SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT

Project Number: 43405-023

Reporting Period: January-June 2021

GEORGIA: URBAN SERVICES IMPROVEMENT INVESTMENT PROGRAM (TRANCHE 1)

(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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August 2021

ABBREVIATIONS

ADB	Asian Development Bank
DC	Design Consultant
DEPP	Department of Environmental Protection and Permit
DPM	Department of Project Management
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
ES/ SES	Environmental Specialist/ Senior Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IPMO	Investment Program Management Office
USIIP	Urban Services Improvement Investment Program
IA	Implementing Agency
IEE	Initial Environmental Examination
MFF	Multi-tranche Financing Facility
MEPA	Ministry of Environmental Protection and Agriculture
MoRDI	Ministry of Regional Development & Infrastructure
NEA	National Environmental Agency
SC	Supervision Consultant
UWSCG	United Water Supply Company of Georgia
WSS	Water Supply & Sewerage

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I. INTRODUCTION

1.1 Preamble

1. This report represents the Semi-Annual Environmental Monitoring Review (SAEMR) for "Urban Services Improvement Investment Program" (USIIP), Tranche 1 and describes the period of January-June 2021.

2. This report is the 16th Semi-Annual EMR for the T1 of USIIP.

1.2 Headline Information

3. During the reporting period, no construction work was carried out under USIIP/T1. All construction activities under USIIP/T1 are already completed. Construction of Mestia Water Supply Headworks (Contract MES-01) sub-project was completed in 31 October 2013. Construction and rehabilitation of Kutaisi, Poti & Anaklia water supply infrastructures (Reg-01) sub-project was completed in 16 May 2016. Construction of Mestia Water Supply Facilities (REG-02) sub-project was completed in 31 May 2019. Construction of Water Supply and Wastewater Network in Ureki/Phase I (URE-01) sub-project was completed in 30 September 2019.

4.

II. PROJECT DESCRIPTION AND CURRENT ACTIVITIES

2.1 Project Description

5. 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.

6. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements will include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network. Sewerage improvement works will include construction and/or rehabilitation of sewer network, pumping stations, main collectors and Waste Water Treatment Plants.

7. Tranche 1 of the Investment Program includes:

- Construction of Mestia Headworks (MES-01)
- Improvement of Water Supply Infrastructure in Anaklia, Kutaisi and Poti (REG-01)
- Construction of Mestia Water Treatment Plant and Reservoirs (REG-02)
- UWSCG Office Building (TBI-01)
- Construction of the Water Supply Network in Ureki (Ure-01)

Projects financed under Tranche 1:

8. **Mestia Water Supply Headworks (Contract MES-01**). The project comprises of the construction of a Tyrolean Weir as intake structure on Mestia Chala River for the capture of raw water. The discharge is estimated at minimum 1,000 liters/second in dry seasons. The location has been chosen for its altitude and the possibility to supply the water treatment plant, the adjoining reservoir and from there the largest part of the distribution network, by gravity. Apart from the intake, the scope of work comprises 10.75 km transmission lines to the site of Water Treatment Plant and a reservoir and the connection of this location to the distribution network.

9. The contract MES-01 was signed on October 10, 2011 with Joint Venture of Dagi LTD – Georgia and Enguri 2006 LTD – Georgia (which changed its corporate name to Enguri - New Construction LTD on 11 April 2013), the contract was completed on October 31, 2013. Post Construction Audit Report was prepared by UWSCG and approved by ADB, in October 2014.

10. **Kutaisi, Poti & Anaklia water supply infrastructures (contract Reg-01).** The scope of works includes improvement of water supply infrastructure in Anaklia, Kutaisi and Poti, in particular, reservoirs and pumping stations, transmission lines and distribution lines of water supply systems as well as a water treatment plant in Poti. The project envisages installation of water pipelines on 96 km. Concrete water reservoirs will be built on 5 places with total

capacity of 35,000m3. The project also covers construction of 4 pumping stations (with total capacity of 4,516 mph3) as well as construction of water treatment facility.

11. United Water Supply Company of Georgia signed a contract (#UWSCG/ICB/CW-2013-REG-01) with Spanish Cobra Instalaciones y Servicios for implementation of Reg-01 project. The Contract was made effective on September 19, 2013.

12. Construction work was completed on May 16, 2016. Post Construction Environmental Audit was conducted in January 2017 by independent consultant and relevant report was submitted to ADB.

13. **Construction of Office Building of UWSCG in Tbilisi (TBI-01)**. A detailed project for the construction of a new UWSCG head office was prepared and funded by the Government of Georgia. The contract (# CW/ICB / Office-01) for the construction of the above-mentioned head office was signed between the United Water Company of Georgia and the Georgian construction company DAGI Ltd on December 1, 2015. Date of commencement of civil works is December 29, 2015. The initial completion date for the above contract was 21.06.2017 and further extended until December 2020. Post Construction Environment Audit will be carried out under TBI-01 sub-project and Post Construction Environmental Audit Report will be submitted to UWSCG and ADB during the next reporting period, July-December 2021.

14. **MESTIA Water Supply Facilities (Contract REG-02).** The scope of works includes: a new water treatment plant (WTP); the rehabilitation of Tsrniashi spring catchment; a new reservoir at Lanchvali (1,000 m³); a new reservoir at Shgedi (1,000 m³); transmission pipes of approximately 9,200 meters.

1. The Contractor had to design and build a Water Treatment Plant with a treated water standard that complies with the European standard for the drinking water quality and is defined in the Council Directive 98/83/EC. The WTP has a design capacity of 80 l/s to serve the projected population in 2040. Contract was signed with JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and Protecno Srl on 22 September 2014 and Notice-to-Proceed given on 08 December 2014. Contract completion date was 31 May 2019. No construction audit report was prepared under REG-02/Mestia sub-project, due to the COVID-19 outbreak during the previous reporting period. An independent consultant was hired by SC/EPTIS to conduct Post Construction Environmental Audit and to prepare Post Construction Environmental Audit Report under REG-02/Mestia WTP sub-project. The main findings of above report are presented in the Table 1 below. Audit report is attached to this SAEMR, please see Annex C.

2. **Construction of Water Supply and Wastewater Network in Ureki/Phase I (URE-01).** The project is simultaneously financed from Tranches I, II and III and therefore might be some overlap of T1-T3 Semi-Annual EMRs. The planned works under Tranche I included construction of Res-01 and Res-02 (2 x 3,000 m³ and 1 x 1,200 m³) and one water supply pumping station (78m³/h and 676 m³/h).

3. The Contract is signed with JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan) on October 28, 2014. Commencement date was November 24, 2014. Initial Completion date was scheduled on November 22, 2018 but due to changes in the design of project, which include the construction of an Aqueduct across the Natanebi River, the construction of Gabion walls to protect well fields from flooding and erosion, and the construction of an additional deep well No. 8 along the banks of the Natanebi River, completion date was extended to 30 September 2019. The project is foreseen to serve 35,000 tourists and 5,400 local inhabitants by year 2040.

4. No Post Construction Audit report was prepared under URE-01 sub-project, due to the COVID-19 outbreak during the previous reporting periods. An independent consultant was hired by SC/EPTIS to conduct Post Construction Environmental Audit and to prepare Post

Construction Environmental Audit Report under URE-01 sub-project. The main findings of above report are presented in the Table 2 below. Audit report is attached to this SAEMR, please see Annex D.

Post Construction Audit

5. As it was already mentioned above Post Construction Audit Reports were prepared under REG-02/Mestia WTP and URE-01 sub-projects by the independent consultant hired by Supervision Consultant/Eptisa during the reporting period.

6. Table 1 gives the summary information about the non-compliances observed during the Post Construction Environmental Audit under REG-02/Mestia sub-project and due corrective actions and terms of their realization. Corrective actions implemented by the UWSCG/facility Operator and UWSCG will be reflected in the next SAEMR, covering July-December 2021.

Table 1: Summary Information, Post Construction Environmental Audit REG-02/Mestia Water Treatment Plant

#	Observed Non-compliance	Requirements	Corrective Action	[1]Target Date for Completion and Responsibility
1	Large quantities of hazardous materials (see Figure 9 of the Post-construction Audit Report, in Annex C), namely Ferric chloride FeCl2 40% solution, were in the plastic containers in the closed space of the given territory. There are also approximately 10 pieces of 50-kg paper bags of caustic soda near the plastic containers.	(i) The hazardous liquid material containers must be placed on secondary containment with its volume of 110% of the main container. If the hazardous materials are placed in several containers, the volume of the secondary container must be 25% of the total volume of all containers with hazardous liquid materials in them. (ii) It is forbidden to place the materials near one another that can react with each other.	The plastic containers with hazardous materials must be placed on secondary containment with its volume of 25% of the containers with hazardous materials in them. Besides, the 50-kg bags with caustic soda must be removed to a separate building.	**30 November 2021 by the facility's operator**
2	The tank with hazardous materials in the area is not placed on a secondary containment. Despite the fact that the given tank is placed in an iron container, there is	The hazardous liquid material containers must be placed on secondary containment with its volume of 110% of the main container.	The fuel tank must be placed on a secondary containment with its volume of 110% of the main container.	**30 November 2021 by the facility's operator**

[1] As the contractor is no longer available and the facility has been turned-over to the UWSCG, UWSCG/facility operator will undertake the necessary actions to correct the observed non-compliance under REG-02/Mestia sub-project.

	a risk of soil pollution in case of spills.			

7. Table 2 below gives the summary information about the non-compliances observed during the Post Construction Environmental Audit under URE-01 sub-project and due corrective actions and terms of their realization. Since the URE-01 sub-project is simultaneously financed T1, T2 and T3 Tranches of USIIP, non-compliances under URE-01 sub-project are also recorded in T2 and T3 SAEMRs. Corrective actions implemented by the UWSCG/facility Operator will be reflected in the next SAEMR, covering July-December 2021.

Table 2: Summary Information, Post Construction Environmental Audit URE-01

#	Observed Non-compliance	Requirements	Corrective action	[2]Terms of accomplishment
1	There was chaotically disposed construction and household waste observed on the territory of the pumping station	Following the completion of the project, the waste must be handed over to a duly licensed company	The waste must be collected and disposed from the project area. The waste must be handed over only to duly licensed contractors for further management	**31 August 2021**
2	The area of the construction materials on the territory of the pumping station was not fenced and was not protected from the impact of the atmospheric precipitation	The area with the construction waste must be fenced and have relevant information signs	The territory of the construction materials area must be duly fenced. The construction materials must be disposed in the project area more compactly and must be protected from the atmospheric precipitation by using an appropriate protective cover. To identify more-cost effective and practical corrective action further discussion of the proposed corrective action will be held with the UWSCG and the project engineer as well	**10 September 2021**

[2] As the contractor is no longer available and the facility has been turned-over to the UWSCG, UWSCG/facility operator will undertake the necessary actions to correct the observed non-compliance under URE-01 sub-project.

3	The underground infrastructure and the well in the project area were not duly covered	All underground infrastructural facilities must be closed after the project is complete to prevent service personnel or animals from falling into them	In the first stage, the area must be fenced or warning signs must be installed. And finally, it will be necessary to provide a capital cover or a hatch over such underground facilities.	**10 September 2021**
4	A power cable was fixed near the power transmission pole located in the water intake area, which was cut off for unknown reasons and lying on the ground in an uncontrolld manner	A power transmission line is not admitted to be on the ground in an uncontrolled manner	First of all, the given area must be marked. Then, owner of the given cable must be identified and addressed immediately to carry out relevant repair works. If the given wire is used to supply power to the wells, it is necessary to install them in compliance with the requirements of the relevant instructions.	**31 August 2021**

2.2 Project Contracts and Management

8. The main institutions that are involved in implementation of the EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environment and Natural Resources Protection (MoENRP).

