental Protection and Social Affairs
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMSP	Environmental Management Plan/Site-Specific Environmental Management Plan
SSEMP	Site-Specific Environmental Management Plan
ES	Environmental Specialist
GoG	Government of Georgia
GMC	Circumlocution Committee
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IPMO	Investment Program Management Office
IEE	Initial Environmental Examination
MPP	Multi-Residue Monitoring Facility
MEPA	Ministry of Environmental Protection and Agriculture
MRDI	Ministry of Regional Development & Infrastructure
NEA	National Environmental Agency
QJSC	Open Joint Stock Company
PCEAR	Post-Construction Environmental Audit Report
SC	Supervision Consultant
USIP	Urban Sector Improvement Investment Program
UWSCC	United Water Supply Company of Georgia
WS	Water Supply
WSS	Water Supply & Sewerage
WMP	Waste Management Plan
WS	Water Supply

I. INTRODUCTION

- This document represents the Post-Construction Environmental Audit Report (PCEAR) for the Construction of Waste Water System and Collector in Bolnisi (MAR-01/ LOT-04 and LOT-05) under the Urban Services Improvement Investment Program (USIP).
- Contract No. P43405-JOB-MAR-01 for the implementation of the MAR-01 sub-project: "Construction of Water Supply and Waste Water Systems in Mamuli and Construction of Waste Water System and Collector in Bolnisi" was signed on November 20, 2018, with "Avalik Group OJSC" (Azerbaijani). The original completion date for the contract was March 29, 2021. The contractor proposed an extension of 210 days, and the revised completion date was set for December 2021. However, the contractor failed to complete the project within the revised timeline. The progress had been deteriorating since the September 2020; finally, the contractor stopped all work on the site on June 14, 2021 and the contract was terminated.
- In light of the above, it was decided to announce a new tender and divide the MAR-01 sub-project into six lots. Lots 04 and 05 were designated for the construction of the wastewater system and collector in Bolnisi. More detailed information about the MAR-01 sub-project can be found in Chapter II – Project Description below.
- The contract for the implementation of Lot-04 and Lot-05 under MAR-01 sub-project has been awarded to PCLAT Yel Yagil Sarayl ve Ticaret Anonim Sirketi (Turkey). Physical works has started in lot 4 and lot 5 in October 2022. Project completion date was March 2024. Construction works have not been completed by the March 2024 and were continued until the end of November 2024, remaining works were implemented under the government financing as MPP was closed in March 2024.
- This Post-Construction Audit Report is being prepared to comply with the 2009 ADB's SPS and Georgian legislation, including safeguards requirement and aims to identify past and present concerns from the production and business activities of Project Company that related to impacts on environment. The specific objectives of the audit can be summarized as follows:
 - Determine and verify whether all environmental requirements, criteria and constraints, prescribed in IEE/EMSP and SSEMPs have been adhered to during the construction phase.
 - Determine and verify whether the mitigation actions and rehabilitation requirements contained in the IEE/EMSP and

- SSEMPs have been appropriate and successful to prevent or control environmental pollution and/or damage.
- Ensure that an appropriate environmental monitoring and control program exists to follow up on mitigation and rehabilitation works completed during the construction phase.
 - To identify any shortcomings in the GSEMP and EMS system implemented during the construction phase and to recommend alterations to the EMS applicable to the operational phase.

6. PROJECT DESCRIPTION

6.1 URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (USIP)

6. The Urban Services Improvement Investment Program was developed as the Government's response to the lack of adequate and/or safe water supply, sewerage and sanitation in urban areas of Georgia. This is related to urban social and economic development in selected urban areas through improved urban water and sanitation services, and is financed by the ADB through its Multi-Branch Financing Facility (MFF). The Ministry of Regional Development and Infrastructure is the Co-leading Agency and the United Water Supply Company of Georgia, LLC is the implementing Agency of the Investment Program. UWSCO is a 100% ADB-owned company.

7. The Investment Program improves infrastructure through the development, design and implementation of a series of sub-projects, each providing improvements in a particular sector (water supply and/or sanitation) in one town. Sub-projects rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements include sewer separation and lift works, pumping systems, treatment facilities, transmission and distribution network, and sewerage improvement works include sewer network, pumping stations, rain collection and waste water treatment plants.