9. Investment Program Management Office (IPMO) established within UWSCG in January 2011 before starting USIIP is responsible for the day to day management of the project including implementation of the EMP. The IPMO has an Environmental Specialist who is responsible for management of the environmental aspects of USIIP.

10. The IPMO (Environmental Specialist) 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) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure;

Provide ENG and 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

11. The SC includes a full time Environmental Specialist to assist the IPMO supervise and monitor implementation of the EMP during construction.

12. The Contractor also appoints a full time Environmental specialist to be a senior member of the construction management team based on site for the duration of the contract. The ES shall have a university degree (preferably at Masters level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project

13. Department of Environmental Protection and Permits of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP. More detailed description of implementation arrangements; responsibilities and staffing are provided in the Table 3 below.

Table 3: Institutional Arrangement, Responsabilités and Staffing

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Environmental Protection and Permits Department (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 SEMP approved by IPMO.	Review and endorse the SEMP; Monitor implementation of SEMP 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 SEMP; Implement updated SEMP.	Approve the design change to be submitted to IPMO; Make environmental assessment of the change and update the IEE and/or SEMP.	Review the updated IEE and/or SEMP and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMP; 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 SEMP	Review the updated IEE and/or SEMP and send it for clearance to ADB	Liaise with CSC in preparing updated IEE and/or SEMP

#	Millstones/Actions	Contractor (Environmental Specialist)	Construction Supervision Consultant (Environmental Specialist)	IPMO (Environmental Specialist)	Environmental Protection and Permits Department (Environmental Specialist)
4	**Reporting**	Prepare monthly environmental monitoring reports and send it to CSC and IPMO	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.	1. Finalize 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)	Environmental Protection and Permits Department (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	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

14. A list of main organizations involved in the USIIP/T1 and relating to environmental safeguards is presented in Table 4 below.

Table 4: List of Main Organizations under USIIP/T1

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
		ADB RETA International-Regional Environmental Consultant	Keti Dgebuadze +995 577232937 E-mail: ketdgeb@yahoo.com
		Associate Safeguards Officer Georgia Resident Mission Asian Development Bank	Nino Nadashvili +995 595 070442 E-mail: nnadashvili@adb.org
Borrower	UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. Maka Goderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
Borrower	UWSCG	UWSCG/IPMO Department of Projects Management, Head	Ms. Ana Onashvili Tel: +995 599 692090 E-mail: ana.onashvili@water.gov.ge
Borrower	. UWSCG/USIIP/T3	Environmental Specialist	Ms. Ketevan Chomakhidze Tel:

Type of project participant	Name of Agency/Company	Environmental Staff	Name and contact details
			+995 577 380309 E-mail: Chomakhidzek@yahoo.com
Supervision Consultant	A Consortium of Consulting Firm led by Eptisa Servicios de Ingeniria S.L. (Spain) in association with SAFEGE (Belgium) and JSC Georgian Water Project (Georgia)	Environmental Specialist	Mr. Irakli Legashvili Tel: +995 577 177 016 E-mail: chem_ira@yahoo.com
Contractor URE-01	JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan)	Environmental H&S Specialist	Mr. Levan Asabashvili Tel: +995 599 962 693 Email: levani.asabashvili@mail.ru
Contractor MES-01	Joint Venture of Dagi LTD – Georgia and Enguri 2006 LTD – Georgia	Environmental Specialist	Mr. Nikoloz Neparidze Tel: +995 599 346 821 Email: nikoloz.nepharidze@ludwigpfeiffer.com
Contractor REG-01	Spanish Cobra Instalaciones y Servicios	Environmental Specialist	Ms. Natia Babukhardia Tel: +995 595 150 444 Email: natiiibab@gmail.com
Contractor REG-02	JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and Protecno Srl	Environmental Specialist	Mr. Nikoloz Neparidze Tel: +995 599 346 821 Email: nikoloz.nepharidze@ludwigpfeiffer.com
Contractor TBI-01	Dagi LTD (Georgia)	Environmental H&S Specialist Specialist	Mr.Aleksandre Chumburidze Tel: +995 597 744 164 E-mail: a.tchumburidze@dagi.ge

2.3 Project Activities During Current Reporting Period

15. N/A. No construction activities were implemented during the reported period, January-June 2021 under USIIP/T1, since all sub-projects under T1 were already completed.

2.4 Description of Any Changes to Project Design

16. N/A. Due to the fact that during the reporting period no construction work was carried out, no changes took place to the project design and accordingly nothing has been updated or prepared.

2.5 Description of Any Changes to Agreed Construction methods

17. N/A. Due to the fact that during the reporting period no construction work was carried out no changes took place to the agreed construction methods under USIIP/T1.

III. ENVIRONMENTAL SAFEGUARD ACTIVITIES

3.1 General Description of Environmental Safeguard Activities

18. Individual and joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC and Environmental Specialist of USIIP on a regular basis, during the implementation of the sub-projects under USIIP/T1, this included also unscheduled monitoring visits, development of non-compliance notes issued to contractors as needed.

19. The monitoring activities included monitoring of compliance of construction activities to the IEE/EMP and SEMP requirements under MES-02, ANA-01, REG-02/Mestia, URE-01 and TBI-01 sub-projects.

20. The new instructions developed by the Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, in March 2020, including General Guidelines Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) which applies to all sectors of economic activity were introduced to contractor and SC during the previous reporting period of January-June 2020.

21. The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector (Please see Annex B of this report).

22. Additional measures were carried out by Supervision Company EPTISA based on the requirements of the UWSCG and Emergency Management Plan of COVID 19 was developed for construction activities carried out under USIIP-T1 (please see Annex A).

23. No monitoring activities were carried out during the reporting period, January-June 2021, due to the fact that all construction activities were completed under USIIP/T1, therefore all measures against COVID-19 outbreak were implemented during the previous reporting period, January-June 2020.

24. Environmental Monitoring Specialists hired under the contractors within the framework of the USIIP/T1 conducted the day-to-day monitoring of the construction sites, developed the monthly monitoring reports and submitted to SC/Eptisa.

25. Environmental Monitoring Specialist of Eptisa, Mr.Irakli Legashvili conducted monthly monitoring of project sites under T1 and developed Non-Conformance Notices were required. He also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG/USIIP.

26. Environmental Specialist of UWSCG/USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMPs, and other environmental commitments of the contractor. USIIP/ES developed Semi-annual monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results. Post Construction Environmental Audit under REG-02/Mestia and URE-01 sub-projects was conducted in June 2021 by Supervision Company/Eptisa.

27. There are no protected areas, wetlands, mangroves, or estuaries. Trees, vegetation (mostly shrubs and grasses) in the subproject sites are those commonly found in built-

up areas. The geological structure of the area is stable and no potential land subsidence is foreseen.

3.2 Site Audit

28. N/A. No Site monitoring/audit was carried out during the reporting period, since there were no construction activities.

3.3 Issues Tracking (Based on Non-compliance Notice)

29. N/A. Since all construction activities were already completed Non-compliance Notice was not issued during the reporting period, January-June 2021.

3.4 Trends

N/A

3.5 Unanticipated Environmental Impacts or Risks

N/A

IV. RESULTS OF ENVIRONMENTAL MONITORING

4.1 Overview of Monitoring Conducted during Current Period

30. N/A. No monitoring was carried out during this reporting period as all construction work under USIIP/T1 was completed. Non-compliances from the previous reporting period have not been identified.

4.2 Trends

N/A

4.3 Summary of Monitoring outcomes

N/A

4.4 Material resources Utilization

4.4.1 Current Period

31. N/A. No data on material resources utilization were provided under USIIP/T1 since all construction activities are already completed.

4.4.2 Cumulative Resources Utilization

N/A

4.5 Waste Management

4.5.1 Current Period

32. During the Post Construction Environmental audit, conducted under REG-02/Mestia WTP sub-project, by the Supervision Consultant / EPTISA, in June 2021, the following non-compliances were observed: Large quantities of hazardous materials, namely Ferric Chloride (FeCl2) 40% solution, were in the plastic containers in the closed space of the WTP territory and approximately 10 pieces of 50-kg paper bags of caustic soda were located near the plastic containers.

33. As the contractor is no longer available at construction site and the facility has already been turned-over to the UWSCG the following corrective actions will be implemented by the UWSCG/facility operator by the 30 November 2021: the plastic containers with hazardous materials will be be placed on secondary containment with its volume of 25% of the containers with hazardous materials in them; 50-kg bags with caustic soda will be removed to a separate building.

4.5.2 Cumulative Waste Generation

N/A.

4.6 Health and Safety

4.6.1 Community Health and Safety

N/A

4.6.2 Workers Health and Safety

N/A

4.7 Training

34. N/A. No trainings have been carried out during the reporting period, January-June 2021 under USIIP/T1, due to the fact that all construction activities were already completed.

V. FUNCTIONING OF THE SEMP

5.1 SEMP Review

35. No SEMP has been prepared under USIIP/T1 during the reporting period, January-June 2021.

36. The following SSEMPs were prepared within the framework of USIIP/T1 by contractors, endorsed by SC/EPTISA and approved by UWSCG/USIIP:

URE-01:

- SSEMPs for Ureki Well Fields (May 2016)
- Reservoir#1 (November 2016)
- Water Supply Pumping Station (November 2016)
- Reservoir #2 (Laituri Reservoir) (August 2018);

REG-02/Mestia Water Supply Component

- Zargashi Reservoir
- Lanchvali Reservoirs
- Water Treatment Plant in Zargashi

TBI-01:

- Construction of Tbilisi Head Office

37. All above mentioned SEMPs were prepared by Contractor before commencement of construction activities and reviewed/commented by the RETA International-Regional Environmental Consultant of ADB under RETA 8663 - Ms. Keti Dgebuadze.

VI. GOOD PRACTICE AND OPPORTUNITY FOR IMPROVEMENT

6.1 Good Practice

N/A

6.2 Opportunities for Improvement

N/A

VII. SUMMARY AND RECOMMENDATIONS

7.1 Summary

38. No construction activities have been implemented under USIIP/T1 during the reported period, January-June 2021.

39. Individual and Joint on-site monitoring activities were conducted by Environmental Monitoring Specialist of SC/EPTISA and UWSCG/USIIP on a regular basis during the previous reporting periods and were reported in the corresponding SAEMRs.

40. The Government of Georgia and its Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia, issued the General Guidelines Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) which applies to all sectors of economic activity.

41. The General Guideline for COVID-19 was also developed by the Government of Georgia specifically for the construction sector.

42. Additional measures were carried out by Supervision Company EPTISA based on the requirements of the UWSCG and Emergency Response Plan of COVID 19 was developed for construction activities carried out under USIIP-T1.

43. Environmental Monitoring Specialist of Eptisa, Mr.Irakli Legashvili conducted monthly monitoring of project sites under USIIP/T1 and developed Non-Conformance Notice were required. He also developed quarterly environmental monitoring reports based on the monthly reports submitted by Contractor and environmental site inspections and submit to UWSCG.

44. Environmental Specialist of USIIP Ms. Kate Chomakhidze performed monitoring of contractor's performance in accordance with the requirements of approved IEE/EMPs, SEMPs, and other environmental commitments of the contractor. USIIP/ES developed Semi-annual monitoring reports and submitted to ADB based on the quarterly reports prepared by SC and monitoring results.