Tranche 6 of the Investment Program includes:

- Construction of Water Supply and Waste Water Systems in Marneuli and Construction of Waste Water System and Collector in Bolnisi (MAR-01-LOT-01/LOT-02/LOT-03/LOT-04/LOT-05 and LOT-06)
- Construction of Waste Water Treatment Plant for Marneuli and Bolnisi in Marneuli (MAR-02)
- Construction of Water Supply System in Chikhevi (CH-01)

6.2 DESCRIPTION OF THE BIDDING AND LOT UNDER PROJECT

8. Construction of Water Supply and Sewerage System in Marneuli and Sewerage System and Collector in Bolnisi, Lot 4 and lot 5. Brief Description of LOT-04, LOT-05 and scope of works are presented below:

9. Lot 4: It covers sewer network in Bolnisi city. Bolnisi is directly adjacent to Marneuli and is about 27 km from Marneuli. New sewer lines are to be laid under LOT-04. Earlier laid sewer lines by AKEL, GROUND, GUSC and other need to be tested and commissioned. The components of the subproject that will involve civil works under LOT-04 are as follows:

- Construction of new sewer lines (25.0 km)

- Rehabilitation of existing sewer lines (7.3 km)

10. Lot 5: Sewerage Interceptor (Collector) from Bolnisi to Marneuli. It involves the sewerage (pumping station) to be laid. Earlier laid sewer lines by AKEL, GROUND, GUSC and other need to be tested and commissioned. The works under LOT-05 comprise mainly the following items:

- Construction of new sewerage lines (15.9 km)
- Rehabilitation of existing sewer lines (7.2 km)

11. The contractor (PONDICHERANNI) for the implementation of the MAR-01 sub-project, including LOT-04 and LOT-05 was signed in November 20, 2018 with Award Group 0490 (Awarded). The original completion date of the contract was March 29, 2021, present extension by contractor is 270 days. Revised completion date was December 2021.

12. Since the progress of contractor was very slow, contractor didn't manage to start several works in parallel, such as transmission pipe, Closed Circuit Television Video (CCTV) inspection of laid sewer lines, hydraulic testing of sewer lines, MSE works, pipe crossing works, etc. In the end, the contractor (PONDICHERANNI) was unable to complete the project, terminated further from the end week of September 2020. Finally, the contract closed all works on the site from June 14 2021 and the contract was terminated.

13. Based on the above mentioned, the new contract for installation of MAR-01 (Lot 04 and lot 05) sub-project has been awarded to POLAT "of Year" Sarsal ve Tuzak Anonim Sirketi (Turkey). Physical works has started in lot 4 and lot 5 in October 2022. The initial project completion date was set for March 2023. However, since the construction works have not been completed by the end of March 2024, the project is continuing under government financing, as the ADB/USIP was closed in March 2024.

DESCRIPTION OF PROJECT

14. Based on the existing ADB Environmental Safeguards Policy (ESOP), the Project falls under ADB's original Category B. Accordingly to ADB ESOP proposed project can be classified as Category B due to the following reasons:

- adverse environmental impacts are less adverse than those of category A projects;
- some impacts are site-specific, few if any of them are irreversible; and
- if more cases mitigation measures can be designed more rapidly than for category A projects.

15. An Initial Environmental Examination (IEE) was required and prepared for Bolnisi Waste Water Project in June 2022 as for category B projects. A category is assigned to a project by its most sensitive component, therefore, all of the outputs and activities to be undertaken under the Project fall under Category B as well.

16. In accordance with the requirements of the existing national legislation, no EIA report was prepared and no permission was required for the proposed project.

2.4 LOCATION OF BOLNISI

17. Bolnisi is located in the middle of the Mtskheta River, 520 meters above sea level, 64 kilometers from Tbilisi. Railway station on the Marneuli-Kazbegi line. It is mainly industrial in the plain, and the southern part is on the hilly foothills. The area of the city is 400 ha. The city is built 5 kilometers from east to west. It has straight and parallel streets. There are 60 streets and 13 alleys in total.

Figure 1: Location Map of the Project



REMAIN STAKEHOLDERS OF THE PROJECT

18. The main institutions that are involved in implementation of the EMP are:

- **Executing agency (IAI)** - United Water Supply Company of Georgia (UWSCO), LLC
- **Supervision Consultant (SC)** - Supervision Consultant: HIL International N.V. (Netherlands) has an Environmental Specialist Mr. Abdouk Heparidze
- **The PMO has an Environmental Specialist** - Mr. Ketevan Chikhradze who is responsible for management of the environmental aspects of USIP, Tranche 6.
- **The Construction Contractor** - "Pondiczy Yapı Sanayi ve Ticaret" Branch in Georgia (TJK partner) (Turkey/Georgia) and Investment Program Management Office (PMO), established within UWSCO is responsible for the day-to-day management of the project including implementation of the EMP. The CC also has an Environmental Specialist Mr. Saurko Atanadze

19. Main organizations involved in the project and related to environmental safeguards are presented in the Table 1 below:

Table 1. List of contracts under the Project.