45. In accordance with the IEE, and the accompanying Environmental Monitoring Plan (EMP), the Contractor was required to undertake parametric measurements and observations on air quality, noise and socio-cultural resources.

7.2 Recommendations

46. Post-construction Environmental Audits will be conducted under TBI-01 sub-project and Post Construction Audit Reports will be submitted to UWSCG and ADB during the next reporting period July-December 2021.

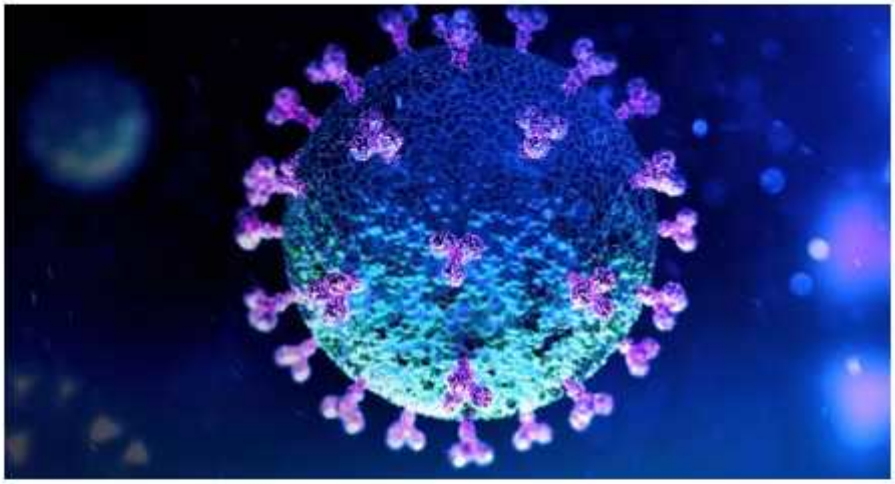
47. The main findings and recommendations of above mentioned Post Construction Audit Report will be reflected in the next Semi-annual EMR of July-December 2021.

ANNEX A: COVID 19 EMERGENCY MANAGEMENT PLAN

Georgia: CONSTRUCTION SUPERVISION CONSULTANCY SERVICES FOR URBAN SERVICES IMPROVEMENT INVESTMENT PROJECT (USIIP)

Financed by the Asian Development Bank and Government of Georgia

COVID-19 Emergency Management Plan in Construction Sector



Prepared by: **EPTISA** - Supervision Consultant
Tbilisi, Georgia

For: Ministry of Regional Development & Infrastructure (MRDI)
United Water Supply Company of Georgia (UWSCG)

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1. PREAMBLE

1.1 Project Description

1. The overall aim of the project is to improve the health condition of residents by addressing the problems associated with poor water and sewerage services in the towns Kutaisi, Tbilisi. The objective of the project is to solve the most urgent public health problems through the installation of new water systems; new water and sewerage networks: and new treatment facilities. The 'water supply' component aims to augment water production, treatment capacity and maintain water pressure for 24 hours a day.
2. The civil works contracts award sequence is as follow:

Contract Package	Contractor	Start Date	Completion Date
KUT-01	SMK Ulusal Insaat Ve Ticaret	8-Jun-15	28-Mar-20
TBI-01	DAGI Ltd.	01-Mar-16	29-Sep-19
ABA-01	"AS Inshaat-N" LLC	02-Feb-18	14-Mar-20
GUD-03	"China Nuclear Industry 23 Construction Co." LTD	17-Jul-19	06-Jun-22

3. Project Management Organisation
   - Executing Agency (EA) - Ministry of Regional Development and Infrastructure (MoRDI)
   - implementing agency (IA) - United Water Supply Company of Georgia (UWSCG)
   - Supervision Consultant – Eptisa
   - Contractors – SMK Ulusal Insaat Ve Ticaret; DAGI Ltd; "AS Inshaat-N" LLC; China Nuclear Industry 23 Construction Co. - LTD

1.2 Coronavirus

4. Coronaviruses are a large family of viruses that cause respiratory infections. These can range from the common cold to more serious diseases. Coronavirus (COVID-19) is a disease caused by a new form of coronavirus. It was first reported in December 2019 in Wuhan City in China.
5. Health authorities around the world believe the coronavirus (COVID-19) is spread from close contact with an infected person, mostly through face-to-face contact or between members of the same household. The coronavirus (COVID-19) is spread by people with symptoms when

they cough or sneeze. People may also pick up the coronavirus (COVID-19) from surfaces contaminated by a person with the infection.

6. Studies suggest that COVID-19 may persist on surface for a few hours or up to several days. This may vary under different conditions such as the type of surface, temperature or humidity of the environment.
7. A coronavirus infection can cause mild to severe respiratory illness. The most common coronavirus (COVID-19) symptoms reported are:
   - Fever
   - Breathing difficulties and breathlessness
   - Cough
   - Sore throat
   - Fatigue or tiredness.
8. Coronavirus (COVID-19) is most likely to spread from person-to-person through:
   - Close contact with an infected person.
   - Touching objects or surfaces (such as door handles or tables) contaminated by a person with the infection.
9. Close contact means having face-to-face contact for more than 15 minutes with someone who has a confirmed case of coronavirus (COVID-19) – or alternatively sharing a closed space with them for more than two hours.
10. Close contact can happen in many ways, but examples include:
    - Living in the same household or household-like setting (for example, a boarding school or hostel)
    - Direct contact with the body fluids or laboratory specimens of a confirmed case
    - Being in the same room or office for two hours or more
    - Face-to-face contact for more than 15 minutes in some other setting such as in a car or a lift or sitting next to them on public transport.

2. PURPOSE

11. The purpose of these document for the Construction sector, is to:
    - Provide direction to employers and workers
    - Outline the steps to be taken to best provide a safe and healthy environment, and
    - Identify the action available in the event of interruption to building and construction work, as a result of the coronavirus (COVID-19) pandemic.

12. The Document is intended to have application across all sectors of the building and construction sector. Construction sites are diverse and vary in complexity. To allow for flexible interpretation of these guidance, it is recommended that employers apply a risk-based approach and implement reasonably practical controls based on the environment and specific hazards at each construction site.
13. This Document have been developed to maintain the safe operation of construction sites, ensuring the safety of workers.
14. Following of these recommendations these is necessary to minimize and avoid the closure of any construction site.
15. The recommendations apply to all personnel attending on a building and construction site or project, whether management, staff, employees, contractors or service providers.

3. CONTROLLING RISKS ON SITE

16. To assist with providing and maintaining safe operations during coronavirus (COVID-19) the below measures should be implemented to assist in providing a safe and healthy environment at work.
    - Screening workers coming to site
    - Workplace Mapping
    - Physical Distancing
    - Hygiene
    - Shared Tools, Plant and Equipment
    - Cleaning and Disinfecting
    - Personnel Hoists
    - Personal Protective Equipment
    - Common Areas
    - Inspections
    - Travel
    - General Communications
    - Other measures
    - Vulnerable workers

3.1 Screening workers coming to site

17. To minimize the risk of transmission of coronavirus (COVID-19) on site, employers must implement a two-phase screening process; phase one being an initial declaration and phase two on going daily screening.

18. Initial declaration is to be conducted by all workers (this includes any person who attends site), including current and new-starters. Each worker must provide a declaration that they to the best of their knowledge:
    - have not been diagnosed with coronavirus (COVID-19) in the last 14 days, or
    - are not in a period of 14 day quarantine as directed by a health professional, or
    - have not been overseas in the last 14 days, or
    - have not been in contact with anyone who has coronavirus (COVID-19), or
    - have not been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
    - do not have anyone in their household who has symptoms consistent with COVID-19.
19. Once the initial declaration has been made by the worker, ongoing screening (phase 2) should be conducted for every worker prior to the start of their shift, asking to the best of their knowledge:
    - have they been overseas in the last 14 days, or
    - have they been in contact with anyone who has coronavirus (COVID-19), or
    - have they been in contact with anyone who is currently being tested for coronavirus (COVID-19), or
    - do they have anyone in their household who has symptoms consistent with COVID-19.
20. If a worker declares any of the above they may be required to self-isolate.
21. Screening should be conducted, whilst maintaining safe distances or over the phone before entering site, on a mobile app, via text message system, or other non-contact methods. It is advisable to have a system in place that limits the sharing of pens/ notebooks/ computers etc.
22. If a worker has recently had close contact with a confirmed case, they need to:
    - self-isolate at home for a period of 14 days and follow the self-isolation Guidelines
    - not attend work
    - contact their employer
    - seek urgent medical attention if they have symptoms consistent with COVID-19
    - not return to work until they have been cleared by a medical practitioner.
23. If a worker is experiencing symptoms consistent with COVID-19 or had close contact with a confirmed case, they must:
    - not attend work
    - contact their employer for further advice and;
    - not return to work until they have been cleared by a medical practitioner.

3.2 Workplace Mapping

24. In the event of an employee being confirmed as having COVID-19, those who are potentially affected need to be quickly identified.
25. Employers should implement processes to record the schedule and work locations for workers that enables tracing of those who have come into contact with the confirmed case.
26. The record should include:
    - day and time work was undertaken
    - members of teams that worked together
    - specific work area on the construction site
    - any breaks taken, including time and location
27. Movement between sites, or areas within large sites, should be minimized as much as possible.
28. Where attending multiple sites is necessary (e.g. for HSRs, first aiders, emergency wardens) movement between sites should be recorded in the workplace mapping.

3.3 Physical Distancing

29. Physical distancing of at least 1.5-2 meters should be implemented wherever possible. Employers should consider each work task and whether there is a safe alternative way to undertake the work with an increased distance between workers.
    - Mark safe distances in work, transit and break areas (e.g. on floors and walls).
    - Consider different shift patterns to minimize the number of workers onsite (e.g. AM/PM shifts).
    - Stagger start times, breaks and finish times to avoid congestion in high traffic areas and minimize workers coming into contact with each other as they move around the site.
    - Plan for how physical distancing will be maintained during inclement weather (e.g. use of lunch or crib rooms and amenities).
    - Install temporary physical barriers (e.g. fences, screens) between work areas, where appropriate.
30. Where it is not possible to undertake work tasks and maintain physical distancing, other control measures need to be implemented. For example:
    - Minimize the number of worker to worker interactions that need to be completed within 1.5 meters
    - Minimize the number of workers involved in activities that need to occur within 1.5 meters of each other
    - Provide personal protective equipment (PPE) (e.g. gloves, masks, glasses).

31. Where essential work activities need to be undertaken in restricted spaces (e.g. lift shafts, personnel hoists, lifts), the number of workers working in the space should be minimized.

3.4 Hygiene

32. Good hygiene practices and general cleaning helps with minimizing the spread of coronavirus (COVID-19). Employers should review general hygiene requirements and the cleaning regimes in place.

33. Employers should display health information in prominent locations on the construction site such as tea rooms, site offices, toilets, foyers, lifts and site entrances.

34. Every effort must be made by employers to upgrade personal hygiene and minimize worker to worker contact and all workers must co-operate in all necessary measures to achieve these objectives. These measures need to include:

- Promote regular hand washing with soap for at least 20 seconds. Employers must facilitate regular hand washing by providing ease of access/additional facilities where possible. Communicate to all workers where hand sanitizers are located and encourage their regular use.
- Promote good cough etiquette by covering your cough and sneeze, or cough into your elbow or shoulder.
- Avoid touching your nose, eyes or mouth.
- Provide hand sanitizer and/or hand washing facilities with soap in all site entrances and exits hoists, amenities and areas/levels of the site.