Organization	Name of main staff and Institutional Specialist	Contact data (including phone and web-site) and address of the organization
JRC Country Environmental Fund		Heidi E. Powell E-mail: heidi@jrc.org
Asian Development Bank	ADB/ETA International Institutional Specialist Consultant	Kat. Dzhordzhia Tel: +995 57723207 E-mail: kate.dzhordzhia@adb.org
	Relayments Office, Georgia Resident Mission Asian Development Bank	Nyu Nishvishvili Tel: +995 585 07042 E-mail: nishvishvili@adb.org
UWSCO	UWSCO, Department of Animal, Environmental Protection and Forest Affairs, Head	Mr. Maku Gvaramadze Tel: +995 585 02929 E-mail: m.gvaramadze@uwsco.ge
	UWSCO/PMO, Department of Management of Projects Financing, Supervision, Digital Unit	Mr. Natin Hovhannishvili Tel: +995 585 10111 E-mail: natin.hovhannishvili@uwsco.ge
UWSCO/OPPT	Environmental Specialist	Mr. Ketevan Chikhradze Tel: +995 577 36009 E-mail: chikhradze@uwsco.ge

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www

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www

Organization	Name of main staff and Institutional Specialist	Contact data (including phone and web-site) and address of the organization
Supervision Consultant: HIL International N.V. (Netherlands)		Mr. Abdouk Heparidze Tel: +995 585 34631 E-mail: a.heparidze@hiltoninternational.com
PMO's Policy and Management Consulting Group and JRC Georgian Water Project (Georgia)	Environmental Specialist	Dr. Nishvishvili E-mail: nishvishvili@hiltoninternational.com
"Pondiczy Yapı Sanayi ve Ticaret" Branch in Georgia (Turkey/Georgia)	Environmental Specialist	Mr. Saurko Atanadze Tel: +995 585 40290 E-mail: satanadze@pcc.com

IV. SUMMARY OF PREVIOUS ENVIRONMENTAL INSPECTIONS

- 20 In 2020-2022, regular environmental monitoring of the "Construction of Waste Water System and Collector in Borisi" system was carried out by several organizations:
- "Ecology Right Society" in Borisi Branch in Georgia (Turkey/Georgia); also in city meetings
 - Supervision Consultant, weekly monitoring
 - UNWCO/IFPM, monthly monitoring
 - ADB, semi-annual environmental safeguard reviews
- 21 Multi-construction reviews were issued by IIS of EC and UNWCO/IFPM after monitoring of construction sites if necessary, and sent to the contractor. The sample NCM issued following the site visit on December 12 are attached to this report (Please see Annex H1). Corrective Action Plans were required from contractor, along with detailed photos showing improvements at the sites. The most identified non-compliances are summarized into the following areas:

- 1) Deep trenches/basements/culverts - safety shields had to be used. During non-working hours, a special tape or net had to be kept. Warning lighting had to be installed to install at night - 22 cases (36.3%)
- 2) After the work, the soil should have been removed or fenced non-erodible materials and ground waste and not have left facts in the area - 19 cases (30.0%)
- 3) The use of Personal Protective Equipment had been necessary - 16 cases (27.1%)
- 4) Roads had to have been temporarily closed during the works. Speed limits and warning signs had to have been installed - 10 cases (16.7%)
- 5) Hazardous waste had to have been removed with a permit authorized and transferred to a hazardous waste container - 9 cases (15.0%)
- 6) CEMP Site should be properly cleaned and organized and construction materials should be segregated and construction waste removed on the daily basis (1%)
- 7) Construction area of Pumping Station (PS) should be fenced (2%)
- 8) Proper marking and information signs should installed on entrance gate (2%)
- 9) Un-fenced/unsecured pipelines cross river near residential areas, where children may use it as a playground cause threats to local population and should be adequately fenced and protected (2%)
- 10) Safety visible signposts/signs, trench side boxes or proper cover should be installed around deep open excavations (3-Tier) to avoid accidents with working personnel and visitors of the Pumping Station (2%)
- 11) Construction waste should be removed from the territory of the Pumping Station (1%)