35. Employers must ensure that workers have access to appropriate amenities. Employers should review and revise the number and locations of amenities, to reduce movement around the site.

36. Amenities need to include:

- Hand washing facilities (whether permanent or temporary), such as a wash basin, clean running water, soap and paper towels, placed in strategic locations to ensure employees can access them in a timely manner.
- Access to hand sanitizer.
- Rubbish bins with touch-free lids (e.g. foot pedal bins).
- Thorough and regular sanitation.
- Appropriate waste management systems.

3.5 Shared tools, plant and equipment

37. Workers should avoid the shared use of tools, plant and equipment wherever possible. For example, drop saws, drills, grinders, ladders or elevating work platforms should not be used by more than one worker.

38. Where it is not possible to eliminate shared use:
    - Provide cleaning products (e.g. alcohol spray or solution) where communal tools, plant and equipment are located.
    - Keep cleaning products with tools, plant and equipment as they move around the site.
    - Ensure all operators thoroughly wash or sanitize their hands before and after every use.
    - Ensure all parts of tools, plant and equipment (e.g. including handles, handrails) are wiped down before and after use.
39. The shared use of phones, desks, offices, computers and other devices should also be avoided. Where this is not possible, these items should be regularly disinfected.

3.6 Cleaning and Disinfecting

40. Cleaning and disinfecting of surfaces is to be conducted using cleaning products as per DHHS Cleaning and Disinfection guidelines to reduce coronavirus (COVID-19) Transmission – the specific guidance is available here:
    - Cleaning and disinfection of amenities and meal areas must occur between work group breaks
    - Cleaning and disinfection of Personnel Hoists should occur at the end of each hoist operator shift
    - Implement regular cleaning and disinfection (minimum of twice daily) to 'Frequently Touched Surfaces', surfaces such as toilets, door handles, stair handrails, light switches, lift buttons, table tops.
    - Additional cleaning/disinfecting on-site. There must be an increased frequency of industrial grade cleaning/additional cleaning/disinfecting on sites across all areas including particular emphasis on commonly touched/communal surfaces;

3.7 Personnel hoists

41. Workers using hoists and lifts may be at greater risk of exposure to coronavirus (COVID-19), because they are required to be in close contact with others and potentially contaminated surfaces.
42. Control measures to reduce the risk in personnel hoists should include systems of work, physical distancing, personal hygiene, PPE and cleaning.
43. It is acknowledged that not all hoists and lifts are identical in size or dimension, and have varying weight limits.
44. Where it is not possible to implement physical distancing measures in a personnel hoist, all other available control measures need to be used.
45. Control measures may include:

- Limiting worker movement between levels and floors on site, where it is possible and safe to do so.
- Reviewing which hoists are available for use on site and identifying if additional hoists can be used (for example where a partially occupied building is under construction, consider whether a residential lift be used solely for construction persons).
- Physical distancing of 1.5-2 m and hygiene systems to be followed when waiting for hoist, particularly on floors where worker volumes may increase during peak times (start, break, finish times). For example the ground floor, floors with meal or break out spaces and floors with bathroom amenities.
- Determine how many workers can use a hoist at any time (including hoist operator) taking into consideration the limited duration and additional control measures in these Guidelines.
- Mark out hoist floor, identifying:
  - where workers stand
  - what direction they are to face when in the hoist to avoid face to face contact
  - Sequencing of entering and exiting
- Mark the hoist waiting area at each floor ensuring the physical distancing is maintained
- Regularly communicate and remind workers (e.g. through posters, digital displays):
  - diagram of positioning of workers and sequence of worker entering
  - not to touch walls/doors of the hoist
  - advise the cleaning regime in place
- During peak periods have system in place to limit crowding of workers entering/exiting the work area. For example:
  - developing a schedule for use of the hoist
  - Staggering what floors workers are to use the hoists. Hoist operators may be exposed to additional risk. They should:
- Be provided with PPE that protects them from worker to worker transmission and from touching contaminated surfaces (e.g. face shield or surgical mask/P2 respirator and glasses).
- Perform frequent hand washing with soap and water or the application of hand sanitizer positioned within the hoist.
- Where possible, change hoist operator every two hours into a different role.

3.8 Personal Protective Equipment (PPE)

46. Employers must provide information, instruction and training on the safe use, decontamination and maintenance of any PPE provided.

47. Any PPE provided needs to be practical for the work environment (e.g. allowing the necessary visibility and mobility) and properly decontaminated or disposed of at the end of every shift.

48. Employers should monitor and encourage correct use of PPE, for example providing information on posters and digital screens about:

    - Washing or sanitizing hands before putting PPE on, and putting face protection on before gloves
    - Removing gloves before face protection, washing or sanitizing hands after removing PPE and decontaminating or disposing of used PPE safely.

3.9 Common areas

49. Common areas on sites such as the amenities pose risks, and these are reduced by ensuring the following measures are adopted.

50. The time spent in those areas must be limited so as not to breach time constraints recommended by DHHS.

51. Staggering of meal breaks and separation of work groups to achieve maximum personal space and reduce the number of workers accessing those areas at any one time consistent with the Government requirements.

52. Sanitization must occur between occupation of amenities by different work groups

53. Spread out furniture to ensure physical distancing measures in common areas

54. There must be an increased frequency of industrial grade cleaning/additional cleaning with specific emphasis on cleaning after each meal breaks in those areas

55. Workers electing to minimize amenity access

56. Staggered working hours must be considered on sites with appropriate consultation (consideration must be given to Construction Management Plans, and workers must be given adequate notice of a change in hours).

3.10 Inspections

57. During inspections of the sites everyone should ensure all measures are in place to ensure compliance. Employers and Health and Safety Representatives are encouraged to work together to assist in this important objective.

3.11 Travel

58. Adequate arrangements are to be made by workers to ensure their travel to and from work is conducted safely in accordance with Government advice, and that adequate sanitization facilities are in place for workers upon attending the work site and when returning to the work site during work.

59. Workers should ensure that for transport to and from work that they adhere to the hygiene and cleaning guidance, and the physical distancing

60. Work vehicles that are shared should be regularly cleaned to ensure adequate hygiene and protection.

3.12 General Communication

61. Ensuring everyone is informed is fundamental to managing this pandemic and ensuring the safe operations of construction sites.

62. These recommendations have been developed to be communicated to all employers, workers and stakeholders. Everyone is urged to regularly promote and adhere to this document.

63. Site inductions should be updated as required to include information on coronavirus (COVID-19) potential risks and workplace specific controls that have been implemented such as daily screening, health checks and symptoms of coronavirus (COVID-19), staggered start, finish and meal times, good hygiene practices and cleaning regimes and PPE requirements.

64. Toolbox talks should be regularly conducted, and workers are to be encouraged to put forward practical ideas for changing work practices to avoid the spread of coronavirus (COVID-19). Toolbox talks should also provide clarity to workers on leave arrangements for those that cannot work, and to encourage self-reporting and minimize the spread of risk.

65. Toolbox talks should also include updates from the responsible Health Officer as they occur and additional information on the severity of the pandemic and the importance of physical distancing at toolbox meetings.

3.14 Other measures

66. Construction sites are diverse and vary in complexity, employers must apply a risk-based approach and implement reasonably practical controls based on the environment and specific hazards at each construction site. In addition to the aforementioned measures and controls mentioned in this section, employers should consider other measures for implementation such as:

- using alternatives to face to face meetings where practicable,
- reducing the length and size of meetings, especially for critical employees, by requiring some or all to dial in,
- consider off-site fabrication,
- ensuring working from home arrangements are enabled where feasible,
- Structuring management teams to ensure contingency in the event of team members needing to be isolated or quarantined at home.

3.15 Vulnerable workers

67. Has been identified the following groups of people as vulnerable workers in relation to coronavirus (COVID-19):

- people over the age of 70,
- people with chronic diseases (cardiovascular disease, diabetes, bronchial asthma and other respiratory diseases)

68. Where practical, reasonable action should be taken to minimize vulnerable workers from conducting higher risk roles

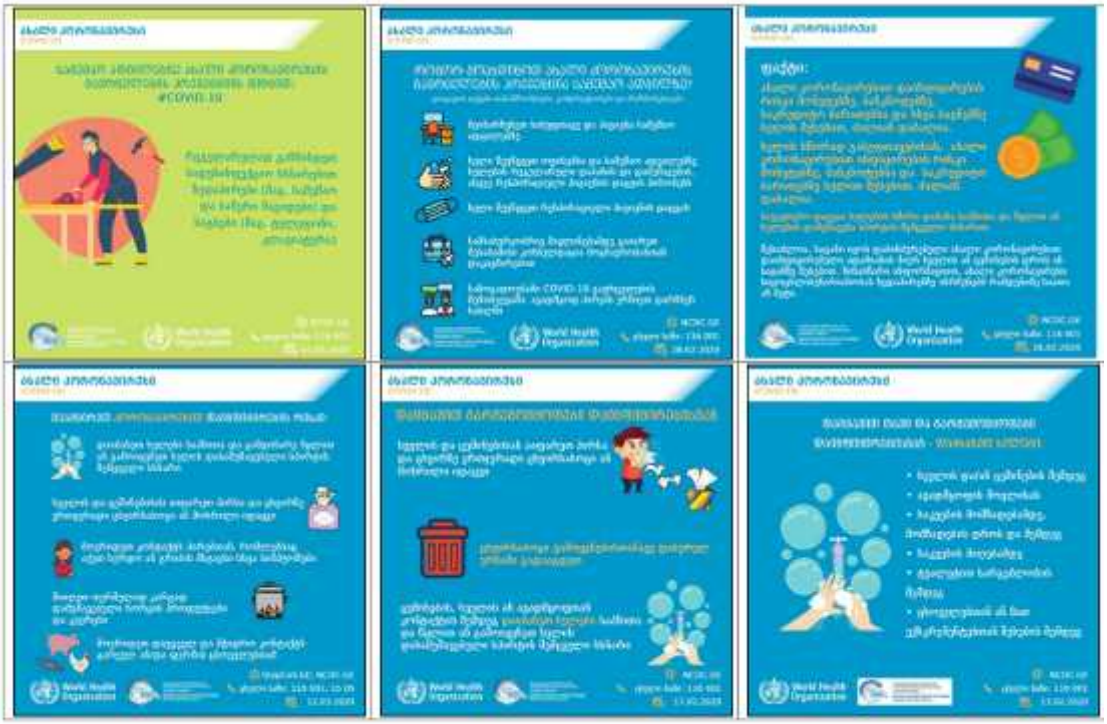
4. Summary of recommendations and responsibility

Table of Summary of recommendations and responsibility

Activity	Responsible for implementation
To provide employees with the information about the work safety procedures and prevention of virus spread (guided by the recommendations of the Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs of Georgia and LEPL L. Sakvarelidze National Center for Disease Control and Public Health);	Employer
To place ads in the workspace about the COVID-19 and its preventive measures defined by the LEPL I. Sakvarelidze National Center for Disease Control and Public Health;	Employer
To ensure maximum use of remote work in relation to those employees who can perform work remotely (administrative personnel);	Employer
To put mattings at the entrance of the lounge room / dining room, with the relevant sign of indication;	Employer
To ensure hand washing at the workspace with appropriate soap and other hygiene products. In case of inability to wash hands, to provide with at least 70% alcohol-based hand cleaning liquids;	Employer
To place hand sanitizers and the instruction for their proper use in a prominent place;	Employer
To ensure that employees have access to hand sanitizers and know how to use them in accordance with the relevant instructions;	Employer
To provide information to all staff and contractors, as well as cleaning staff, on appropriate preventive measures to avoid the spread of coronavirus in the work environment;	Employer
To train the employees on the proper use of personal protective equipment and its subsequent storage / disposal;	Employer
To provide employees with the necessary personal protective equipment (overalls, special shoes, helmet, gloves, medical mask) based on the specifics of their job and establish control over their use;	Employer
Periodically, several times a day ensure natural ventilation of indoor spaces / closets;	Employer
Periodically ensure disinfection of workplaces and frequently used equipment;	Employer
To keep ergonomics in order at the construction site. To ensure the prompt cleaning of workspace and removal of construction waste.	Employer
To ensure placement of closed containers for the disposable napkins and other hygiene waste used by both employees and visitors.	Employer