V. SUMMARY OF OBSERVATIONS OF THE SITE DURING THE POST CONSTRUCTION ENVIRONMENTAL AUDIT

- 22 The Post Construction Environmental Audit of "Construction of Waste Water System and Collector in Borisi" sub-project, was conducted on 13 December 2024 by Environmental Specialist of G partners (contracted IEL) and IFPM/UNWCO Policy and Management Consulting Group, Mr. Tiburcio Nolasco and Environmental Specialist of UNWCO/IFPM Ms. Kate Chomskovska
- 23 During the audit the following construction sites have been visited: (1) Waste Water Network in the city of Borisi (2) Waste Water Collector construction sites (3) Waste Water Pumping Stations in Borisi (2 units)
- 24 All Pumping Stations are fenced and it is impossible for strangers as well as animals to enter the sites (see below and after photos in Figures 1-2 below)

Fig.1. Borisi Pumping Station #1

Fig.2. Borisi Pumping Station #2



- 25 CEMP Site was properly cleaned and organized after completion of construction works, all machines, equipment and construction materials were removed on the daily basis (please see below and after photos in Figures 3-4 below)

Fig.3: Construction CAMP during the Construction



Fig.4: Construction CAMP after completion of Construction Works



- 21 The kerbside/roads were restored in a timely manner after completion of the construction works (please see before and after Photos in Figures 5-6 below)

Fig.5: Roads during construction of Waste Water Network



Fig.6: Roads after completion of construction Works



- 26 All surplus waste was removed from the construction area (please see before and after photos in Figures 7-8 below)

Fig.7: Surplus soil on the road

Fig.8: Removed Surplus Soil



VI. GRIEVANCE REDRESS MECHANISM

1. The Grievance Redress Mechanism was developed under USPTO and for the implementation of the Borisi WW sub-project. In case of any suggestions/complaints arise from the local community it was planned to implement the GRM system established under USPTO.
2. For the effective implementation of a GRM system under the IDSP, UNWCO issued special order #122, signed by the Director of UNWCO for "Establishment of GRM within the Framework of the Borisi Construction Site Feasibility Project" on 20 April 2014, which was further regulated by Order # 196, of October 2016 (see Annex 3). The aforementioned Order gave clear instructions to every involved stakeholder how to act when affected people are impacted by the project. In November 2021, Order #429 was issued to amend Order #196, which included a change to paragraph 5 of Order #196, defining the composition of the GRM construction.
3. Based on the above GRM System any affected person can report at a UNWCO Joint Service Centre in Borisi (UNWCO has 52 service centers and 8 Regional Branches across Georgia, is offering municipalities through different ways, either by going to the service Centre, sending a letter to the Service Centre, or calling a hotline. The operation of the Service Centre can respond by going directly to the affected person if they are allowed to get the written grievance form them. These AP's complaints are registered by the operator of the service center and AP get a case number.

Fig.9: AP gate queue registration number at Local Service center



4. It should be mentioned that complaints log, is available at each construction site and any affected person may fill the complaint log (Please see Annex 4) and submit to the contacts directly.
5. At first stage of grievance redress, an authorized representative of Customer's Resident/Donor/Customer Relation Office or local Service Center/Regional Branch of United Water Supply Company of Georgia, LLC, be obliged to facilitate themselves with by content of the complaint, to register the complaint in the form approved by Annex #4 of this report and to submit it to Grievance Redress Committee (hereinafter the Committee), which will consider the submitted complaint within the two weeks period.
6. In case the problem raised in the complaint is not solved within the two weeks period at the first stage of grievance redress, the individual concern can address the GRM Commission,

which will make decision within two weeks period.

7. In case the problem raised in the complaint is not solved within two weeks of the second stage of grievance redress, the individual concerned can address the Permanent Representative of the Asian Development Bank to Georgia.
8. It should be emphasized that there are no unresolved complaints from the local population under the Borisi WW sub-project. All issues have been addressed during the project implementation, and there are no outstanding complaints under the project.

VI. CONCLUSIONS AND RECOMMENDATIONS

- The construction of the Waste Water System and Collector in Dolac, under the MAR-01-LOT-04/LOT-05 sub-project, is complete. The system will be put into operation once the construction of the Waste Water Treatment Plant in Maronec (MAR-02) sub-project are finished, which is expected by the end of March 2024. As mentioned previously, approval works for Lot 4 and Lot 5 began in October 2022, with the original project completion date set for March 2024. However, the construction works were not completed by that time and were continued until the end of November 2024. After the March 2024, these works were being finished by the Government's state budget, as the MPP was closed in March 2024.
- Regular monitoring has been carried out during the construction phase of MAR-01-LOT-04/LOT-05 sub-project (October 2022 – December 2024) and 24 non-compliances were identified during these site visits. Annex 2 to this report gives the information about the non-compliances observed during the environmental audit and also corrective actions of their engagement.
- As already noted, most of the impacts are associated with the removal and disposal of construction materials, proper disposal of construction waste, protection of the area benches with proper barriers and shields, preventing public access to the pumping station, as well as fencing and occupying the PS area with warning signs and information.
- The Post-construction Environmental Audit was conducted on December 12, 2024 by the Environmental Specialist of UWSCORUSP Ms. Kate Chromakhtova and ES of SCYLL MANKOVIC Hristova to address a number of mitigation measures and potential problems, to properly and timely implementation of corrective actions will significantly reduce the expected negative future impact.
- Table 2 below provides a summary of the non-compliances identified during the Post-Construction Environmental Audit conducted on December 12, December 2024 as well as the required corrective actions, the responsible organization and status of improvements of the non-compliances.

Table 2: Summary information of post-construction environmental audit

No. non-compliance	Corrective action	Responsible Entity	Terms of completion	Project Status	Status
1. There are no warning and information signs on entrance and gates of the Pumping Station (Photo 01)	Proper Warning and information signs should be installed on entrance gate.	Photo 01	End of February 2024	UWSC	Not yet completed
2. Deep and unstructured pits, both inside (Photo 02) and outside (Photo 03) the pumping station building.	Clearly visible appropriate signs, trench side slopes to protect them should be installed around deep open pits (1-2m) to avoid accidents with working personnel and visitors of the Pumping Station.	Photo 02 Photo 03	Mid of January 2024	UWSC	Not yet completed
3. A small amount of waste (about 100 kg) was deposited on the site, both inside (Photo 04) and outside (Photo 05).	Construction waste should be collected from the site and deposited separately (Photo 06).	Photo 04 Photo 05	End of December 2024	UWSC	Completed, returned, end of December 2024 Completed

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No. non-compliance	Corrective action	Responsible Entity	Terms of completion	Project Status	Status
1. The pumping station building.	Photo 05				returned, end of December 2024 Photo 07
Un-bermed lanes and pipes in areas near residential areas (near plot 10, PS 02, Photo 08)	The sewage collector across the area should be fenced off as children may use the pipeline as a playground or bridge, causing a potential health risk.	Photo 08	Mid of January 2024	UWSC	Not yet completed

ANNEX 1: POST-CONSTRUCTION ENVIRONMENTAL AUDIT RESULTS

Required regular activities of environmental management system	Observed compliance	Comments
1. Proper planning and implementation of environmental management system	4	Approved plans of Emergency Response Plan, but no compliance plans have been prepared.
2. Identification of environmental impacts	3	The identification work has not been completed in the field by the experts for the construction phase.
3. Environmental impact assessment	3	No EIA has been performed for the project. The construction activities are carried out in the area during the construction.
4. Environmental monitoring and reporting	3	A large part of environmental monitoring data is not recorded with the monitoring system and the information is not being used for decision-making.
5. Environmental management system	3	The system of management related to the project is not implemented in the project area.
6. Environmental training and awareness	3	The necessary training and awareness has not been implemented for the site.
7. Environmental communication	3	The necessary communication has not been implemented for the project area.
8. Environmental performance evaluation	3	Environmental performance has not been evaluated in the project area.

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ANNEX 2: NON-COMPLIANCE NOTICE, 12 DECEMBER 2024, MAR-01/LOT-04/LOT-05

Non-Compliance Notice: UWSCORUSP
Site Visit: 12 December 2024

Project: UWSCORUSP
Contract No: MAR-01-LOT-04/LOT-05
Contractor: MPP (The First Group for Transport and Services) Ltd.
Project Supervisor: (Contracted Firm)
Address: (Contracted Firm) Ltd., 1000 Blvd. "1944" Sofia, Bulgaria
Phone: (Contracted Firm) Ltd., 1000 Blvd. "1944" Sofia, Bulgaria

This notice is issued to you by the Contractor on the following date(s): 12 December 2024
The non-compliance is to be corrected by the following date(s): 12 December 2024

Generalized Summary Report and Monitoring Notice (attached)

- Proper planning and information signs should be installed on entrance gate (Photo 01).
- Deep and unstructured pits, both inside and outside the pumping station building, should be fenced off as children may use the pipeline as a playground or bridge, causing a potential health risk.
- Clearly visible appropriate signs, trench side slopes to protect them should be installed around deep open pits (1-2m) to avoid accidents with working personnel (Photo 02) and visitors of the Pumping Station.

Photos of Selected Non-Compliance and Proposed Mitigation, PS02 and PS05:

All these conditions have to be remedied immediately

Date of site visit: 12 December 2024

Site Monitoring was carried out by: Kate Chromakhtova, Environmental Consultant of UWSCORUSP

NCN is prepared by: Kate Chromakhtova, Environmental Consultant, UWSCORUSP