Follow the rules of hygiene at your workplace;	Employee
Carry out the work process in accordance with the Emergency Action Plan defined by the employer / work safety manager;	Employee
Avoid shaking hands and direct contact with others (touch, etc.) while saluting;	Employee
Avoid gathering, the work of more than 10 people on one work platform at a safe distance (less than 2 m) is not recommended;	Employee
When performing the work, make full use of the personal protective equipment provided by the employer;	Employee
Clean the workplaces and the tools and equipment used during the work process with disinfectants;	Employee
Thoroughly wash your hands with soap and water before and after eating, as well as before and the bathroom. Dry your hands thoroughly after washing;	Employee
Use alcohol-based hand sanitizers in case if you are unable to wash and dry your hands;	Employee
Keep a safe distance (not less than 2 m);	Employee
Cover your mouth with clean napkin or elbow when coughing and sneezing and then throw the used disposable napkin in the trash;	Employee
Avoid touching your eyes, nose, or mouth with your hands.	Employee

5. Covid-19 informational banners



ANNEX B: GENERAL GUIDELINES RELATED TO INFECTION (COVID-19) CAUSED BY NOVEL CORONAVIRUS (SARS-CoV-2) FOR CONSTRUCTION SECTOR

Annex №2

General Guidance Related to Infection (COVID-19) Caused by Novel Coronavirus (SARS-CoV-2) for Construction Sector

Note: In accordance with Order N781/N of the Minster of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia on "the rule for Examination for Short-term Employment Disability and Issuance of Doctors Note", the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia will issue an equivalent document to the doctors excuse note (Medical Certificate) to persons quarantined in order to prevent the spread of coronavirus. The document will serve as the basis to receive monthly payment and therefore, the working days spend in quarantine or in self-isolation will be legitimate and fully paid to the employees. In order to get the certificate, an interested person has to apply to the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia at -

For further information, please contact: 1505 116 001

StopCoV.ge

The job of builders involves constantly changing work places and work activity existing in open-air conditions. For this reason, in terms of virus spread, construction falls within the medium risk sector because its specificity covers natural ventilation. Nevertheless, it is important to consider the following preventive measures at construction work.

The staff must not appear in the workplace if they :

- Left the affected country over the past 14 days;
- Were in close contact with infected person/persons for the past 14 days (they must be self-isolated/quarantined as per the rule);
- Have symptoms of respiratory infection (coughing, temperature, sneezing, difficulty in breathing, general weakness etc.);
- Are among the ones who have high risk of getting infected with COVID-19 or serious complications: over 70 years of age, people suffering from chronicle diseases (cardio-vascular diseases, diabetes, bronchial asthma and other respiratory diseases.

Employer's responsibilities

- Whether or not the incidence of infection is detected, employer should develop an emergency action plan to support reduction of working days missed due to illness, and in case of detection – prevention of spread;
- Provide employees with information about safe working procedures and about prevention of virus spread (guide with the recommendations defined by LEPL L. Sakvarelidze National Center for Disease Control and Public Health of the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia);
- Inside the working space post announcements about COVID-19 and about the preventive measures that have been identified by LEPL L. Sakvarelidze National Center for Disease Control and Public Health;
- In relation to the employees who can perform job remotely (administrative personnel) ensure as much as possible use of such working mode;
- At the entrances of break room/dining room, place disinfecting rugs with relevant mandatory sign marking;
- Provide hand-washing facility with soap and other disinfectants. If hand-washing facility is not feasible, at least 70% alcohol based hand cleansing liquid should be used;
- Visibly place the hand sanitizers and post the rules of their proper use;
- Make sure that employees have access to hand sanitizers and are aware of their use with proper rules;
- Provide all employees and contractors, personnel responsible for cleaning with information about relevant preventive measures to avoid spread of coronavirus in the working environment;
- Train the employees in proper use and further storage/removal of personal protective equipment and disinfectants;

- Depending on their work specificity, provide the employees with necessary personal protective equipment (protective clothing, protective shoes, helmet, gloves, respirator) and establish control on their use;
- Periodically, several times a day ensure natural ventilation of closed spaces/facilities;
- At certain periodicities disinfect frequently used working equipment and working places;
- Maintain ergonomics at construction site. Ensure timely cleaning of working space and timely disposal of construction waste.
- For employees and visitors ensure closed containers for used disposable tissues and other used hygienic waste in the working space.

Employees' responsibilities

Ensuring proper hand hygiene regularly and thoroughly is the best way to be protected from most of the viruses. Therefore, it is necessary to take the following measures in the workplace:

- Follow hygiene rules in your workplace;
- Carry out the working process in accordance with emergency situations action plan defined by employer/occupational safety manager;
- When greeting do not shake hands and avoid contact with others (touching etc.);
- Avoid gatherings, it is recommended not more than 10 people in one working platform by keeping a safe distance (at least 2 m);
- While performing your work, fully use personal protective equipment provided by the employers;
- Treat with disinfectants the working places and tools used in the course of the work;
- Before and after taking meals, before and after using the restrooms thoroughly wash your hands with soap and water. After washing dry your hands well;
- If you can not wash and dry your hands, use alcohol-based hand sanitizers;
- Keep safe distance (at least 2 m);
- While coughing or sneezing, cover the face with a clean tissue or elbow and place used dispensable tissue in the waste bin;
- Avoid touching your eyes, nose and mouth with your hands.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First aid kit

ANNEX C: POST-CONSTRUCTION AUDIT REPORT, REG-02/MESTIA WTP, oreoared by SC/Eptisa

Financed by: The Asian Development Bank

Project: Construction of Mestia Water Treatment Plant and Reservoirs

Post - Construction Environmental Audit Report

July 2021

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22. Consequently, on the date of audit, Mestia water treatment plant was not in operation. ..... *Error! Bookmark not defined.*

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ABBREVIATIONS

ADB	Asian Development Bank
CAP	Compensation Action Plan
DC	Design Consultant
EA	Executing Agency
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EIP	Environmental Impact Permit
EMP/ SSEMP	Environmental Management Plan/ Site-Specific Environmental Management Plan
ES	Environmental Specialist
GoG	Government of Georgia
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IA	Implementing Agency
USIIP	Urban Sector Improvement Investment Program
IEE	Initial Environmental Examination
MoEPA	Ministry of Environment Protection and Agriculture of Georgia
MoRDI	Ministry of Regional Development & Infrastructure
UWSCG	United Water Supply Company of Georgia
WS	Water Supply

I. INTRODUCTION

1. This report represents the Post Construction Environmental Audit Report for Construction of Mestia Water Treatment Plant and Reservoirs(REG-02) under Urban Services Improvement Investment Program (USIIP) Tranche 1.

2. 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 and SSEMP have been adhered to during the construction phase.
    - Determine and verify whether the mitigation actions and rehabilitation requirements contained in the SSEMP 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 SSEMP and EMS system implemented during the construction phase and to recommend alterations to the EMS applicable to the operational phase.

II. PROJECT DESCRIPTION

2.1 Brief Description of the Project

3. 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.

4. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and expanded infrastructure to meet the present and future demand. Water supply improvements will include source augmentation and head works, pumping systems, treatment facilities, transmission and distribution network; and, sewerage improvement works will include sewer network, pumping stations, main collectors and waste water treatment plants. The Investment Program will improve the health of residents in secondary towns in Georgia. The outcome of the Investment Program is improved WSS services in these urban centers.

5. The Improvement of Water Supply and Sewer System in Mestia is a part of ADB's Tranche 1 of Urban Services Improvement Investment Program. Tranche 1 of the Investment Program Includes:

    - Construction of Mestia Headworks (MES-01)
    - Improvement of Water Supply Infrastructure in Anaklia, Kutaisi and Poti (REG-01)
    - Construction of Mestia Water Treatment Plant and Reservoirs (REG-02)
    - UWSCG Office Building
    - Construction of the Water Supply Network in Ureki (Ure-01)

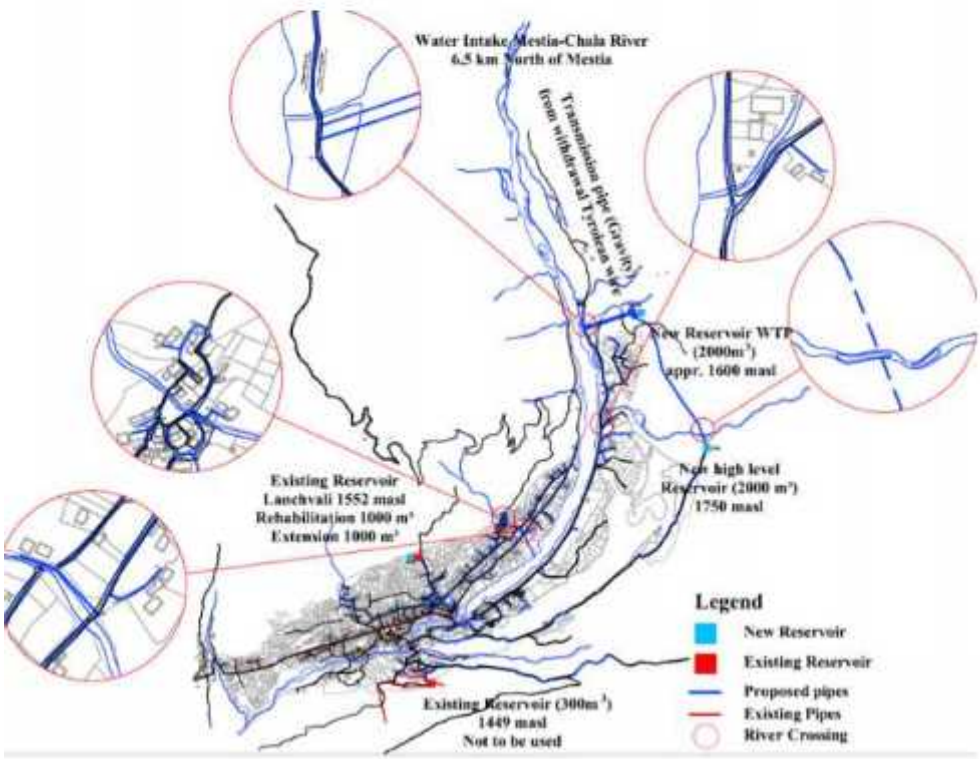
6. The presented final audit report covers only Mestia Water Treatment Plant and Reservoirs (REG-02) sub roject. Under this project, a new water treatment plant (WTP) has been built; Tsrniashi spring catchment has been rehabilitated; a new reservoir at Lanchvali (1,000 m³), a new reservoir at Shgedi (1,000 m³) and transmission pipes of approximately 9,200 meters were constructed.

7. The Contractor had to design and build a Water Treatment Plant with a treated water standard that complies with the European standard for the drinking water quality and is defined in the Council Directive 98/83/EC. The WTP has a design capacity of 80 l/s to serve the projected population in 2040. Contract was signed with JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and ProtecnoSrl on 22 September 2014 and Notice-to-Proceed given on 08 December 2014. Contract completion date was May 2019.

8. The MestiaWTP improvement project has been classified as environmental assessment category B, which means it has some negative impacts on the environment, but

significantly less than category A projects (Source: IEE). There is no protected area located nearby and ecologically sensitive habitats will not be affected. Information and data on the Project sites have been extensively elaborated in the IEE documents for the project.

Figure 1: Mestia Water Supply Improvement Subproject Map



2.2 Main Stakeholders of the Project

9. The main institutions that are involved in implementation of the EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environmental Protection and Agriculture (MoEPA).

10. Investment Program Management Office (IPMO) established within UWSCG is responsible for the day to day management of the project including implementation of the EMP. The IPMO has an Environmental Specialist who is responsible for management of the environmental aspects of USIIP.

11. The IPMO (Environmental Specialist) 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) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and 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

12. The SC includes a full time Environmental Specialist to assist the IPMO supervise and monitor implementation of the EMP during construction.

13. The Contractor also appoints a full time Environmental specialist to be a senior member of the construction management team based on site for the duration of the contract. The ES shall have a university degree (preferably at Masters level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project

14. Department of Environmental Protection and Permits of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP. More detailed description of implementation arrangements; responsibilities and staffing under REG-02/Mestia sub-project are provided in the Table 1 below.

Table 1. List of contracts under the Project

Organization	Name of main staff and Environmental Specialist	Contact data (including phone and web-site) and address of the organization
Asian Development Bank	Country Environmental Focal	Ninette R. Pajarillaga E-mail:npajarillaga@adb.org
	ADB RETA International Environmental Consultant	KetiDgebuadze +995 577232937 E-mail: kdgebuadze.consultant@adb.org

Organization	Name of main staff and Environmental Specialist	Contact data (including phone and web-site) and address of the organization
	Associate Safeguards Officer, Georgia Resident Mission Asian Development Bank	Nino Nadashvili +995 595 070442 E-mail: nnadashvili@adb.org
UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. MakaGoderdzishvili Tel: +995 599 229925 E-mail: m.goderdzishvili@water.gov.ge
	UWSCG/IPMO Department of Projects Management, Head	Ms. Ana Onashvili Tel: +995 599 692090 E-mail: ana.onashvili@water.gov.ge
UWSCG/USIIP/T3	Environmental Specialist	Ms. KetevanChomakhidze Tel: +995 577 380309 E-mail: Chomakhidzek@yahoo.com
Supervision Consultant **A Consortium of Consulting Firm led by EptisaServicios de Ingeniria S.L. (Spain) in association with SAFEGE (Belgium) and JSC Georgian Water Project (Georgia)**	Environmental Specialist	Mr. Irakli Legashvili Tel: +995 577 177016 E-mail: chem_ira@yahoo.com
Construction Contractor **JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and ProtecnoSrl**	Environmental Specialist	Mr. Nikoloz Neparidze Tel: +995 599 346 821 Email: nikoloz.nepharidze@ludwigpfeiffer.com

III. SUMMARY OF PREVIOUS ENVIRONMENTAL AUDITS

15. In 2018-2020, in the construction phase of Mestiawater treatment plant, the environmental monitoring was conducted by several organizations, namely - ADB, Supervision Consultant (SC), Construction Contractor (CC) and UWSCG. A total of 58 non-compliances were identified in the environmental monitoring phase in 2016-2020 (see **Annex 1**).

16. The identified non-compliances can be divided into the following main areas: (i) absence or improperly installed warning and prohibition signs - 17 cases (29.3%); (ii) improper management and disposal of waste or hazardous construction materials - 19 cases (32.8%); (iii) violation of the requirements for wearing safety uniforms (PPE) or safety standards - 11 cases (19.0%); (iv) Violationofsanitarynorms- 8 cases (13.8%); (v) Incorrectmanagementoftopsoil- 2 cases (3.4%); (vi) violation of IEE/SSEMP requirements in the phase of rehabilitation works - 1 cases (1.7%).

17. In 2018-2020, corrective actions were developed and realized for all of the above-listed non-compliances. According to semi-annual environmental reports (SAEMRs), all non-compliances have been eliminated.

IV. SUMMARY OF OBSERVATIONS OF SITE VISITS

4.1 Site Visit - Audit results

18. Construction of Mestia Water supply systems (REG-02) is financed from Tranche I of USIIP.

19. The Contractor had to design and build a Water Treatment Plant with a treated water standard that complies with the European standard for the drinking water quality and is defined in the Council Directive 98/83/EC. The WTP has a design capacity of 80 l/s to serve the projected population in 2040. Contract was signed with JV Ludwig Pfeiffer Hock und Tiefbau GmbH & Co. KG and ProtecnoSrl on 22 September 2014 and Notice-to-Proceed given on 08 December 2014. Contract completion date was May 2019.

20. The final (closing) environmental audit of Mestia Water Treatment Plant and Reservoirs was conducted by the environmental audit team on 19 May of 2021.

21. The audit team visited the following facilities: (i) the Mestia Water Treatment Plant; (ii) Shkedi reservoir; and (iii) Lanchvali Reservoir. For the locations of the mentioned facilities, see **Figure 1**. Besides, the access roads to the mentioned facilities are restored/built.

22. All the above-mentioned sites were fenced and it was impossible for strangers as well as domestic animals to enter the site (see **Figure 1** and **2).**

Figures 1 and 2: All project areas are fenced

23. The territories were restored in a timely manner; the removed topsoil was used for the rehabilitation works. The local roads of all objects are improved (see **Figures 3 and 4**)

Figures 3 and 4: Local roads

24. No grass was planted on the territory. The vegetation cover was self-restored (**Figures 3 and 4**). The ground access roads to the facility are also restored (**Figures 5 and 6**).

Figures 5 and 6: Access roads

25. Both, the hazardous and household waste was totally disposed from the project zone. Besides, the construction techniques and construction materials were removed as well, and lighting poles were installed all over the area.

26. The water quality testing laboratory was fully equipped (see **Figures 7 and 8**).

Figures 7 and 8: Drinking water quality testing laboratory

4.2 Non-compliances and Corrective Actions

27. **Non-compliance #1**: Large quantities of hazardous materials (see **Figure 9),** namely Ferric chloride FeCl2 40% solution, were in the plastic containers in the closed space of the given territory. There are also approximately 10 pieces of 50-kg paper bags of caustic soda near the plastic containers.

Figure 9. Hazardous materials in plastic containers

28. **Requirement:** (i) The hazardous liquid material containers must be placed on secondary containment with its volume of 110% of the main container. If the hazardous materials are placed in several containers, the volume of the secondary container must be 25% of the total volume of all containers with hazardous liquid materials in them. (ii) It is forbidden to place the materials near one another that can react with each other.

29. **Corrective action**: The plastic containers with hazardous materials must be placed on secondary containment with its volume of 25% of the containers with hazardous materials in them. Besides, the 50-kg bags with caustic soda must be removed to a separate building.

30. **Non-compliance #2**: The tank with hazardous materials in the area is not placed on a secondary containment (**Figures 10** and **11**). Despite the fact that the given tank is placed in an iron container, there is a risk of soil pollution in case of spills.

Figures10 and 11: Fuel tank in the iron container

31. **Requirement**: The hazardous liquid material containers must be placed on secondary containment with its volume of 110% of the main container.

32. **Corrective action**: The fuel tank must be placed on a secondary containment with its volume of 110% of the main container.

V. CONCLUSIONS AND RECOMMENDATIONS

33. The construction of the WTP is complete and the object is put to exploitation. The territory is fenced, it has a gate and guardroom. The whole territory is cleaned and there is a drainage system provided around the territory as well as within the territory of WTP.

34. **Table 2** gives the summary information about the non-compliances observed during the environmental audit and due corrective actions and probable terms of their realization.

Table 2: Summary information

#	Non-compliance	Correctiveaction	Terms of accomplishment	Note
1	Large quantities of hazardous materials, namely Ferric chloride FeCl2 40% solution, were in the plastic containers in the closed space of the given territory. There are also approximately 10 pieces of 50-kg paper bags of caustic soda near the plastic containers.	The plastic containers with hazardous materials must be placed on secondary containment with its volume of 25% of the containers with hazardous materials in them. Besides, the 50-kg bags with caustic soda must be removed to a separate building.	**4 month**	
2	The tank with hazardous materials in the area is not placed on a secondary containment. Despite the fact that the given tank is placed in an iron container, there is a risk of soil pollution in case of spills.	The fuel tank must be placed on a secondary containment with its volume of 110% of the main container.	**6 month**	

ANNEXES:

Annex 1: Non-compliancesobservedduringtheenvironmentalAuditsconducted during the 2016-2020 reporting period

Date	Ref Number	Subject	Content/Issues
June - December 2016			
16 November		Reservoirs construction sites should be fenced from all sides and equipped with lockable gate with proper warning and information signs	
16 November		Trees at the construction zone should be protect to avoid its damage	
16 November		Proper warning and information signs should be arranged at the entrance, inside and perimeter of construction sites	
16 November		Reservoirs construction territories should be lighted adequately	
16 November		Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil and accidents	
16 November		Proper Parking area should be arranged at the adequate place	
16 November		The reservoirs access roads and internal roads should be arranged properly (covered with gravel)	
16 November		Fuel/oil spill response items (sand, sawdust, special containers) should be available at the reservoir construction sites	
16 November		Household and Hazardous Waste containers with relevant sign should be installed at the reservoir construction sites in proper places	
16 November		Surplus/accumulated waste soil should be taken away for its final disposal. Soil for backfilling purposes should be stored properly	
16 November		Reservoirs construction sites should be fenced from all sides and equipped with lockable gate with proper warning and information signs	
16 November		Proper warning and information signs should be arranged at the entrance, perimeter and inside of construction site	
16 November		Excavated pit and tranches are not surrounded with warning tapes	
16 November		Toilet facilities are not arranged	
16 November		Trees at the construction site should be protect to avoid its damage	
16 November		Existing temporary, electrical connection is unacceptable from safety point of view	
16 November		Proper fuel/oil spill response items (sand, sawdust, special containers) should be available at the site	
16 November		Household Waste containers with	

		relevant sign should be installed in proper place	
16 November		First aid kits are not provided	
16 November		Use tarpaulins to cover during materials transportation	
16 November		Site internally should be arranged properly and cleaned regularly	
January – June 2017			
Shkedi reservoir			
13 February		Reservoirs construction sites should be fenced from all sides and equipped with lockable gate with proper warning and information signs	
13 February		Top soil at the access road should be managed properly to avoid its loosing	
13 February		Electricity equipment (cable) safe maintenance should be ensured	
13 February		Trees at the construction zone and along the access road (removal of stones from trees) should be protected to avoid its damage	
13 February		Special equipment during working at heights should be used	
13 February		Ladder safety should be ensured	
13 February		Dust prevention activities (watering of access road) should be provided	
13 February		Proper warning and information signs should be arranged at the entrance, inside and perimeter of construction sites	
13 February		Bio toilet at the site should be installed	
13 February		All construction materials should be properly segregated and stored adequately	
13 February		Construction waste materials (wood, residues of iron and others) should be managed properly and disposed at the proper organized place	
Lanchvali Reservoir			
13 February		Construction sites should be fenced from all sides and equipped with lockable gate with proper warning signs	
13 February		Ladder safety should be ensured	
13 February		Special equipment during working at heights should be used	
13 February		Dust prevention activities should be provided in windy and dry weather	
13 February		All construction materials should be properly segregated and stored adequately	
13 February		Waste containers should be properly labelled (Household waste, Hazardous waste and etc.)	
13 February		Waste should be placed in proper waste container and discharged timely	
13 February		Parking should be arranged with relevant sign	
13 February		Transport should be parked only at the parking area	

13 February		Waste construction materials should be removed from the site timely and permanently	
13 February		Construction waste materials should be managed properly and disposed at the proper organized place	
13 February		PPE equipment should be used always and completely by all workers (even personnel of subcontractor)	
13 February		Site internally should be arranged properly and cleaned regularly	
13 February		Place of fuel containers storage should be with roofing	
June – December 2017			
Shkedi reservoir			
28 September		Top soil at the access road should be managed properly to avoid loosing of it	
28 September		Trees at the construction zone and along the access road should be well protected to avoid its damage	
28 September		Bulks of surplus waste soil should be removed/disposed at the proper place	
28 September		All construction materials should be properly segregated and stored adequately	
28 September		Dust prevention activities (watering of access road) should be provided	
28 September		PPE equipment should be used always and completely by all workers (even personnel of subcontractor)	
28 September		Site internally should be arranged properly and cleaned regularly	
28 September		Ensure Road / track access arrangements to sites	
Lanchvali Reservoir			
28 September		Proper reinstatement should be done after completion of construction activities	
28 September		Construction territory should be fenced from all sides properly	
28 September		All construction materials should be properly segregated and stored adequately	
January – June 2018			
Skedi and Lanchvali Reservoir			
21 April		Contractor to install fencings for all sites and equipped with lockable gate with proper warning and information signs to avoid unexpected access of tourists on site	

Annex 2.Mestia WTP Post-ConstructionEnvironmentalAuditChecklist

Requiredmitigationmeasure sofenviromentalimpact	Measuresimplemented				Comment
	yes	partially	no	N/A	
Siteterritoryfencedfully	x				All project zones were fenced.
Topsoilplacedatoriginallocatio n		x			The rehabilitation works were carried out in all project zones, where the removed topsoil in the project zone was used.
Vegetationcoverreinstated		x			The grass has been self-restored on the territory.
Treesreplantedasneeded				x	No trees were planted in the project zone.
Construction waste and surplus/waste soil removed completely and disposed properly		x			All the construction equipment and construction materials were removed from the project zones.
Hazardous waste removed and disposed properly.	x				No facts of uncontrolled disposal of hazardous waste were fixed in the project area.
Fuels and lubricants spills eliminated	x				No traces of leakage were identified in the project area.
Contractor equipment and machinery removed	X				All the construction equipment was removed from the project zones.
All temporary facilities removed and cleaned up	x				Thetemporaryauxiliarybuildingsarefullyre movedfromthesite.
Streets with installed network reinstated to pre-construction or better conditions	x				The access roads to the project zone are reinstated. Their physical state is satisfactory.
Post-Construction territory reinstated to pre-construction or better conditions		x			The project zone is reinstated in line with the requirements.

ANNEX D: POST CONSTRUCTION ENVIRONMENTAL AUDIT REPORT, URE-01

ADB Project No: 43405

Project: Construction of Water Supply and Wastewater Network in Ureki (URE-01)

Post - Construction Environmental Audit Report

July 2021

I

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Annex 2: Post-Construction Environmental Audit Checklist *19*

ABBREVIATIONS

ADB	Asian Development Bank
CAP	Compensation Action Plan
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IA	Implementing Agency
USIIP	Urban Sector Improvement Investment Program
IEE	Initial Environmental Examination
MoEPA	Ministry of Environment Protection and Agriculture of Georgia
MoRDI	Ministry of Regional Development & Infrastructure
UWSCG	United Water Supply Company of Georgia
WS	Water Supply

I. INTRODUCTION

1.1 Preamble

1. This report represents the Post Construction Environmental Audit Report for Construction of Water Supply and Wastewater Network in Ureki (URE-01) under "Urban Services Improvement Investment Program" (USIIP) funded by the Asian Development Bank. URE-01 sub-project is simultaneously funded by T1,T2 and T3 of USIIP.

2. 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 and SSEMP have been adhered to during the construction phase.
   - Determine and verify whether the mitigation actions and rehabilitation requirements contained in the SSEMP 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 SSEMP and EMS system implemented during the construction phase and to recommend alterations to the EMS applicable to the operational phase.

1.2. Project background

3. The Urban Services Improvement Investment Program was developed as the Governments 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.

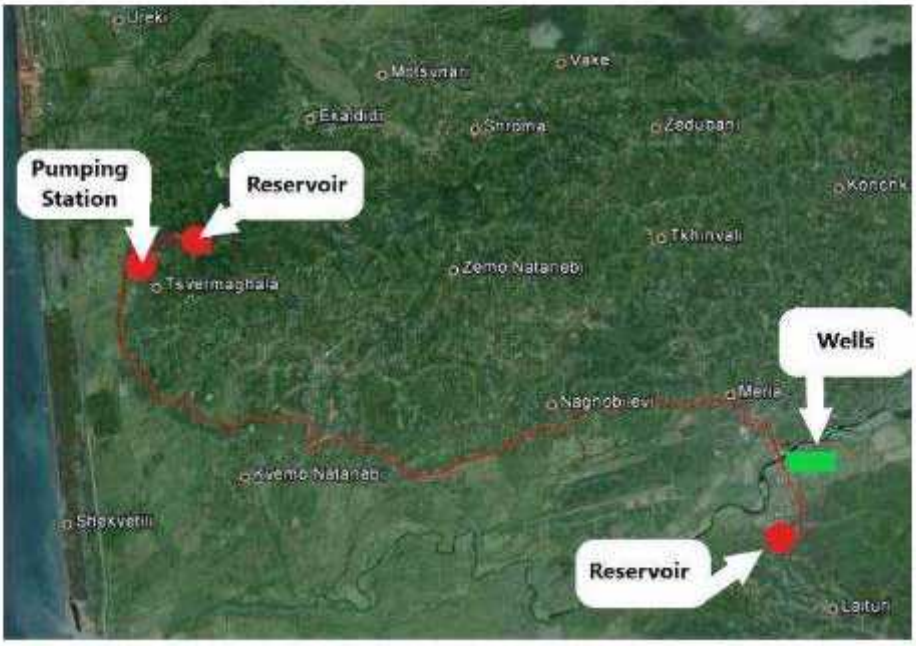
4. The Investment Program will improve infrastructure through the development, design and implementation of a series of subprojects, each providing improvements in a particular sector (water supply and/or sewerage) in one town. Subprojects will rehabilitate existing infrastructure and/or create new and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

5. The project comprises of the construction of 1 water supply pumping station and 31 sewage pumping stations (Shekvetili - 18, Ureki - 13; construction of new reservoirs (2,000 m^3 x 3,000 m^3 and 1 x 1,200 m^3); distribution network - laying of approximately 70

km water supply pipelines (distribution network will be divided into 3 areas); laying of approximately 70 km sewage pipelines; installation of approximately 1,500 water meters; wells - drilling of 10 drinking water wells (**Figure 1**).

6. Implementation of infrastructural projects negatively impacts on environment as we are all aware. Construction of water infrastructure impacts on all components of the natural environment, during which changing of landscape, fragmentation of soil surface, losing of fertile layer of soil, elimination of green cover and migration ways of animals, changing of river bed and pollution of surface water, reducing of living area of birds and fishes may also occur.

Figure 1: Location Map of the Project



1.3 Main Stakeholders of the Project

7. The main institutions that are involved in implementation of the IEE/EMP are UWSCG executing agency (EA), Supervision Consultant (SC) the Contractor and to a lesser extent the Ministry of Environment and Natural Resources Protection (MoENRP).

8. Investment Program Management Office (IPMO) established within UWSCG is responsible for the day to day management of the project including implementation of the EMP. The IPMO has an Environmental Specialist who is responsible for management of the environmental aspects of USIIP.

9. The IPMO (Environmental Specialist) 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;
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(v) Finalize SAEMRs (and Final EMRs upon project completion), send it to ADB and address potential ADB's comments until SAEMR disclosure; Provide ENG and 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

10. The SC includes a full time Environmental Specialist to assist the IPMO supervise and monitor implementation of the EMP during construction.

11. The Contractor also appoints a full time Environmental Specialist to be a senior member of the construction management team based on site for the duration of the contract. The ES shall have a university degree (preferably at Masters Level) in Environmental Science or related discipline and have at least 10 years work experience in environmental management of infrastructure project.

12. Department of Environmental Protection and Permits of UWSCG work together with IPMO on addressing the Environmental Safeguard issues of USIIP. More detailed description of implementation arrangements, responsibilities and staffing under URE-01 sub-project are provided in the Table 1 below.

Table 1. List of contracts under the Project

Organization	Name of main staff and Environmental Specialist	Contact data (including phone and web-site) and address of the organization
Asian Development Bank	ADB Country EnvironmentalFocal	Ninette R. Pajarillaga E-mail:npajarillaga@adb.org
	ADB RETA InternationalEnvironmental Safeguards Consultant	KetiDgebuadze +995 577232937 ketdgeb@yahoo.com
	Associate Safeguards Officer, Georgia Resident Mission Asian Development Bank	Nino Nadashvili +995 595 070442 nnadashvili@adb.org

Organization	Name of main staff and Environmental Specialist	Contact data (including phone and web-site) and address of the organization
UWSCG	UWSCG, Department of Environmental Protection and Permits, Head	Ms. MakaGoderdzishvili Tel: +995 599 229925 m.goderdzishvili@water.gov.ge
	UWSCG/IPMO Department of Projects Management, Head	Ms. Ana Onashvili Tel: +995 599 692090 ana.onashvili@water.gov.ge
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Supervision Consultant **A Consortium of Consulting Firm ledby EptisaServiciosde Ingeniria S.L.(Spain) in associationwith SAFEGE(Belgium) and JSCGeorgian WaterProject (Georgia)**	Environmental Specialist	Mr. Irakli Legashvili Tel:+995 577 177016 chem_ira@yahoo.com
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II. SUMMARY OF PREVIOUS ENVIRONMENTAL AUDITS

13. In the construction phase, as a result of the environmental audits conducted by the organizations (UWSCG/IPMO/DEPP, Supervision Company) involved in the project in 2017-2020 revealed total 44 non-compliances. The environmental reports submitted to the Asian Development Bank give a detailed description of all non-compliances and corrective actions developed. According to the environmental audit reports published on the Asian Development Bank website, all of the non-compliances fixed in 2017-2020 have been remedied.

14. For the detailed information about the results of the accomplished audits, see **Annex 1**.

III. SUMMARY OF OBSERVATIONS OF THE SITE VISITS

3.1. Audit results

15. Construction of Water Supply and Wastewater Network in Ureki (URE-01). The Contract is signed with JV of Peri Ltd (Georgia) Leading Partner and Slon LLC (Azerbaijan) on October 28, 2014. Commencement date was November 24, 2014. Initial Completion date was scheduled on November 22, 2018 but due to changes in the design of project, which includes the construction of an Aqueduct across the Natanebi River, the construction of Gabion walls to protect well fields from flooding and erosion, and the construction of an additional deep well No. 8 along the banks of the Natanebi River, completion date was extended to September 2019.

16. The final (closing) environmental audit of Ureki water supply and sewerage network was conducted by the environmental audit team in 17 May of 2021.

17. The audit team visited the following facilities: (i) the water intake area; (ii) Reservoir #1; (iii) Reservoir #3; and (iv) pumping station. For the locations of the mentioned facilities, see **Figure 1** above. Besides, the access roads to the mentioned facilities are restored/built.

18. All the above-mentioned sites were fenced and it was impossible for strangers as well as domestic animals to enter the site (see **Figure 2 - 5).**

Figure 2: Territory of reservoir #3

Figure 3: Territory of reservoir #1 station

Figure 4: Territory of the pumping station

Figure 5: Borehole area

19. The construction waste was disposed from all facilities except some minor exceptions (see non-compliance 1) and the area was cleaned (**Figures 6 - 9**).

Figure 6: Reservoir #3

Figure 7: Reservoir #1

Figure 8: Pumping station

Figure 9: Borehole area

20. The restoration works are completed all over the area and the topsoil was taken back to the project area. It should be noted that no artificial plantings were done in the area. So, it is clear that the self-restoration process took place in the project area (see **Figures 10 and 11**).

Figure 10: Self-restored grass – the territory of the first reservoir

Figure 11: Self-restored grass – the territory of the pumping station

21. The access roads to the project area were restored and paved. Their physical state corresponds to the IEE requirements (**Figures 12 and 13**).

Figure 12: Access road to the first reservoir

Figure 13: Access road to the pumping station

3.3 Non-compliances and corrective actions

22. As mentioned above, no significant non-compliances were observed during the environmental audit and all corrective actions that need to be taken do not require additional funding and time.

23. **Non-compliance #1**: There was chaotically disposed construction and household waste observed on the territory of the pumping station (see **Figures 14 and 15**).

Figures 14 and 15. The waste disposed chaotically. The territory of the pumping station

24. **Requirement:** Following the completion of the project, the waste must be handed over to a duly licensed company.

25. **Corrective action**: The waste must be collected and disposed from the project area. The waste must be handed over only to duly licensed contractors for further management.

26. **Non-compliance #2**: The area of the construction materials on the territory of the pumping station was not fenced and was not protected from the impact of the atmospheric precipitation (**Figures 16 and 17**).

Figure 16 and 17: The construction waste on the territory of the pumping station

27. **Requirement**: The area with the construction waste must be fenced and have relevant information signs.

28. **Corrective action**: The territory of the construction materials area must be duly fenced. The construction materials must be disposed in the project area more compactly and must be protected from the atmospheric precipitation by using an appropriate protective cover.

29. A number of violations of the rules of safety were observed in the water intake area.

30. **Non-compliance #3**: The underground infrastructure and the well in the project area were not duly covered (**Figures 18 and 19**).

Figures 18 and 19: Open infrastructural objects in the water intake area

31. **Requirement:** All underground infrastructural facilities must be closed after the project is complete to prevent service personnel or animals from falling into them.

32. **Corrective action**: In the first stage, the area must be fenced or warning signs must be installed. And finally, it will be necessary to provide a capital cover or a hatch over such underground facilities.

33. **Non-compliance #4**: A power cable was fixed near the power transmission pole located in the water intake area, which was cut off for unknown reasons and lying on the ground in an uncontrolled manner (see **Figures 20 and 21**).

Figures 20 and 21: The wire cable on the earth surface

34. **Requirement:** A power transmission line is not admitted to be on the ground in an uncontrolled manner.

35. **Corrective action:** First of all, the given area must be marked. Then, owner of the given cable must be identified and addressed immediately to carry out relevant repair works. If the given wire is used to supply power to the wells, it is necessary to install them in compliance with the requirements of the relevant instructions.

III. CONCLUSIONS AND RECOMMENDATIONS

36. Table 2 gives the summary information about the non-compliances observed during the environmental audit and due corrective actions and probable terms of their realization.

Table 2: Summary information

#	Non-compliance	Corrective action	Terms of accomplishment	Note
1.	There was chaotically disposed construction and household waste observed on the territory of the pumping station	The waste must be collected and disposed from the project area. The waste must be handed over only to duly licensed contractors for further management.	**1 month**	
2	The area of the construction materials on the territory of the pumping station was not fenced and was not protected from the impact of the atmospheric precipitation	The territory of the construction materials area must be duly fenced. The construction materials must be disposed in the project area more compactly and must be protected from the atmospheric precipitation by using an appropriate protective cover.	**1 month**	
3.	The underground infrastructure and the well in the project area were not duly covered	In the first stage, the area must be fenced or warning signs must be installed. And finally, it will be necessary to provide a capital cover or a hatch over such underground facilities.	**1 month**	The area must be fenced or the warning signs must be installed in the shortest possible time, in maximum 2 or 3 days
4.	A power cable was fixed near the power transmission pole located in the water intake area, which was cut off for unknown reasons and lying on the ground in an uncontrolled manner	First of all, the given area must be marked. Then, owner of the given cable must be identified and addressed immediately to carry out relevant repair works. If the given wire is used to supply power to the wells, it is necessary to install them in compliance with the requirements of the relevant instructions.	**2 weeks**	The area must be fenced or the warning signs must be installed in the shortest possible time, in maximum 2 or 3 days

ANNEXES:

Annex 1: Non-compliances observed during the Environmental Audits conducted during the 2017-2020 reporting period

Date	Ref Number	Subject	Content/Issues	Status of Implementation
January to July 2017				
9-10 February		High visible safety signs/tapes and trench side barriers around of deep open trenches should be installed toavoid accident of population	Instruction is given to the contractor to keep the standard and ensure safety of local population	**Competed**
9-10 February		Construction activities information signs should be installed at each construction segment		
9-10 February		Walls of the deep trenches (>1.5m) should be strengthened by boards to avoid landfall of the soil andaccidents	Construction is given instruction to improve the situation. Non compliance Notice was developed by SC to improve the situation on site.	
9-10 February		Where are necessary proper wooden/metal walkways/planks across open trenches should be installed		
9-10 February		Accumulated waste soil should be removed from construction area and disposed in a proper place	No additional actions are required	
9-10 February		Construction materials should be brought when needed to avoid its long time disposal in the streets and disturbance of residents and businesses		
9-10 February		Resident houses nearby areas should be clean from construction materials to avoid disturbance of residents and businesses		

Date	Ref Number	Subject	Content/Issues	Status of Implementation
January to July 2017				
9-10 February		Trees of nearby construction zone should be protected to avoid its damage		
9-10 February		Use tarpaulins to cover during materials transportation	Despite numerous instructions given by SC and Environmental Specialist of USIIP to contractor trucks with tarpaulins are not used by contractor to cover construction material during transportation, immediate improvements are requested from contractor	
9-10 February		Workers always should use complete PPE		
9-10 February		All network line construction segments should be cleaned/well organized on regular bases		
9-10 February		Entrance door of construction site should be in better operational condition and closed as needed		
9-10 February		Piles of soil at the construction territory should be managed properly (grading/leveling)		
9-10 February		Site internally should be arranged properly with signage and cleaned regularly		
29-30 May		Trees at the construction site and nearby deep excavation zone should be fenced protect to avoid its fallingand damage		
29-30 May		Proper warning and information signs should be arranged at the entrance and perimeter of the site		
29-30 May		Safety signs/tapes and trench side barriers around of deep open excavation should be installed from all		

Date	Ref Number	Subject	Content/Issues	Status of Implementation
January to July 2017				
		sidesto avoid accidents		
29-30 May		Walls of the deep trenches (>1.5m) should be strengthened to avoid landfall of the soil and accidents		
29-30 May		Workers always should use complete PPE		
29-30 May		Trenches should be fenced adequately		
July to December 2017				
3 August		Safety rules during high-altitude works should be respected to avoid workers damage	Contractor developed Corrective Action Plan and improved the situation within the proposed deadlines	
3 August		During high-altitude works special protection equipment should be used	Contractor developed Corrective Action Plan and improved the situation within the proposed deadlines	
3 August		Implementing works without special protection equipment is strictly prohibited		
3 August		Workers always should use complete PPE	Contractor developed Corrective Action Plan and improved the situation within the proposed deadlines	
7 November		All construction materials (pipes) should be accurately stacked and stored properly at the special dedicated place	Contractor is requested to keep the standards and to follow EMP requirements	
7 November		Special warning and information signs should be installed	Contractor is requested to keep the standards and to follow EMP requirements	
7 November		Trees (nearby territory) should be freed from pipes to avoid its damage	Contractor is requested to keep the standards and to follow EMP requirements	
7 November		Piles dedicated warehouse should be fenced, protected and organized as suggested for warehouse arrangement		
7 November		Protect River bank alongside theUreki Well fields	Contractor is requested to protect River Bank alongside the Ureki Well fields as soon	

Date	Ref Number	Subject	Content/Issues	Status of Implementation
January to July 2017				
			as final design is proposed by Eptisa	
7 November		Contractor to install fencings forUreki Well Fields	Contractor is requested to finalize fencing of Ureki Well Fields	
January to June 2018				
24 April		All construction materials (pipes) should be accurately stacked and stored properly at the special dedicated place	No additional actions are required	
24 April		Special warning and information signs should be installed		
24 April		There should be separate waste containers for municipal and hazardous waste at the site with signatures, placed at special designated area with roofing and concrete base		
24 April		Workers always should use complete set of PPE		
24 April		Trees (nearby territory) should be freed from pipes to avoid its damage		
24 April		Construction materials should be segregated precisely and stored properly	Contractor to developed Corrective Action Plan and improved the situation within the proposed deadlines, site improvements with relevant photos will be presented in EMR July-December 2018.	
24 April		Site internally should be arranged properly (including signage) and cleaned regularly (animals should not be available at the site)		
24 April		Site gate should be operation at every entrance or exit with relevant signage		
24 April		Waste should be placed at the proper standard waste containers with labeling		
24 April		Containers of lubricants should be		

Date	Ref Number	Subject	Content/Issues	Status of Implementation
January to July 2017				
		managed properly (concrete flooring and relevant roofing)		
24 April		Construction equipment should be in good condition		
24 April		Site fencing should be complete and with visible materials on it		
24 April		Construction materials should be segregated precisely and stored properly		
24 April		Site internally should be arranged properly (including signage) and cleaned regularly (animals should not be available at the site)		
January to June 2019				
February		Site internally should be arranged properly and cleaned regularly	Contractor was given strong instruction to improve the situation within the 2 working days and keep improved Standards on sites	

Annex 2: Post-Construction Environmental Audit Checklist

Required mitigation measures of enviromental impact	Measures implemented				Comment
	yes	partially	no	N/A	
Site territory fenced fully	x				All facilities must be fenced and have gates.
Topsoil placed at original location	x				The topsoil must be returned to its original area, and the topsoil must be used to cover the small slopes of the infrastructural facilities constructed within the scope of the project.
Vegetation cover reinstated	x				The grass has been self-restored on the territory.
Trees replanted as needed				x	No trees were planted in the project zone.
Construction waste and surplus/waste soil removed completely and disposed properly		x			The construction and household waste are mainly disposed from the project area. Only few facts of the construction and household waste disposal were fixed on some sites of the pumping station.
Hazardous waste removed and disposed properly	x				The hazardous waste is totally removed from the project site.
Fuels and lubricants spills eliminated	x				Fuel or lubricant storage areas in the construction camps aretotally demolished and waste is totally removed from the site
Contractor equipment and machinery removed	X				The construction equipment removed by the Contarctor.
All temporary facilities removed and cleaned up	x				The temporary auxiliary buildings are fully removed from the site.
Streets with installed network reinstated to pre-construction or better conditions	x				The access roads to the project zone are reinstated. Their physical state is satisfactory.
Post-Construction territory reinstated to pre-construction or better conditions	x				The project zone is reinstated in line with the requirements.

